



# DIFFERENTIATED SERVICE DELIVERY FOR HIV IN GHANA

An Operational Manual



September 2022



# **DIFFERENTIATED SERVICE DELIVERY FOR HIV IN GHANA**

An Operational Manual

*September 2022*



# CONTENTS

<b>Acknowledgements</b>	<b>4</b>
<b>Foreword</b>	<b>6</b>
<b>Abbreviations</b>	<b>7</b>
<b>Summary of New Updates</b>	<b>9</b>
<hr/>	
<b>1.0 INTRODUCTION TO DIFFERENTIATED SERVICE DELIVERY FOR HIV</b>	<b>14</b>
<hr/>	
<b>2.0 SUMMARY OF RECOMMENDATIONS FOR DIFFERENTIATED SERVICE DELIVERY FOR HIV IN GHANA</b>	<b>21</b>
<hr/>	
<b>3.0 DIFFERENTIATED HIV TESTING SERVICES</b>	<b>28</b>
3.1 The building blocks of HTS services for the general adult population	29
3.2 Partner notification and index client testing	32
3.3 Social Network-Based Testing	35
3.4 HIV Self-Testing	37
3.5 Differentiated HTS for men	38
3.6 Demand Creation	39
3.7 Linkage to ART services	41
<hr/>	
<b>4.0 DIFFERENTIATED ART DELIVERY</b>	<b>42</b>
4.1 Decentralization of ART delivery	42
4.2 Differentiated ART initiation	45
4.3 Follow-up schedule on ART	48
4.4 Differentiated ART delivery for clients successfully established on ART	50
<hr/>	
<b>5.0 DIFFERENTIATED SERVICE DELIVERY FOR HIV IN SPECIFIC POPULATIONS</b>	<b>74</b>
5.1 Differentiated service delivery for HIV in children and adolescents	74
5.2 Differentiated service delivery for HIV in pregnant and breastfeeding women	86
5.3 Differentiated service delivery for HIV in key populations	89
<hr/>	

<b>6.0 DIFFERENTIATED ART DELIVERY FOR CLIENTS WITH HIGH VIRAL LOAD</b>	<b>92</b>
---	-----------

<b>7.0 DIFFERENTIATED ART DELIVERY FOR CLIENTS WITH CO-INFECTIONS, CO-MORBIDITIES AND ADVANCED DISEASE</b>	<b>104</b>
--	------------

<b>APPENDICES</b>	<b>112</b>
-------------------	------------

<b>APPENDIX 1:</b> Questionnaire for baseline assessment of differentiated service delivery for HIV	<b>113</b>
--	------------

<b>APPENDIX 2:</b> Facility group ART follow up register	<b>116</b>
---	------------

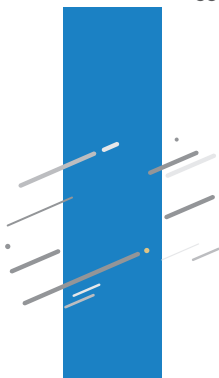
<b>APPENDIX 3:</b> Monthly health centre/CHPS refill monitoring form	<b>117</b>
---	------------

<b>APPENDIX 4:</b> Counselling guidance for choosing a differentiated ART option	<b>118</b>
---	------------

<b>Appendix 5:</b> Key messages on viral load	<b>120</b>
--	------------

<b>APPENDIX 6:</b> High viral load summary form	<b>122</b>
--	------------

<b>APPENDIX 7:</b> Session guides for high viral load enhanced counselling	<b>124</b>
---	------------



# Acknowledgements

The Ghana Health Services wishes to thank our development partners, led by WHO and the Global Fund, for the technical and funding assistance for updating the operational manual for differentiated service delivery for HIV in Ghana. Its utilization will facilitate the process for improved access to HIV services by all clients, particularly PLHIV, to whom we pay tribute for the partnership in the fight against HIV and AIDS. Special gratitude goes to all the assiduous healthcare providers whose selfless efforts across the cascade of care have enabled us to realize the successes achieved so far in the implementation of differentiated service delivery for HIV care in Ghana.

We are grateful to Marian Honu who led the updates to this guideline and Dr. Helen Bygrave, the consultant who led the development of the guideline. We are also grateful to the Director General, Director of Public Health, and other divisional, regional, district and facility directors of the Ghana Health Service/Ministry of Health for their leadership and support.

We extend our heartfelt thanks to our colleagues, partners and stakeholders who took time from their busy schedules to validate this manual:

Dr. Stephen Ayisi Addo	- National AIDS/STI Control Programme
Dr. Parbie Abbeyquaye	- 37 Military Hospital
Dr. Anthony Ashinyo	- National AIDS/STI Control Programme
Dr. Mark Bayor Kyengbe	- Bole Hospital
Dr. Nyonuku Akosua Baddoo	- National AIDS/STI Control Programme
Dr. Samuel Aidoo	- Effia Nkwanta Regional Hospital
Dr. Kwadwo Koduah Owusu	- National AIDS/STI Control Programme
Dr. Raphael Adu-Gyamfi	- National AIDS/STI Control Programme
Dr. Shiela Bawa	- Suntreso Gov't Hospital
Winifred N. O. Armah-Attoh	- National AIDS/STI Control Programme
Caroline Adonadaga	- National AIDS/STI Control Programme
Joyce O. Appiah	- Ghana AIDS Commission

Comfort Kwegyir-Aggrey

Seth Twum

Rowland Adukpo

Dr. Anthony Enimil

Kenneth Ayeh Danso

Obedia Seaneke

Priscilla Ekpale

Ekow Wiah

James Saakwa-Mante

Marijanatu Abdulai

George Gyasi Poku

Jenevieve Klu

Nadia Tagoe

Dr. Ekua Houphouet

Courage Botchway

Reynolds Asare

Dr Kafui Senya

Emmanuel Sefah Boakyie-Yiadom

Damaris Forson

Dr. Nana Ayegua Seneadza

Georgina Benya

Comfort Anane-Kyei

Patricia Porekuu

Joseph K. Addae

Emmanuel Obeng-Hinne

Amos Asiedu

Dr. Kate Coleman-Sarfo

Irene Alimah Lansah

Michael Deladem Kwashie

- Greater Accra Regional Health Directorate

- Akuse Government Hospital

- National AIDS/STI Control Programme

- KNUST/KATH

- National AIDS/STI Control Programme

- Korle Bu Teaching Hospital

- Korle Bu Teaching Hospital

- National AIDS/STI Control Programme

- National AIDS/STI Control Programme

- National AIDS/STI Control Programme

- National AIDS/STI Control Programme

- National AIDS/STI Control Programme

- USAID

- USAID

- Volta Regional Health Directorate

- West African Programme To Combat AIDS And STIs

- WHO

- USAID GHSC-PSM

- USAID GHSC-PSM

- University of Ghana Medical School

- Christian Health Association of Ghana

- Agona Gov't Hospital

- Hope For Future Generations

- Christian Health Association of Ghana

- Bono Regional Health Directorate

- JHPIEGO

- 37 Military Hospital

- National AIDS/STI Control Programme

- USAID Strengthening the care Continuum Project

# Foreword

Ghana has made significant progress in the fight against HIV and AIDS. In 2016, the National AIDS/STI Control Programme (NACP) adopted the new World Health Organization (WHO) recommendations to treat all people living with HIV with ART, regardless of immune status or clinical stage. In 2020, an estimated 346,120 people were living with HIV of which 208,811 were receiving antiretroviral therapy (ART). Differentiated Service Delivery approaches were also adopted to cater for client's needs.

The Consolidated Guidelines for HIV Care in Ghana (2021) describe the “What” of ART delivery, outlining the threshold and ART regimen that should be used and how clients on ART should be monitored. This manual is aimed at outlining the “How” of HIV care and describes how services may be differentiated according to clients' clinical requirements and according to the specific populations' needs (for example, pregnant or breastfeeding women, children and adolescents, and key populations).

Differentiated service delivery describes how services may be adapted to reflect the clients' needs and preferences, as well as reduce the burden of care for healthcare workers. Such adaptations may be made across the cascade of HIV care from testing to virological suppression, including the adaptation of services to specific populations. The NACP has endorsed the models of service delivery described in this manual; however, the choice of model in any given district will ultimately be decided after analysis of local data and an assessment of challenges being faced by both healthcare workers and clients.

It is my wish to encourage healthcare workers and patients to work together to achieve the 95-95-95 goals and to further learn from adapting our HIV services in Ghana to provide quality, client-centred care that enhances the lives of those living with HIV while continuing to impact on the control of the epidemic.



**Dr. Patrick Kuma-Aboagye**  
Director General, Ghana Health Service

# Abbreviations

ANC	Antenatal care
AHD	Advanced HIV Disease
ART	Antiretroviral Therapy
ARV	Antiretroviral
AZT	Zidovudine
CALHIV	Children and Adolescents Living with HIV
CHPS	Community-based Health Planning and Services
CSO	Community Service Organization
CTX	Cotrimoxazole
EAC	Enhanced Adherence Counselling
EFZ	Efavirenz
EID	Early Infant Diagnosis
EPI	Expanded Programme on Immunisation
FSW	Female Sex Worker
HCW	Health Care Worker
HIVST	HIV Self-Testing
HTS	HIV Testing Services
IPD	Inpatient Department
KPs	Key Populations
LTFU	Lost to follow up
M&E	Monitoring and Evaluation
MCH	Maternal and Child Health
MSM	Men who have sex with men
NACP	National AIDS/STI Control Programme
NCD	Non-communicable Disease
OI	Opportunistic Infection
OPD	Outpatient Department
PI	Protease Inhibitor
PITC	Provider-initiated Testing and Counselling
PLHIV	People Living with HIV
PMTCT	Prevention of Mother-to-child Transmission



PNC	Post Natal Care
PWID	People who inject Drugs
SOPs	Standard Operating Procedures
SRH	Sexual and Reproductive Health
STI	Sexually Transmitted Infection
TB	Tuberculosis
TDF	Tenofovir
UNAIDS	Joint United Nations Programme on HIV and AIDS
VL	Viral Load
WHO	World Health Organization

# Summary of New Updates

The 2017 Differentiated Service Delivery operational manual took into consideration recommendations from the 2016 WHO Consolidated Guidelines. Over the years, new evidence, global guidance and best practices have emerged based on the global implementation of DSD across different countries and context. This has provided the opportunity for Ghana to revise its operational manual to reflect evidence-based approaches to improve its DSD within the local context. Hence this updated operational manual contains key considerations deemed feasible and relevant to Ghana's context which will produce high impact results in delivering differentiated HIV services.

## **Differentiated HIV Testing Services**

A social network-based approach to testing has been introduced in this update. This strategy involves identifying persons who are HIV positive or at risk and recruiting them as “seeds” of a network. These seeds then recruit members of their social networks who may be at risk for HIV.

HIV self-testing was mentioned in the previous manual. However, in this updated manual, the building blocks for HIVST have been outlined with implementation considerations. This section should be used in tandem with the national HIV self-testing guide published in 2020 which serves as the framework for HIVST implementation in Ghana.

Implementation considerations were added to the Differentiated HTS for men to provide additional guidance in providing this service.

A section on Demand Creation has been included in this operational manual. This section provides guidance for demand creation in general but also places a spotlight on key populations, children and adolescents.

## Differentiated ART Delivery

The 2021 WHO Consolidated Guidelines recommends a shift from “stable clients” to “clients successfully established on ART”. This recommendation has been adopted, therefore the new definition for clients successfully established on ART is:

- receiving ART for at least six months;
- no current illness, which does not include well-controlled chronic health conditions;
- good understanding of lifelong adherence: adequate adherence counselling provided; and
- evidence of treatment success: at least one suppressed viral load result within the past six months (if viral load is not available: CD4 count >200 cells/mm<sup>3</sup> or CD4 count >350 for children 3-5 years or weight gain, absence of symptoms and concurrent infections).

This definition applies to all populations established on ART including:

- Individuals receiving second- and third-line regimens
- PLHIV with controlled comorbidities
- Children and adolescents
- Pregnant and breastfeeding women
- Key populations

A new option for follow up of clients successfully established on ART has been introduced. This is the group model managed by clients. The community antiretroviral treatment refill groups (CARGS) is a client-managed group model where a representative from the group is nominated to collect refills on behalf of group members. This option can be provided alongside the existing options of the group model managed by healthcare workers, the individual model based at facilities and individual model not based at facilities.

Some recommendations and target populations have been updated in incorporating sexual and reproductive health services into follow ups for clients successfully established on ART.

## **Differentiated service delivery for HIV in children and adolescents**

This updated manual contains recommendations for point-of-care nucleic acid testing to diagnose HIV among infants and children younger than 18 months of age. This comes as a result of the overwhelming benefits documented in the 2021 WHO CONSOLIDATED GUIDELINES.

The manual also provides guidance on presumptive treatment for exposed infants where there is high suspicion of HIV infection but where EID results are not available.

## **Differentiated service delivery for HIV in pregnant and breastfeeding women**

This manual contains guidance on re-testing pregnant women during the 3rd trimester. All pregnant women who tested negative at registration, should be re-tested in week 34 of their pregnancies. Considerations for treatment monitoring of pregnant and breastfeeding women have also been outlined.

In addition, integrated testing for HIV, syphilis and hepatitis B is also recommended to all pregnant women. Guidance on treatment monitoring for pregnant women is also provided in this update.

## **Differentiated ART delivery for clients with high viral load**

A major shift is outlined in the definition of clients on ART who are virologically suppressed. Whereas it used to be defined as having a VL < 1,000 copies/ml, the new definition is VL < 50 copies/ml. With the transition to dolutegravir and potentially more potent ARVs in the future, the global move is to have clients virologically suppressed at undetectable viral loads. This shift calls for clients with viral loads between 50 and 1,000 copies/ml (low viraemia) to be supported with enhanced adherence counselling and encouraged to achieve viral suppression.

It is recommended in this manual that where applicable, task sharing of specimen collection and point-of-care testing can be conducted using non-laboratory healthcare workers. This is in anticipation of more portable and easy to operate PoC devices becoming available on the market, as tools to fight the epidemic keeps evolving. Implementation considerations are outlined for this recommendation.

### **Differentiated ART delivery for clients with co-infections, co-morbidities and advanced disease**

Additional considerations for NCDs among children, adolescents and adults were included in this update.

To provide mitigation measures against interruptions in HIV services during a pandemic, as was observed with the COVID-19 pandemic, considerations have been outlined in this update for integration with HIV. This guidance covers HIV prevention services, ART and VL.

This manual has been updated with a section on Advanced Disease. WHO guidelines recommend a package of interventions for clients presenting with advanced HIV disease which covers screening, treating, optimizing and preventing recurrence. These have been adopted for this manual and are outlined in the section.

Finally, some language in the appendices were updated to reflect new definitions stated in this updated operational manual.

# How to use this book

The content of this manual follows the flow of the HIV care and treatment cascade from HIV testing through to viral load monitoring of a client on ART.

Throughout the manual the following icons will be used to signpost the reader to important issues for implementation or considerations for specific populations.

## Special considerations related to:



Pregnant and  
breastfeeding women



Children



Key populations



Adolescents



## Important information



## **INTRODUCTION TO DIFFERENTIATED SERVICE DELIVERY FOR HIV**

In 2020, the Joint United Nations Programme on HIV and AIDS (UNAIDS) reported that 73% of all people living with HIV (37.7 million) were receiving antiretroviral therapy (ART) worldwide. Under the global coordination of UNAIDS and the World Health Organization (WHO), further ambitious targets have been set. By 2030, 95% of all people living with HIV (PLHIV) should know their HIV status, 95% of all people diagnosed with HIV infection will receive antiretroviral therapy, and 95% of all people receiving antiretroviral therapy should achieve virological suppression. In 2015, WHO recommended the “treat all” policy, where all clients diagnosed with HIV are eligible for ART regardless of CD4 count or clinical stage.

Ghana, under the direction of the National AIDS/STI Control Programme (NACP) and the Ghana AIDS Commission, has embraced these international targets within its national strategic plan for 2021-2025. Ambitious targets have been set for testing, ART coverage, access to viral load testing and levels of virological suppression.

In order to achieve these ambitious goals, in a context where healthcare workers are overburdened and clients face financial and practical barriers to access care, including high levels of stigma, the current approach to HIV service delivery will have to be adapted.

Differentiated Service Delivery is a client-centred approach to address these challenges by adapting services to the needs of clients while reducing the burden on the health system. The principles of differentiated service delivery may be applied across the cascade from testing through to ART initiation, long-term ART delivery and achieving virological suppression. Differentiated service delivery is also not just for clients successfully established on ART. Service delivery should be adapted for clients with advanced HIV disease both at ART initiation, where there is evidence of treatment failure on ART and for specific populations.

To define the characteristics of the client for whom services are being differentiated, three elements should be considered:

- The contextual setting
- The clinical characteristics
- The specific population.

The contextual setting of the client will have a strong influence on how services are adapted. Differences in HIV prevalence geographically and in resource constraints will influence the priority given to certain interventions. Likewise, implementation experience shows that some models of care may be more acceptable in urban than in rural settings.



Regarding clinical characteristics, WHO defines four subgroups of clients:

- Individuals presenting or returning to care with advanced HIV disease (WHO Stage 3 or 4 disease and/or CD4 <200 cells/mm<sup>3</sup>). Such individuals may or may not have had previous ART exposure
- Individuals presenting or returning to care when clinically well (absence of WHO Stage 3 or 4 disease and CD4 >200 cells/mm<sup>3</sup>). Such individuals may or may not have had previous ART exposure
- Individuals who are successfully established on ART (see section 4.4 for Ghana's new definition of successfully established on ART)
- Individuals receiving an ART regimen that is failing.

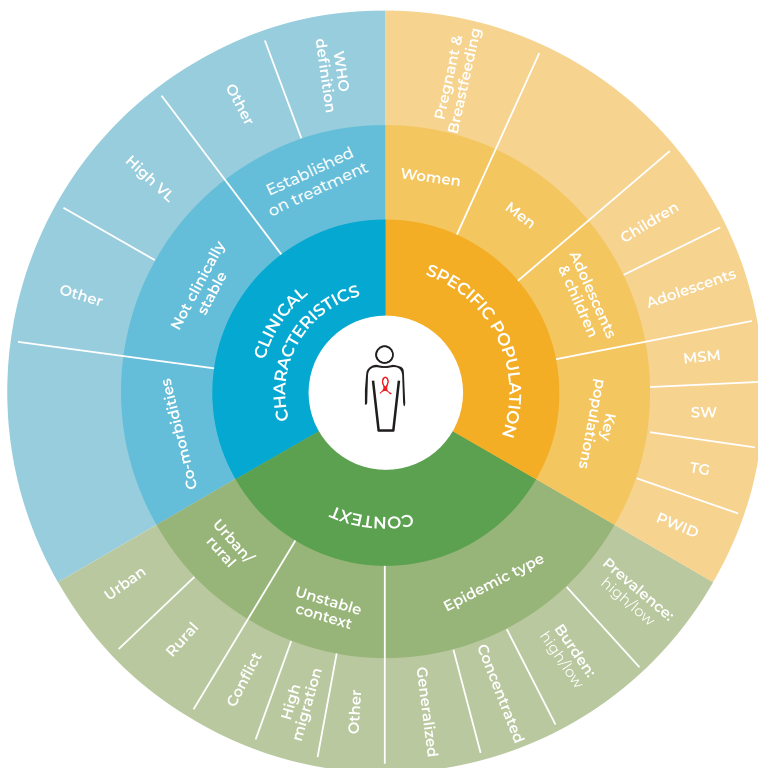
In addition to these categories, the presence of a co-infection (TB and hepatitis B or C) or other co-morbidity (diabetes and hypertension) may also alter how services will be delivered in both outpatient and inpatient settings.

The specific populations commonly considered when differentiating HIV services include:



Figure 1 summarizes these elements that guide for whom HIV testing and ART services are differentiated.

**Figure 1:** The three elements of differentiated service delivery



Once the elements have been selected, a model of testing, initiation or ART delivery can be built using the building blocks of When, Where, Who (which cadre of healthcare worker) and What is provided, as part of a tailored service delivery model (Figure 2).

**Figure 2:** The building blocks of differentiated service delivery



- The aim of this manual is to outline options for differentiated service delivery across the HIV care and treatment cascade that have been endorsed by NACP.
- The selection of strategies for implementation should be guided by a local situation analysis of data and assessment of healthcare worker and client experiences of HIV services.
- Differentiated service delivery models should be implemented to address specific challenges and prioritized to address the gaps in meeting the 95-95-95 targets.

A questionnaire to guide this assessment at site level can be found in Appendix 1. Figure 3 outlines the steps in this decision-making process for the implementation of differentiated service delivery.

**Figure 3:** Decision-making process for differentiated service delivery

### **STEP 1**      **Situation analysis**

- Use the questionnaire in Appendix 1 to guide your assessment.
- Assess facility routine monitoring and evaluation data and clinic workload.
- If possible, disaggregate data by age and specific population.
- Assess challenges being faced by your healthcare workers (HCWs).
- Assess challenges being faced by clients in your health facilities.
- Assess activities of civil society organizations (CSOs).

### **STEP 2**      **Define challenges for each facility**

- What are the challenges faced by most of the facilities in your district?
- What are the challenges specific to selected facilities or specific populations?

### **STEP 3**      **Decision-making process for differentiated service delivery**

- Define which specific population will benefit from differentiated service delivery models for HIV testing or ART delivery.
- If there are several service delivery models identified, which should be implemented immediately and which in the medium or longer term?

## STEP 4 Design a differentiated service delivery model

### For testing, ask:

- Where and how is PITC offered at the facility?
- Is index client testing and partner notification performed?
- Is targeted community testing for specific populations performed?
- How can HIV self-testing be utilized?

### For ART delivery, ask:

- Is the maximum refill being offered?
- Could ART be offered on additional days of the week?

Design the service delivery model for testing or ART delivery using the building blocks.

#### HIV testing services:



#### ART services delivery models:



## STEP 5 Implement and monitor

- Implement the differentiated service delivery model for HIV testing or ART delivery.
- Monitor and evaluate the model's impact.
- Consider further adaptation of the service delivery model to address any ongoing identified challenges.



## **SUMMARY OF RECOMMENDATIONS FOR DIFFERENTIATED SERVICE DELIVERY FOR HIV IN GHANA**

### **Where are HIV testing and ART services provided?**

Decentralization of HIV testing and ART services has been conducted in phases to all hospitals, health centres and Community-based Health Planning and Services (CHPS) sites in Ghana and is still an on-going process. The process of decentralization is further considered in Section 4.1. As a priority, all sites should provide HIV testing services.

# **Who provides HIV testing and ART services?**

A task-sharing policy has been adopted, supporting the role of nurses in the provision of ART care and specific roles for lay workers. For details of which healthcare worker can provide HIV testing and treatment services throughout this document, please refer to the Ghana Health Service Operational Policy and Implementation Guidelines on Task Sharing (2017). Assisted self-testing may be provided by lay workers trained to provide the service. Refer to the HIV Self-Testing Implementation Guidelines (2020) for further details.

**Table 1:** Differentiated HIV testing services (see Chapter 3)

## General adult population

Provider-initiated testing and counselling (PITC) should be offered in **all health facilities**, including CHPS sites, during government-defined opening hours. This should include overnight and weekends for facilities providing maternity and inpatient care.

## HIV testing should be prioritized in any client:



With symptoms or signs suggestive of HIV



With STI symptoms



With TB



Presenting to the emergency room



In inpatient departments (IPD)



In ANC/PNC clinic

NEW

NEW

- HIV testing should be offered in outpatient departments (OPDs) and specialist clinics and at the laboratory.
- **Index client testing and partner notification** is a priority high-yield HIV testing strategy. This should be performed at the facility and in the community.
- **Social network-based testing** is an evidence-based approach to engage and motivate a person to receive HTS. This can be performed to reach hidden key populations.
- **Targeted** (specific population-based) community-based testing, for example, for key populations and men, should be planned quarterly within all districts.
- **HIV self-testing** should be offered as part of community-based testing and index client testing.
- Demand creation should be planned using evidence-based platforms and approaches that have been proven to increase demand.

#### Special considerations for children and adolescents



- The “mature minor” and “best interests of the child” principles must be applied when considering HIV testing services (HTS) for children and adolescents.
- All children born to HIV-positive mothers must be offered HTS (PMTCT programme; index client testing).
- Opt-out PITC should be offered to all children presenting to the emergency room, IPD, TB clinics or malnutrition services.
- PITC should be offered to all children attending the under-5 clinic with guardian consent.
- Children and adolescents older than 5 years attending OPD should be prioritized for testing using the screening questions outlined in Chapter 5.
- PoC NAT can be used to diagnose HIV among infants and children younger than 18 months.

NEW

#### Special considerations for pregnant and breastfeeding women

- HIV re-testing for pregnant women who tested negative at registration, should be conducted during the 3rd trimester in week 34.
- Integrated testing for HIV, syphilis and hepatitis B should be offered to all pregnant women.

#### Special considerations for key populations



- Timing of community-based HTS for key populations should be adapted to their needs.
- Peers should be engaged for mobilization and testing.
- HIVST should be scaled up among key populations to increase reach.



**Table 2:** Linkage to HIV care (see Chapter 3)

- All clients confirmed positive at a facility should be escorted (with their consent) to the point for clinical assessment and ART initiation.
- This should ideally be done by the HCW who has performed the test or by a lay worker.
- All clients who have tested HIV positive in the community should be linked, with their consent, with a community health nurse or other community-based lay worker.
- The person who has performed community testing should link the client to their ART site of choice and, after one month, follow up to ensure that linkage has occurred.
- If not linked, tracing should be performed by the community-based HCW.

**Table 3:** Differentiated ART initiation (see Chapters 4 and 5)**All clients**

- All approved ART and PMTCT sites should offer ART initiation.
- All clients should aim to be initiated within 7 days of diagnosis unless there is a clear clinical or psychosocial contraindication.
- All clients should be offered the option of same-day initiation. This must include an assessment of both clinical and psychosocial readiness.
- ART preparation should assess clinical and psychological readiness following the steps outlined in the Consolidated Guidelines for HIV Care in Ghana (2021).
- ART initiation should include a determination of whether the client is identified as having early or advanced HIV disease (Stage 3 or 4 and/or CD4 <200 cells/mm<sup>3</sup>).
- Performance of any routine baseline laboratory investigation should not delay initiation of ART if the client is otherwise clinically and psychologically ready to initiate ART. 'Baseline' means tests done in the early stages of ART initiation and not only tests done prior to initiation where clinically indicated.
- CD4 may be performed, if available, at baseline to determine whether the client has early or advanced HIV disease.
- Other baseline investigations should be performed as clinically indicated.

**Special considerations for pregnant and breastfeeding women**

Pregnant and breastfeeding women should be encouraged to initiate ART on the same day as diagnosis of HIV to prevent transmission to their infant.

**Special considerations for children and adolescents**

Same-day initiation or initiation within 7 days should also be offered to children and adolescents. However, it must be ensured that the caretaker(s) has enough knowledge to provide ART to the child.

**Table 4:** Differentiated ART delivery for clients successfully established on ART (see Chapters 4 and 5)

**Definition of client successfully established on ART (see chapter 4).**  
All client successfully established on ART will have a clinical review every 6 months.  
All client successfully established on ART should have a 3 to 6 month refill ensured.

**General population**

Clients should receive ART at the facility of their choice.  
ART follow up will be offered through the following models:

- Group model managed by healthcare workers
- Group model managed by clients
- Individual model based at facilities
- Individual model not based at facilities

**Special considerations for children and adolescents**  
(see Section 5.1.3)

- Children aged 0-2 years exposed or living with HIV, should be reviewed monthly. Mother and child should be seen in maternal and child health (MCH) settings in a family approach.
- Where there is a high index of suspicion of HIV infection in a newborn (e.g., has signs and symptoms of HIV) but an EID result is not available, the infant should be put on presumptive treatment.
- Children aged 2-5 years should be reviewed every 3 months. Mother and child should be seen in MCH in a family approach.
- Children older than 5 years should be reviewed in OPD or ART clinic, every 3 months until successfully established on ART.
- For children over 5 years who are successfully established on ART, clinical review may be 6 monthly with 3-monthly ART refills.
- Book mothers and their children on the same-day “family” approach.
- Offer group refill options for mothers and young children and adolescents.
- In particular, adolescents and young adults may benefit from a group refill strategy.
- Engage adolescent and young adult peers to facilitate group refill strategies.

**Special considerations for pregnant and breastfeeding women**  
(see Section 5.2.3)

- PMTCT/ART and sexual and reproductive health (SRH) services should be integrated antenatally, at delivery and postnatally (same day, same clinic and same healthcare worker).
- Mother and exposed infant should be seen on the same day in the MCH clinic using the “family approach”.
- Newly diagnosed women initiated on ART should be reviewed at 2 weeks and then monthly until the exposed baby is 6 months, and then 3 monthly.
- Women already on ART may choose to receive ART during MCH clinics or through their existing refill model of choice.

### Special considerations for key populations (see Section 5.3.2)



- An integrated package of medical care should be tailored to the specific needs of the key population.
- Services for key populations should be integrated into existing services.
- Healthcare workers should provide the integrated package of services in a non-judgmental manner.
- If feasible, specific times for clinics for key populations' services may be allocated.
- Peers should be engaged to support adherence and defaulter tracing activities.
- Clients who are successfully established on ART should be offered the same refill options as the general population.
- Clients within a key population may choose to form their own group refill option.
- Drop-in centres for key populations may also serve as refill sites.

**Table 5:** Differentiated ART delivery for clients with high viral load, low viral load and viral suppression

#### All clients:

- Viral load should be taken at 6 and 12 months on ART and annually thereafter.
- Where applicable, task sharing of specimen collection and PoC testing can be conducted using non-laboratory healthcare workers.
- A client is considered virologically suppressed with a VL <50 copies/ml.

#### Clients with VL >1,000 copies/ml:

- Follow national guidelines for management of clients with VL >1,000 copies/ml.
- Clients on ART presenting with VL >1,000 copies/ml should be assessed urgently and where the client is on an NNRTI-based regimen, switch to appropriate regimen as prescribed in the Consolidated HIV Care Guidelines for Ghana 2021.
- Provide enhanced adherence counselling and repeat VL after 3 months.
- If results persist, an expedited switch to second line therapy should be considered based on clinical assessment and likelihood of resistance.
- The decision to switch to second line should take no longer than 2 weeks from the receipt of the second high viral load >1,000 copies/ml.
- Where a site does not have a trained clinician to switch, remote decision support should be utilized.





**Clients with VL between 50 and 1,000 copies/ml:**

- Flagging systems should be in place to identify who needs a VL taken and who has a VL >50 copies/ml.
- Clinics should offer enhanced adherence counselling and repeat VL testing after 3 months.
- If VL persists between 50 and 1,000 copies/ml, maintain ARV regimen (if not NNRTI-based) but continue adherence counselling and repeat VL after 3 months.
- Consider switching ART for those receiving NNRTI-based regimens based on clinical considerations and address any adherence concerns.

**Clients with VL <50 copies/ml:**

- Patients with VL <50 copies/ml are considered virologically suppressed and should maintain ARV regimen.



**Table 6:** Differentiated ART delivery for clients with co-infections, co-morbidities and advanced disease

**All clients**

- All clients diagnosed with TB are tested for HIV as an entry point to HIV care.
- Once on ART, screening for hypertension, diabetes and assessment of overall cardiovascular risk should be integrated into the clinical review visit.
- In the event of a pandemic (like COVID-19), HIV facility visits should be limited to those that are considered medically essential to reduce the risk and burden to recipients of care and healthcare providers.
- For clients that require a facility visit, ensure all infection prevention and control protocols are observed.
- Six month multi-month scripting should be offered to eligible clients during a pandemic when interruptions in health services are anticipated.
- Where prioritization is required in a pandemic, VL and early infant diagnosis services should first be provided to children, pregnant and breastfeeding women, and adults with recent documented non-suppression.
- For managing advanced disease, the STOP package is applied: Screen, Treat, Optimize and Prevent.



3.0

## **DIFFERENTIATED HIV TESTING SERVICES**

In 2020, 1,440,103 people in Ghana were tested for HIV. Currently, the majority (51%) of tests performed are on pregnant women in antenatal care (ANC), where HIV testing has been fully integrated. In 2020, only 17% of tests were performed on men.

In addition to improving access to HIV testing, differentiated testing models should be prioritized to identify those people living with HIV who do not yet know their status in order to appropriately link them to HIV services. Hence, identifying high- yield testing strategies for the general population and supporting testing in specific populations with high HIV prevalence (female sex workers and men who have sex with men) should be prioritized.

For the general population, high-yield strategies that should be prioritized include:

- Facility-based provider-initiated testing and counselling (PITC). All clients presenting with sexually transmitted infection (STIs), TB and clients presenting with symptoms and signs of HIV should be tested with priority.
- Index client testing both at facility and community.
- HIV self-testing in the community.
- Social Network-Based testing in the community.

### 3.1 The building blocks of HTS for the general adult population

#### 3.1.1 Where should HTS be offered?

##### Facility-based HIV testing services

Facility-based testing services are a priority strategy to reach the general population. All health facilities in Ghana, including Community-based Health Planning and Services (CHPS) sites, should offer HIV testing services.

The following clients should all be offered HTS:

- Any client voluntarily attending the health facility for HIV testing should be provided with the service directly.
- All clients presenting to any service with signs or symptoms of HIV should be offered HTS.
- For clients attending for another health reason, PITC should be prioritized in the following entry points for both adults and children, regardless of whether there are signs or symptoms suggestive of HIV:



TB clinic



STI clinic (or anyone presenting with symptoms of STIs)



Emergency room



ANC/PNC



Inpatient department (IPD)

- HTS should be offered to all inpatients.
- All wards should have a trained HTS provider to ensure all inpatients have been informed of the importance of testing for HIV and to perform the test.
- Those consenting should be tested on the ward and should not need to move to another site within the hospital to be tested.

For all other clients attending OPD, specialist clinics and the laboratory, HTS should be promoted by:

- Explaining the benefits of HIV testing.
- Directing clients who choose to be tested to the appropriate HCW, who is trained to perform HTS, or to the laboratory.

## Community-based HIV testing services

Generalized community-based HIV testing campaigns are low yield and hence may not be cost effective in a low-prevalence setting. Community-based testing activities should be targeted at:

- Men (see Section 3.5)
- Key populations (female sex workers, MSM, PWID) (see Section 5.3.1 on differentiated HTS for specific populations)
- Testing partners and children of an identified index client (see SOPs in Section 3.2 for index client testing).

### 3.1.2 Who provides HTS?

All cadres may perform HIV rapid testing (refer to the Ghana Health Service Guidelines on Task Sharing) if they have received the approved training. Laboratory services at the district hospital must ensure that quality assurance mechanisms are in place for all healthcare workers and lay cadres performing HIV testing.

HIV self-testing, where the client performs the test themselves, is being introduced in a phased approach. Lay workers may perform assisted HIV self-testing in the community. Self-testing may have a role in the testing and re-testing of high-risk key populations and in performing index client testing. HIV self-testing may be implemented using a range of strategies:

- Distribution: from the facility or in the community
- Testing: assisted, semi-assisted or unassisted.

### 3.1.3 When is HTS provided?

All sites should provide HTS during working hours.

Any sites providing maternity or IPD services should have a trained staff member available to perform HTS 24 hours a day where applicable.

### 3.1.4 What services are provided during HTS?

For clients older than 18 months, HIV rapid testing is performed following the national testing algorithm. For children younger than 18 months old, the early infant diagnosis (EID) algorithm should be followed.

For community-based testing (including community-based index client testing), an integrated approach to HTS should be taken. During community testing, the following health screening activities may be offered:

- Screening for malnutrition
- BP check
- Blood glucose check
- TB screening
- STI screening
- HIV testing.



### 3.2 Partner notification and index client testing

WHO strongly recommends testing the partners and children of a known HIV- positive client, and this is a priority in low-prevalence settings. Partner notification is a voluntary process where a trained healthcare worker asks people diagnosed with HIV about their sexual partners and, if the client agrees, offers these partners HTS. Partner notification may be passive or assisted. In addition, any child of an HIV- positive client should also be offered HIV testing.

Passive notification is when HIV-positive clients are encouraged by a trained healthcare worker to disclose their status to their sexual or drug injecting partners by themselves and to suggest HTS to the partner.

Assisted partner notification is when a consenting HIV-positive client is assisted by a trained healthcare worker to disclose their status or to anonymously notify their sexual or injection drug partners. The provider then offers HTS to these partners. Assisted partner notification is done using contract referral, provider referral or dual referral.

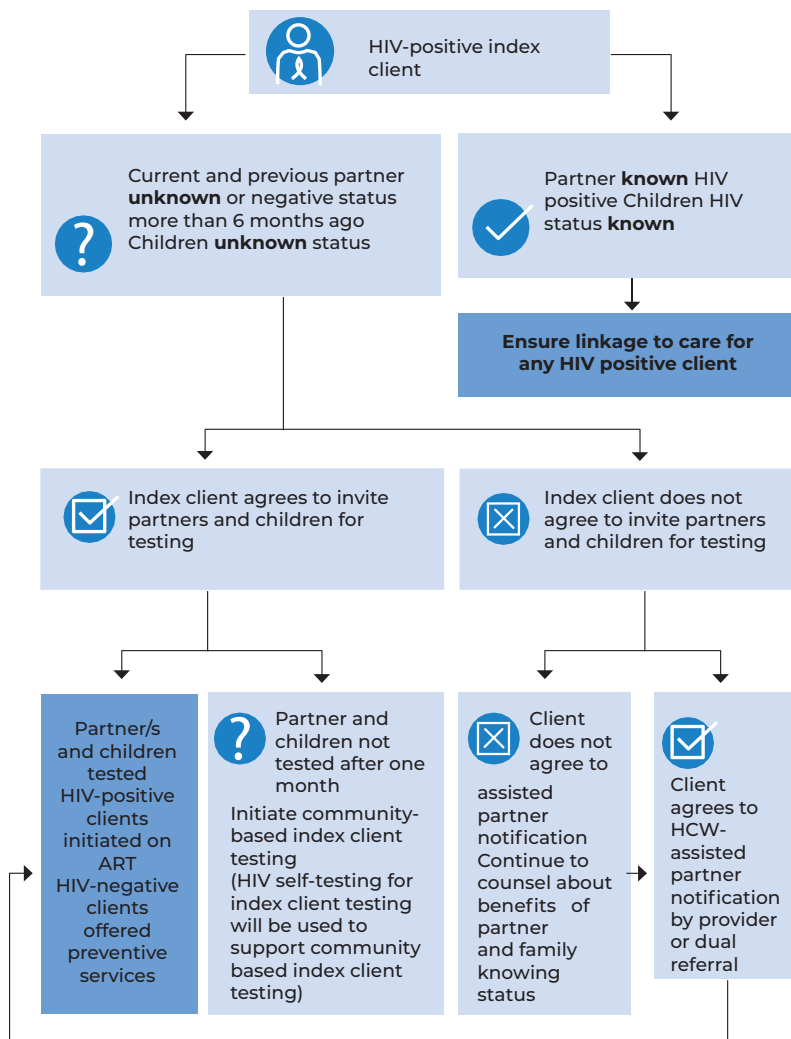
- Contract referral: The client makes a contract with a trained healthcare worker and agrees to disclose their status by themselves and to refer their partner to HTS within a specific time. If the partner does not access HTS, the healthcare worker will contact the partner directly to offer HTS.
- Provider referral is when, with the consent of the HIV-positive client, a trained healthcare worker confidentially contacts the person's partner directly and offers the partner voluntary HTS.
- Dual referral is when a trained healthcare worker accompanies and provides support to the HIV-positive client when they disclose their status and may then provide HTS to the partner.

Capacity building to support HCWs to perform index client testing and partner notification will be integrated into the HCW HIV training package.

## **STANDARD OPERATING PROCEDURE FOR PARTNER NOTIFICATION AND INDEX CLIENT TESTING IN GHANA**

1. All clients, when tested HIV positive, should be advised to invite the following people for HTS:
  - Their current and previous sexual partners if their status is unknown or they have not been tested within the past six months
  - Their children of any age if their status is unknown
  - Their injecting partner if they are PWID
  - Other close household contacts.
2. Information on the status of partners and family members should be recorded in the client care booklet.
3. Where the client agrees to notify and invite their current partner(s), previous partner(s) and children to attend, they should be given one month to attend for HTS.
4. Where the client does not agree to notify the current partner(s) or previous partner(s), the healthcare worker should offer to perform assisted anonymous or dual notification of the partner(s).
5. If the client has agreed to invite their partner(s) and children for HTS, and they have not attended after one month, community-based index client testing should be offered. With the client's consent, the community health nurse or community volunteer who is trained to test should be informed of the index family to be tested. Facilities should establish links with their local CSOs to support community-based testing.
6. HIV testing should be offered at home or in an agreed community location by the community health nurse or community volunteer as part of an integrated health screen, including screening for malnutrition, hypertension, diabetes, TB and STIs.
7. The person(s) performing the test should then ensure linkage to ART services for any client who tests HIV positive.
8. HIV self-test kits may also be provided to the index client at the facility so that they can perform the HIV test for their partner(s) and children at home. With the client's consent, their community health nurse should follow up on the outcome of the test during a routine home visit and ensure linkage of any HIV- positive client to the facility.

**Figure 4:** Algorithm for partner notification and index case testing



### 3.3 Social Network-Based Testing

This is an evidence-based approach to engage and motivate a person to receive HTS. The key principle that drives this approach is that persons within the same social network who share a sphere of influence, share similar HIV risk behaviours. This strategy is particularly useful in reaching hard-to-reach key populations.

Social Network-Based testing involves identifying persons who are HIV positive or at risk and recruiting them as “seeds” of a network. These seeds then recruit members of their social networks who may be at risk for HIV. These recruits can be their friends, sexual or drug-using partners, family members, etc. The seeds play a crucial role in encouraging, referring or accompanying their recruits to get tested. The seeds however are not categorized as peer educators as their roles are short term and would only require coaching to perform the task.

#### STANDARD OPERATING PROCEDURE FOR SOCIAL NETWORK-BASED TESTING

1. Engage members of key populations in planning, implementing and evaluating the strategy. This is important in creating effective strategies for identifying, recruiting and coaching the seeds.
2. Recruit the seeds for the network by answering the following questions:
  - a. **Who are your potential seeds?** A seed should be well-connected in their social circles and be able to identify people in their social network who are also key population. They should be able to engage, discuss and recommend HIV testing and escort or refer their recruits to HIV testing sites.
  - b. **Where can they be found?** Seeds can be initially recruited from clients and client referrals who participate in existing programs such as PLHIV support groups, STI clinics, HTS sessions and HIV treatment sessions. Once identified, seeds should be oriented by providing a short motivational message and clear explanations for participation, benefits, risks and outcomes. Coaching sessions should be

conducted with seeds and a follow-up procedure should be outlined.

**c. What kind of motivation can you provide them?**

Incentives may be introduced at this point but may not necessarily be monetary. There should be provision for seeds to be released either after saturating their network or on the basis of suboptimal performance.

3. Seeds should recruit contacts from their social network and refer or escort them to testing services. There should be no coercion or forcing recruits to obtain incentives.
4. Testing services as described in this manual and related linkage services should be provided to the recruits.
5. Recruits with the potential and who fit the criteria can be invited to become seeds thereby expanding the network.

### 3.4 HIV Self-Testing

The national HIV Self-Testing Implementation Guide was developed in 2020 to serve as a framework for the roll out and scale-up of self-testing in Ghana. The guide outlines parameters for implementation of HIVST in both the private and public sectors. HIVST can be used to augment index testing, social network-based testing and differentiated HTS for men.

HIVST should be considered as a test for triage where reactive clients are linked to further testing through the national testing algorithms. Non-reactive clients should be triaged out to preventive services.

WHEN	WHERE
<ul style="list-style-type: none"> <li>■ During working hours,</li> <li>■ DIC days</li> <li>■ 24 hours</li> </ul>	<p>Where</p> <ul style="list-style-type: none"> <li>■ Community level (homes, KP hotpots, CSOs, etc.)</li> <li>■ DICs</li> <li>■ Facility</li> <li>■ Pharmacies</li> <li>■ Retail shops/malls</li> <li>■ Online/virtual distribution platforms</li> </ul>
WHO	WHAT
<ul style="list-style-type: none"> <li>■ Lay workers (peer educators, Models of hope, mentor mothers, CATS)</li> <li>■ Individuals</li> <li>■ Index clients</li> <li>■ Health care workers</li> <li>■ Social marketers</li> </ul>	<ul style="list-style-type: none"> <li>■ Counselling and education</li> <li>■ Link reactive clients to testing sites for further tests per the national testing algorithm</li> <li>■ Provide preventive services to non-reactive clients</li> </ul>



#### Implementation considerations:

- Develop and distribute IECs materials for demand creation and mobilization on HIV self-testing (see Section 3.6 for Demand Creation).
- Develop call cards with listed facilities to be part of HIVST kits.

- Adapt supply chain to meet demand.
- Develop a robust M&E system and SOPs.
- Train lay workers on utilizing HIVST for index testing, social network-based approaches and differentiated HTS for men.

### 3.5 Differentiated HTS for men

To reach men, community-based workplace testing should be considered. HIV testing within military services and private firms, such as security services, should be integrated within the district's community testing strategy. Other hotspots for testing men during outreach may include trotro or taxi stations, barbering shops and testing of male partners at bars during moonlight activities for female sex workers (FSW).

WHEN	WHERE
<p>During working hours, as agreed with employers.</p> <p>Integrate within any routine medical performed or run annual screening campaign at workplace.</p> <p>During evening activities linked with key population HTS services.</p>	<p>Workplace testing (military, security firms, fishermen landing sites, etc.)</p> <p>Hotspots (e.g., trotro stations, bars)</p> <p>Recreational places (gyms, betting centres, etc)</p>
WHO	WHAT
<p><b>Mobilization:</b> health personnel within the workplace.</p> <p><b>In community:</b> where feasible, a male HIV-positive client.</p> <p><b>Testing:</b> any trained healthcare worker</p>	<p>Aim to offer as part of an integrated health screening package with nutrition, BP, diabetes, TB, STI and HIV screening</p>



#### Implementation Considerations:

- Establish periodic health desk points at trotro and taxi stations for health screening including HTS.
- Provide HIVST kits at gyms, betting centers, etc and train instructors as lay counsellors where applicable.
- Leverage on trained community lay workers for kit distribution.

- Develop IECs including audio visuals targeted at men for example to be screened on display screens at stations, gyms, etc.

### 3.6 Demand Creation

Providing HIV services including differentiated HTS services may yield suboptimal results if demand is not generated. Improving access and quality of service is key but also providing tools and interventions to generate demand for these services is equally important.

Awareness and motivation for HTS of people who need it the most is low, otherwise HIV goals would have been easily attained. People may not be aware of differentiated HTS outside of the health facilities and the options that may be available to them within their communities. It will be important to adopt evidence-based approaches to deliver demand creation to target populations.

Evidence-based platforms for delivering demand creation include:

- peer-led demand creation interventions, including mobilization;
- digital platforms, such as short pre-recorded videos encouraging testing.

Approaches that showed evidence of increased demand include:

- advertisement of specific HTS attributes;
- brief key messages and counselling by providers (less than 15 minutes);
- messages during couples counselling that encourage testing;
- messages related to risk reduction and economic empowerment, particularly for people who inject drugs;
- motivational messages.

Approaches which are less effective for demand creation are:

- personal invitation letters;
- individualized content messaging;
- counselling focused on building the relationship between the client and counsellor;
- general text messages, including SMS.



## Demand Creation for HIV Testing Services

WHEN	WHERE
<ul style="list-style-type: none"> <li>At all times when people interact with health service including community outreach.</li> </ul>	<ul style="list-style-type: none"> <li>Community</li> <li>Schools</li> <li>Health facility</li> <li>Digital platforms</li> </ul>
WHO	WHAT
<ul style="list-style-type: none"> <li>Peer educators</li> <li>HCW</li> <li>Community Cadre</li> </ul>	<ul style="list-style-type: none"> <li>IEC Materials</li> <li>Education at schools and within the community</li> <li>Print media, digital platforms, radio, etc</li> </ul>



Testing and linkage to care should be conducted at both facilities and the community. Provider-initiated testing and index testing can be provided. HIV self-testing can be provided to eligible adolescents.

### Implementation considerations for demand generation:

- Prioritize effective demand creation approaches and focus on those who would benefit from HTS.
- Use demand creation to maximize efficiency.
- Consider digital platforms for demand creation.
- Monitor and evaluate demand creation approaches.

## Demand Creation for KP

WHEN	WHERE
<ul style="list-style-type: none"> <li>During the peak of activities at hotspots in the night and during the day.</li> </ul>	<ul style="list-style-type: none"> <li>Community level (hotspots)</li> <li>DICs</li> <li>Digital platforms</li> <li>Health Facility</li> </ul>
WHO	WHAT
<ul style="list-style-type: none"> <li>Peer educators</li> <li>Index clients</li> <li>Health workers</li> </ul>	<ul style="list-style-type: none"> <li>IEC Materials</li> <li>HIV education</li> </ul>



### Implementation considerations:

- Where applicable, provide motivation for peer educators who transport peers to the facility and DICs.
- Develop SOPs for digital platforms.

## 3.7 Linkage to ART services



- All clients testing HIV positive should be proactively linked to ART services.
- The person performing the HIV test should ensure that the client is linked to ART services.
- With the client's consent, their contact details should be documented in the HTS register and the client's chosen ART site recorded.



- In large facilities, linkage may require escorting the client to be registered at the ART clinic.



- For inpatient clients who test positive, ART should be initiated in the ward (unless delayed initiation is indicated due to clinical reasons, such as treatment of cryptococcal meningitis). Refer client with a clear referral plan made with the client's preferred ART site.



- Where the client was tested in the community, the healthcare worker or lay cadre performing HIV testing should discuss options for ART sites. The client should, with his/her consent, be linked to a healthcare worker or volunteer (for example, model of hope) from their community.



- Clients who tested HIV positive in the previous month should be followed up to ensure that they have been linked to care either through cross-reference in the ART register or by contacting the client by phone.
- If the client has not been linked to care, they should be provided with further counselling if reached by phone.
- Where they are not contactable by phone, the community health nurse or lay worker should schedule a home visit as part of routine health promotion activities to encourage the client to access ART services.



## DIFFERENTIATED ART DELIVERY

### 4.1 Decentralization of ART delivery



Decentralization of ART delivery has been shown to improve retention in care and is strongly recommended by WHO.

Decentralization of ART delivery can reduce the burden/cost to the health system and reduce the burden of transport costs for the client.

In Ghana, district HIV focal points, in collaboration with NACP leadership, should undertake an assessment to determine the need for additional approved ART sites in their district (all sites should offer HTS).

Where it is decided that a site (including CHPS sites) should not yet become an approved ART site, the group model managed by healthcare worker, the individual models based at facilities or the individual model not based at facilities (see Section 4.4) may still be offered to clients from these sites.

Patients should be informed about facilities close to them, but the patient retains the choice of where to receive their ART services.

At the end of 2020, there were 577 certified ART sites in Ghana, the majority of them in district hospitals, and 5,861 sites providing prevention of mother-to-child transmission (PMTCT) services to HIV-positive pregnant and breastfeeding women.

Decentralization of ART care, taking services closer to people's homes, has been shown to improve retention on ART. By decentralizing to lower-level facilities, the health system avoids overcrowding of centralized sites and reduces the burden of travel time and costs for the clients.

As part of the strategy to reach the national HIV targets, there is continued effort to decentralize ART initiation and treatment to the lower levels of the health system.

To prioritize which sites should become ART sites first, districts should analyze their local data. To be classified as an ART centre (providing initiation and follow up of adult, paediatric and PMTCT services), the site must be assessed using the accreditation for antiretroviral therapy in Ghana, national guidelines and site assessment Ghana Health Service document (2006). In addition, where sites are not chosen to become formal ART sites, patients opting for the group model managed by healthcare workers or the individual model based at facilities may, once classified as successfully established on ART, receive their refills at their nearest site through this option.

At all times, the patient should have the choice of which facility they would like to visit to receive ART, allowing those clients who wish to access ART at a site nearer their workplace or choose a site away from their community to overcome issues of stigma to do so.

As decentralized ART sites are approved and additional health centres and CHPS refill sites set up, clients already on ART at existing centralized sites should be offered the choice to transfer to a facility closer to their home or work or location of their choice. New clients should be encouraged to access ART at their nearest ART facility, but should always be offered a choice.

## Phased approach to decentralization

**Note:** Selection of regions and sites to prioritize for further decentralization of HIV care will be guided by an assessment of local data.

### Phase 1:

Offer ART clients a referral to an existing ART site close to their preferred location.

### Phase 2:

- Approve existing PMTCT sites as ART sites based on a demand analysis.
- Establish health centre and CHPS refill sites based on a demand analysis.

### Phase 3:

Approval of non-PMTCT sites as new ART sites based on a demand analysis.

This phased approach to decentralization may be introduced alongside the introduction of refill options for clients successfully established on ART, as outlined in Section 4.4.

## 4.2 Differentiated ART initiation



For all clients (including those initiating ART after a period of treatment interruption), assessment of both clinical and psychosocial readiness should be made before initiating ART. The 3-test national algorithm should also be re-applied before initiation.

### Timing of ART initiation

- Unless there is a clinical indication for delaying ART (such as treatment of TB or cryptococcal meningitis), all service delivery staff should aim at initiating clients within seven days from diagnosis, providing the necessary counselling support.
- Where assessed as both clinically and psychosocially ready, ART may be offered on the same day as diagnosis. Ongoing treatment literacy counselling should be offered at subsequent visits.

### Laboratory investigation

- Performance of any routine baseline laboratory investigation should not delay initiation of ART if the client is otherwise clinically and psychologically ready to initiate ART.
- 'Baseline' means tests done in the early stages of ART initiation and not only tests done prior to initiation.
- Where clinically indicated:
  - ▶ CD4 may be performed, if available, at baseline to determine whether the client has early or advanced HIV disease.
  - ▶ Other baseline investigations should be performed as clinically indicated.
  - ▶ Where there is no immediate clinical indication, baseline laboratory tests (as defined in the Consolidated Guidelines for HIV Care in Ghana 2021) may be performed after initiation.

For clients with advanced HIV disease (WHO Stage 3 or 4 and/or CD4 <200 cells/mm<sup>3</sup>), an additional package of interventions should be offered at initiation (described below).

Involvement of a treatment supporter is encouraged, but is not compulsory for ART to be initiated.

The preparatory steps for ART initiation (clinical assessment, baseline investigations counselling preparation) are described in the Consolidated Guidelines for HIV Care in Ghana 2021.

**ART initiation can be differentiated according to the following categories of client:**

- ART initiation for individuals presenting to care when clinically well (Stage 1 and 2 and CD4 >200 cells/mm<sup>3</sup>)
- ART initiation for individuals presenting to care with advanced HIV disease (Stage 3 or 4 and/or CD4 <200 cells/mm<sup>3</sup>)

**For all clients, the following points should be considered:**

- Screen for TB with the TB screening tool and diagnose TB with Xpert MTB/Rif.
- Provide TB preventive therapy if TB screening is negative.
- Unless there is a clinical (such as TB and cryptococcal meningitis) or psychosocial contraindication (for example, patient in denial or with severe mental health problems and with no treatment supporter), all clients should be initiated on ART within seven days from diagnosis.
- Same-day initiation may be offered if the client is assessed to be clinically and psychologically ready.
- Where same-day initiation is considered, the focus of the counselling should be on making an adherence plan, the benefits of ART and how to deal with ART side effects. Recapping of basic HIV and ART knowledge, disclosure and index testing can then be made at the subsequent ART follow-up visits.
- Clients who are not ready to initiate ART on the same day should have an appointment booked within seven days with the aim of recapping basic HIV and ART information and initiating therapy.
- Clients who are re-presenting to care after a period of treatment interruption should be assessed in the same way with a clinical and psychosocial assessment. Reasons for stopping treatment should be explored, but the client should not be judged or penalized for stopping medication.
- Although two counselling sessions are recommended in the ART guidelines to cover basic information on HIV and ART, this information may be provided on the same day.

**Clients with advanced HIV disease should receive an additional package of interventions to decrease mortality during the first months on ART. In Ghana, this package consists of:**











- History, examination, investigation and treatment of any symptomatic opportunistic infections (OIs), such as TB, cryptococcal meningitis and toxoplasmosis.
- Delay in ART initiation, as follows, if TB or cryptococcal disease is diagnosed:
  - ▶ TB treatment is started first, followed by ART as soon as practical within two weeks but not later than eight weeks after starting TB treatment.
  - ▶ Treatment for cryptococcal disease is started first, followed by ART.

ART initiation should be deferred until after four weeks of induction and consolidation treatment with amphotericin B or after 4-6 weeks of treatment with high-dose fluconazole induction and a consolidation regimen.

- Provision of cotrimoxazole prophylaxis (for adults with Stage 3 or 4 disease and/or CD4 <350 cells/mm<sup>3</sup>; for all adults where malaria and severe bacterial infections are endemic; and for all children with priority for those under 5 years). Glucose-6-phosphate dehydrogenase status and sulphonamide allergy should be ruled out.
- Where available, cryptococcal antigen (CrAg) screening for clients with CD4 <100 cells/mm<sup>3</sup> and treatment with pre-emptive fluconazole if CrAg positive.
- Increased frequency of follow up during the first three months on ART, including linking with a community health nurse and/or community health worker who is able to perform home visits to ensure that the client's clinical status has not deteriorated and the client is adhering to ART, prophylaxis and OI medication as prescribed.



### 4.3 Follow-up schedule on ART









	D0	Week 2	Month 1	Month 2	Month 3
Clinical TB screening should be performed at each clinical visit					
Counselling					
Laboratory Tests should be performed at any time if clinically indicated	CD4 Pregnancy test If possible Cr if on TDF Hep B surface antigen Liver function tests TB screening		Hb if on AZT		

Counselling



Activities performed by a clinician



Month 4	Month 6	Month 8	Month 10	Month 12	Long-term follow up
	 Take VL			 Take VL	  If successfully established on ART, offer differentiated models for ART delivery (see section 4.4)
	 Give viral load key messages. (See Appendix 4) Discuss refill options.				<b>Adherence should be assessed by the healthcare provider at every clinical visit.</b> If group follow up is chosen, group members give peer support for adherence.  After Month 6, clients should see the counsellor only if a red-flag sign is picked up by the nurse, if client attends late or has a high viral load.
	VL CD4 if VL not available			VL CD4 if VL not available	Viral load yearly If no viral load available, CD4 6 monthly Creatinine (TDF), HB (AZT) and ALT (NVP) should be performed annually if available. If not available, routinely check if there is any suspicion of side effects.

## 4.4 Differentiated ART delivery for clients successfully established on ART



### Definition of a client successfully established on ART

A client may be defined as successfully established on ART when they have:

- been receiving ART for at least six months;
- no current illness, which does not include well-controlled chronic health conditions;
- good understanding of lifelong adherence: adequate adherence counselling provided; and
- evidence of treatment success: at least one suppressed viral load result within the past six months (if viral load is not available: CD4 count >200 cells/mm<sup>3</sup> or CD4 count >350 for children 3-5 years or weight gain, absence of symptoms and concurrent infections).

This definition applies to all populations established on ART:

- Individuals receiving second- and third-line regimens
- PLHIV with controlled comorbidities
- Children and adolescents
- Pregnant and breastfeeding women
- Key populations

**Additional eligibility criteria specific to pregnant and breastfeeding women for accessing differentiated ART delivery models outside their maternal, newborn and child health clinic care.**

- **Women clinically established on ART when conceiving:** already accessing the differentiated ART delivery model plus at least one viral load test of <50 copies/ml in the past three months and accessing antenatal care.
- **Women initiating ART during pregnancy:** since a woman initiating treatment during pregnancy will only become eligible to enter a differentiated ART delivery model in the postpartum period, an HIV-negative result for her infant with a NAT at six weeks and evidence of accessing infant follow-up care are additional requirements.

### **Frequency of clinical visits:**

All clients successfully established on ART should be seen for a clinical assessment once every six months.

### **Frequency of ART refill**

- It should be ensured that all clients successfully established on ART are able to receive a minimum three- month ART refill.
- At the six-monthly clinical visit, two three-month prescriptions should be made indicating the next refill date in three months and the next clinical visit in six months.
- Longer refills should not be given to clients if, during a given supply period, it impacts on other clients receiving less than three months of ART supply.
- Where the facility and supply chain can ensure a six-month refill for those clients choosing the individual facility-based six-month refill option, a six-month refill may be supplied. This must be coordinated with facility pharmacy staff and the national supply chain coordination.
- To standardize client follow up and supply chain planning, refills of four and five months should be discouraged.
- Refill duration may be adapted for clients who are travelling or children attending boarding school.

### **Documentation at refill visits**

- At refill visits, the client does not require a clinical assessment.
- Therefore, at refill visits, documentation should reflect the date of visit, medication dispensed and date of next visit.
- Documentation for the various refill models is described in the standard operating procedures (SOPs) in this document.

## **Options for ART delivery for clients successfully established on ART**

The decision to differentiate ART delivery should be based on a local situation analysis.

Before considering the differentiated ART delivery options, the following points should be addressed in all ART sites:

- Is there a plan for further decentralization of ART sites in the district?
- Is ART care integrated within the OPD setting? This should be the goal in all district hospitals, health centres and CHPS sites where healthcare workers have received ART training.
- If ART clients are booked on only 1-2 days per week and a particular ART day is heavily overbooked, consider the need to spread clients to additional days of the week.
- Ensure that the maximum refill for each follow-up option is available through maintenance of accurate pharmacy data, timely ordering and collaboration with higher-level supply chain coordinators.
- Consider offering ART refills outside school hours (evenings, weekends, holidays and vacation schedules) for children and adolescents.
- All sites must use an appointment system. This may be generated using the e-tracker or, where not available or in the group model managed by clients and individual model not based at facilities, a paper diary should be kept.
- All sites (including health centre/CHPS refill sites) should follow the standard defaulter tracing SOP described at the end of this chapter.

If all these points have been considered and there are still challenges related to facility congestion or long travel distances for clients, consider the alternative refill options described in this chapter.



**It is important to emphasize that, if at any point the client has additional clinical needs, they can be seen by the clinician at any time.**

Clients must be educated on what symptoms and signs they should report in between appointments. These include:

- Symptoms and signs of TB: current cough, fever, weight loss, night sweats or other signs suggesting extrapulmonary TB, such as enlarged lymph nodes
- Persistent diarrhoea or vomiting
- Ongoing or severe headache
- Persistent fever
- New rashes
- Symptoms and signs related to side effects of medications.

The following models for follow up of clients successfully established on ART may be offered from approved public and accredited private ART sites:

1. Group model managed by healthcare workers
2. Group model managed by clients
3. Individual model based at facilities
4. Individual model not based at facilities

## 1. Group model managed by healthcare workers

**Target duration 30-60 minutes**

- Experience to date suggests that this model is more popular in health facilities with large cohorts and in urban areas.
- As a group model, it provides additional peer support.

Clients are organized into groups of 5-20 and booked at a specific time to meet at the facility. To establish a group dynamic for peer support, clients meet at the facility as

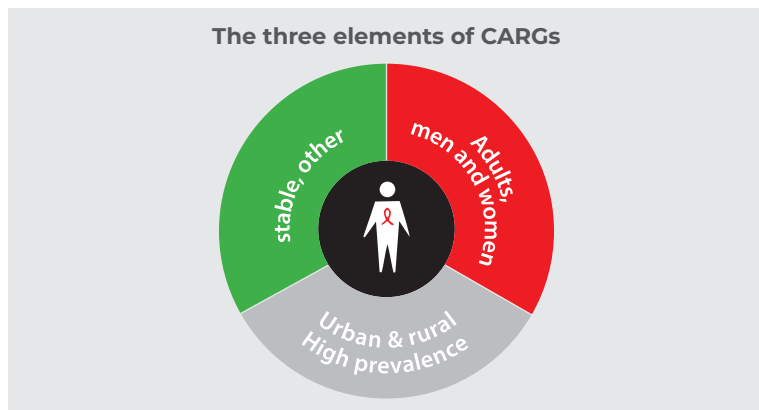


a group every three months. Group discussion is facilitated by a HCW or lay worker (for example a mentor mother or model of hope volunteer) and medication is distributed during the meeting. Where the group is facilitated by a lay worker, the medication should be pre-packed in labelled bags at the refill visit. Every three months, they meet as a group and every six months, in addition to the group meeting, they will be seen individually for a clinical review by a clinician assigned for the group clinical review. The client's care booklet should be completed according to the standard documentation for a clinical review and two three-month prescriptions scripted.

## 2. Group model managed by clients

Community Antiretroviral Treatment Refill Groups (CARGs) are self-forming groups of clients successfully established on ART, usually from the same geographical area. It is a client-managed group model where a representative from the group is nominated to collect refills on behalf of group members. Clients are organized in groups of between four and fifteen. There should be trust among members as they must be willing to disclose their status to each other. To be eligible, clients must meet the following criteria:

- Have a viral load of <50 copies/ml.
- Must have been on ART for at least six months.
- Have no other clinical condition requiring more frequent clinical consultations.



### 3. Individual model based at facilities


#### Target duration 30 minutes

Clients are seen individually every six months by a trained clinician (nurse, physician's assistant or doctor) and prescribed two three-month scripts of ART. As noted in Section 4.3, if the supply chain is ensured, clients may also be given the choice of receiving all six months of ART. Where the refill is three monthly, clients collect their refills directly from the dispensing point and, when pre-packed, these may be distributed by a lay worker. They do not queue to see the clinician. The client can collect the medication at any time during clinic opening hours on his/her refill day. This model has most value in health facilities where dispensing is performed in a separate room and by a different HCW to the clinical consultation.

### 4. Individual model not based at facilities

Where a client is tested at a facility that is not accredited as an ART site, they should be linked with their nearest ART site for initiation. However, once successfully established on ART, they should be offered the choice of receiving their ART either from the ART site, via options 1 and 2 described above, or from their health centre, CHPS, drop-in centre or community pharmacy refill site of choice. If opting for this refill option, they will attend the ART site every six months for a full clinical review and receive their refill at the refill site after three months.

Collection of ART from the approved ART site may be by the HCW, lay worker, community pharmacist or nominated client.

 For any of these options, a nominated treatment supporter or family member may collect the ART on the client's behalf if they are travelling or not available due to unforeseen circumstances. Clients should, however, be seen every six months for a full clinical review and have VL testing performed according to the national guidelines.



Community cadres and HCWs may also deliver ART to clients during home visits. Case managers, models of Hope, Mentor Mothers, CATs and HCWs where applicable, may receive ART on behalf of clients and deliver directly at home visits. This will be based exclusively on the written consent of the client.

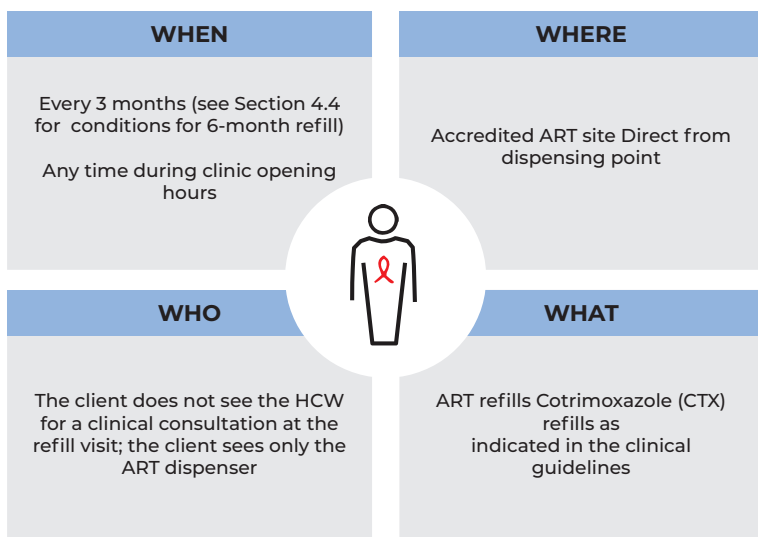
**Table 6:**

Summary of clinical and refill visit frequency for ART follow up for clients successfully established on ART

Refill option	Frequency of clinical visit	ART refill duration for scripting (see SOP section for additional information)
Group model managed by healthcare worker	Every 6 months (book as group but additionally have individual clinical assessment)	3 months
Group model managed by client	Every 6 months at ART site	3 months
Individual model based at facilities	Every 6 months	3 months Additional conditions for 6-month refill (see Section 4.4)
Individual model not based at facilities	Every 6 months at ART site	3 months

## STANDARD OPERATING PROCEDURE FOR INDIVIDUAL MODEL BASED AT FACILITIES

### Facility-based individual refill from pharmacy or dispensing point (Fast Track Refill)



What preparation is needed before implementing this refill model?

- Training of HCW on the model SOP
- Agreement with HCWs dispensing ART on the client flow and documentation for this refill model.

**Where is the refill given?**

Direct from the pharmacy/dispensing point.

**When is the refill given?**

The client should be able to attend any time during clinic opening hours on their refill appointment date or at agreed times for fast-track refills for an individual facility.

Extended opening hours for the pharmacy should be considered.

**Who does the client see during the refill?**

The client goes directly to the dispensing point and sees the HCW who has been allocated to dispense medication. They do not queue to see the HCW for a clinical review.

If a six-month refill is feasible, then every visit is a clinical visit and the client will see the healthcare worker who provides a clinical consultation.

**What happens during the refill?**

The client is asked at the dispensing point if they have any problems today. Full screening tools are not used. If they have a problem, they are directed to the clinician for review. If there are no problems, the client receives their ART refill. The refill documentation is carried out by the dispenser of the medication.

The client should ideally receive their medication within 15 minutes, but should not wait longer than 30 minutes.

**What happens at the clinical visit?**

A full clinical assessment should be carried out every six months and VL samples should be drawn annually. Where three-month refills are given, two three-month scripts should be written indicating the date of the next refill and the date of the next clinical visit. Only where drug supply can be ensured and the patient chooses, a six-month supply of medication may be given at the time of the clinical visit.

## What happens on the day of a fast-track refill?

### STEP 1

- Use the e-tracker appointment list or patient appointment register to pull out the client care booklets for the next day.
- Identify which clients are receiving ART in the fast-track model.

### STEP 2

- For clients in the fast-track model, send the client care booklets to the dispensing point.

### STEP 3

- Client attends on day of refill appointment any time during clinic opening hours.
- Client attends the dispensing point directly.
- Client does not have an individual HCW clinical assessment unless the patient requests this.

### STEP 4

- Dispenser provides refill as prescribed, and completes client care booklet for refill visit

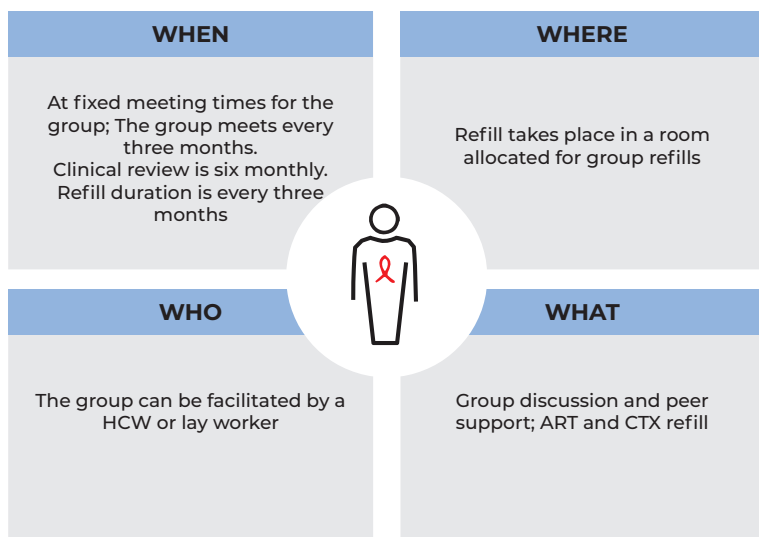
### STEP 5

- The client care booklet is sent to the data clerks for entry.
- At paper-based health facilities, the next refill date should be written in the appointment register.
- If any client does not collect medication as per their appointment, the standard defaulter tracing system should be triggered.

## STANDARD OPERATING PROCEDURE FOR GROUP MODEL MANAGED BY HEALTHCARE WORKERS

This model may be offered at ART sites or health centre or CHPS refill sites.

Implementation experience to date shows that it is most effective at high-volume sites in urban settings.



### What preparation is needed before implementing this refill model?

- Training of HCW on the model SOP and completion of documentation in the client care booklet
- If required, agreement with pharmacy staff dispensing ART to pre-pack and label ART for the group refill session. Pre-packing of medication will facilitate groups being led by non-clinicians
- A room or other location (such as a waiting area) should be assigned, and defined booking times should be agreed on for the groups.

### **How are the groups formed?**

- Groups may consist of between five and twenty clients depending on the cohort size at the facility.
- To facilitate group formation, a designated healthcare worker in the clinic should be allocated to coordinate group formation.
- Groups are formed primarily by the healthcare worker as they screen the clients as successfully established on ART.
- If there are pre-existing support group members or a subgroup of clients who would like to receive refills within the same group, then this should be facilitated.
- The list of group members with their contact details should be kept in the facility- held facility group ART register (Appendix 2).
- Each group should be given a specific group number, which is indicated on the front of their client care booklet.

### **Where is the ART given?**

The medication refill is given in the allocated facility room where the group meets.

### **When is the ART given?**

- Each group is booked at a specific time to collect their refill. Ideally, the group should select the timing of their refill.
- Groups may be booked during or after clinic hours or at weekends.
- Three-month ART refills should be given during a group refill.

### **Who does the client see during this refill?**

The group should be facilitated, if possible, by the same healthcare worker or lay worker at each refill visit to establish rapport with the group.

### **What happens during the refill?**

- Once groups members arrive (a maximum of 15 minutes from the booked time for the group meeting should be given before the activities start), the healthcare worker or lay worker leading the group facilitates discussion.
- Clients are asked as a group if they have any specific clinical problems or any cough, sweats or weight loss.
- Any client with a clinical issue is then directed to see the healthcare worker.

- Clients are then asked to share any other challenges or positive experiences they have faced with the group members.
- The length of the discussion is dependent on the participants, but the entire refill session should not take longer than 60 minutes.
- The healthcare worker then distributes the ART, which may be pre-packed, to each group member individually.

### **What happens at the clinical review?**

All the group members should be aligned to receive their clinical review at the same time once every six months. They meet as a group, as described below, but are also seen individually by the healthcare worker assigned to the group that day (note that on the refill visit in between, they are not seen individually). The clinician writes two three-month scripts on the clinical review form of the client care booklets and the dates for the next refill and next clinical review given. Once a year, they will have their VL tested. Aligning the clinical visit for the group facilitates uptake of viral load testing and allows the group to discuss high VL results and other issues that are raised at the annual review.

### **How are the client care booklets filled?**

In health facilities with the e-tracker, the client care booklets should be filled in one folder labelled with the group number to facilitate pulling of files. The group number should be written on the front of the client care booklet. At paper-based health facilities, files may be kept according to groups and replaced for cohort analysis or pulled individually at each group meeting.

## What happens on the day of a group refill?

### STEP 1

- Use the e-tracker appointment list or patient appointment diary to identify which groups are attending the next day.
- Pull the client care booklets for groups identified.

### STEP 2

- In settings where a lay cadre will distribute ART to the group (or where the team feels that pre-packing of medication will facilitate dispensing in the group room by the HCW), send the client care booklets to the dispensing point for ART to be dispensed and pre-packed.

### STEP 3

- At the time of the refill, the client care booklets and dispensed pre-packed medication should be sent to the group meeting room.
- The clients in the group attend at the specified time for their group.
- If any clinical problem is identified, they are referred to see the HCW.

### STEP 4

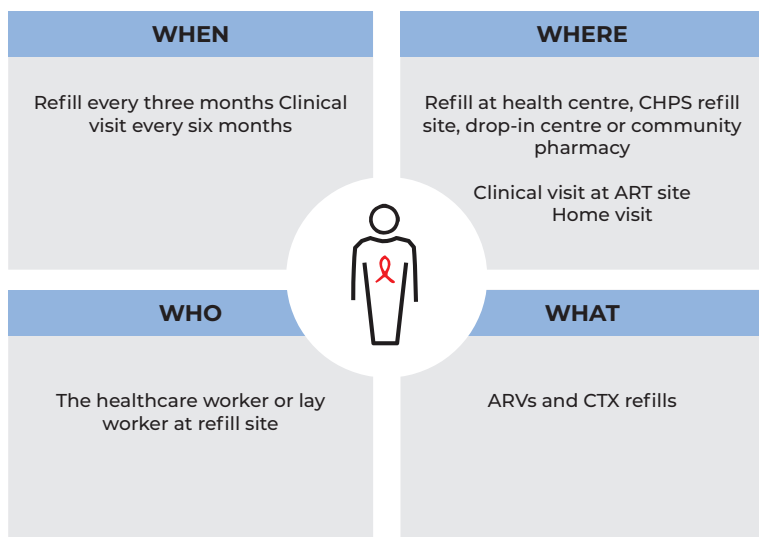
- Facilitated discussion is held for 30-45 minutes.
- The HCW distributes ART to the clients.
- The HCW distributing the medication should complete the client care booklets for a refill visit.

### STEP 5

- The client care booklets are sent to the data clerks for entry into the e-tracker.
- In paper-based sites, the next refill date for the group, including the group number, is written into the appointment diary.
- If any client does not collect medication as per their appointment, the standard defaulter tracing system should be triggered.



## STANDARD OPERATING PROCEDURE FOR INDIVIDUAL MODEL NOT BASED AT FACILITIES



### What preparation is needed for this model?

Refill sites should:

- Have a defined agreement with a specific ART site that will hold the client care booklet and provide the ART and clinical follow up
- Hold an appointment diary for their ART clients
- Nominate who will collect ART from the ART site
- Have HCWs trained in completion of the refill form required to collect ART from the host ART site
- Have HCWs with basic ART and HIV treatment literacy and be aware of common ART side effects and red-alert symptoms and signs.

The following implementation considerations should be deliberated before rolling out the home visit approach in this model:

- Training for community cadres on documentation and good dispensing practices and pill count as a mode of checking adherence to treatment.
- Training of community cadres on adherence counseling.
- Training of community cadres on assessment of clients to identify clients who need clinical care.

**When is ART given?**

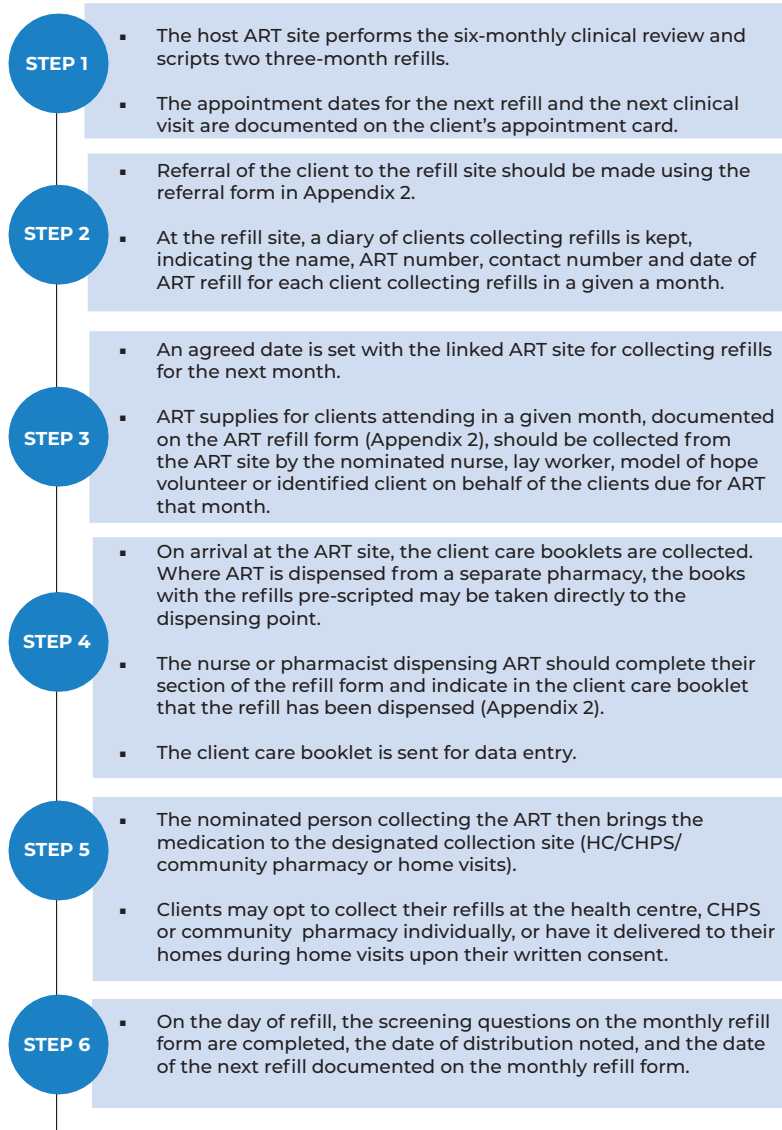
For this model, a three-monthly refill will be given.

**What happens at the clinical visit?**

Clients should attend the ART sites for full clinical review every six months and VL annually.

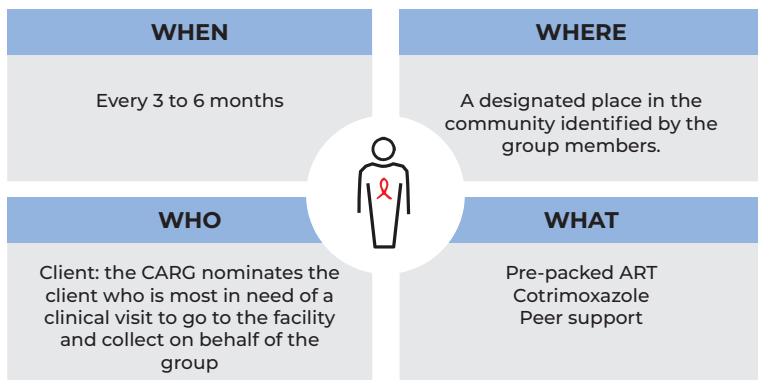
**Steps for individual model not based at facilities**

(Health Centre/ CHPS/ Drop-in centre/ community pharmacy/ home visits)



## STANDARD OPERATING PROCEDURE FOR GROUP MODEL MANAGED BY CLIENTS

This model is formed within the community and may evolve from facility-based groups. It is also referred to as the Community Antiretroviral Treatment Refill groups (CARGs).



### What preparation is needed before implementing this refill model?

- Training for community cadres on documentation and good dispensing practices and pill count as a mode of checking adherence to treatment.
- Training of community cadres on adherence counseling.
- Training of community cadres on assessment of clients to identify clients who need clinical care.

### How are the groups formed?

- Groups may consist of between four and fifteen clients.
- Groups may evolve organically from facility-based groups of clients from the same geographic area.
- Groups are formed and managed solely by the clients themselves.
- Each group should be given a specific group number, which is indicated on the front of their client care booklet.

### **Where is the ART given?**

- The medication refill is given in the allocated facility room where refills are dispensed.

### **When is the ART given?**

- The designated CARG collector is booked at a specific time to collect the refill. Ideally, the facility should be notified that the client will be receiving refills on behalf of the group.
- Three-month or six-month ART refills should be given during a group refill.

### **What happens on the day of a CARG visit?**

#### **Step 1:**

- Use the e-tracker appointment list or patient appointment diary to identify which groups are attending the next day.
- Pull the client care booklets for groups identified.

#### **Step 2:**

- In settings where a lay worker will distribute ART to the group (or where the team feels that pre-packing of medication will facilitate dispensing in the group room by the HCW), send the client care booklets to the dispensing point for ART to be dispensed and pre-packed.
- At the time of the refill, the client care booklets and dispensed pre-packed medication should be sent to the designated dispensing room.

#### **Step 3:**

- The designated CARG collector attends at the specified time booked with the care booklets of the members of the CARG for whom ART is to be collected.

#### **Step 4:**

- The HCW provides the groups ART to the designated CARG collector.
- The HCW distributing the medication should complete all the client care booklets for a refill visit.

### **Step 5:**

- The client care booklets are sent to the data clerks for entry into the e-tracker.
- In paper-based sites, the next refill date for the group, including the group number, is written into the appointment diary.
- If any client does not collect medication as per their appointment, the standard defaulter tracing system should be triggered.

CARG members still require regular clinical consultations and this should be scheduled every 6 months. Refills for non-communicable diseases can be considered if the healthcare system in that community supports it.

## **Additional considerations for differentiated ART delivery options**

### **Promotion of refill options to clients**

- Differentiated ART delivery is founded on client-centred care.
- All the follow-up options should be explained in order for the client to make an informed decision.
- Descriptions of the options may be introduced during ART preparation and then reiterated during follow-up counselling sessions in the first six months (see counselling outline in Appendix 3).
- The pros and cons of moving care closer to home and the potential benefits of a group approach for providing peer support should be clearly explained.
- Issues concerning maintenance of confidentiality should be emphasized to both HCWs and clients when establishing ART services according to the models described as this is often a concern that prevents clients from receiving treatment closer to their community.
- At all times, the client maintains the right to choose where they receive their HIV care and where they collect ART refills.
- Utilizing lay workers and community health workers to sensitize clients on the available models may also support the uptake of the different options for differentiated ART delivery.

## Incorporating Sexual and Reproductive Health into follow up for HIV clients


 NEW

- All PLHIV receiving ART through the various ART delivery models must continue to access SRH services (for example family planning, cervical cancer screening, treatment of STIs, etc).
- Utilization of long-acting contraceptive methods is advantageous as the client does not need regular clinic visits.
- Where clients use depot injections, they should ideally be able to access this on the same day as their ART refill in an integrated approach or in the community.
- If this is not feasible, the client should attend the clinic independently for regular depot injections.
- Sexual and Reproductive health services should be integrated with HIV services at CHPS and Health Centers. The provision of SRH services at the CHPS and Health centres should be integrated into the ART services provided to the client since the same HCW provides these services at these level of health care delivery. At the District, Regional and Teaching hospitals, clients should be linked to the public health units in the facility to receive SRH services.


 NEW

## Incorporating TB preventive therapy into refill models for clients successfully established on ART

Clients opting for individual refill models should be seen monthly for the first two months and then every two months until completion of TB preventive therapy. While on TB preventive therapy, the triage nurse or person dispensing ART to the client should complete the TB screening tool, but otherwise the refill is carried out as per the standard refill SOP. For clients in a group refill model, where possible try to align group members' TB preventive therapy periods. Clients should be aware of symptoms to report at any time between refills (for example, rash, diarrhoea, yellow eyes).

## Action when a client does not meet the definition of “successfully established on ART”

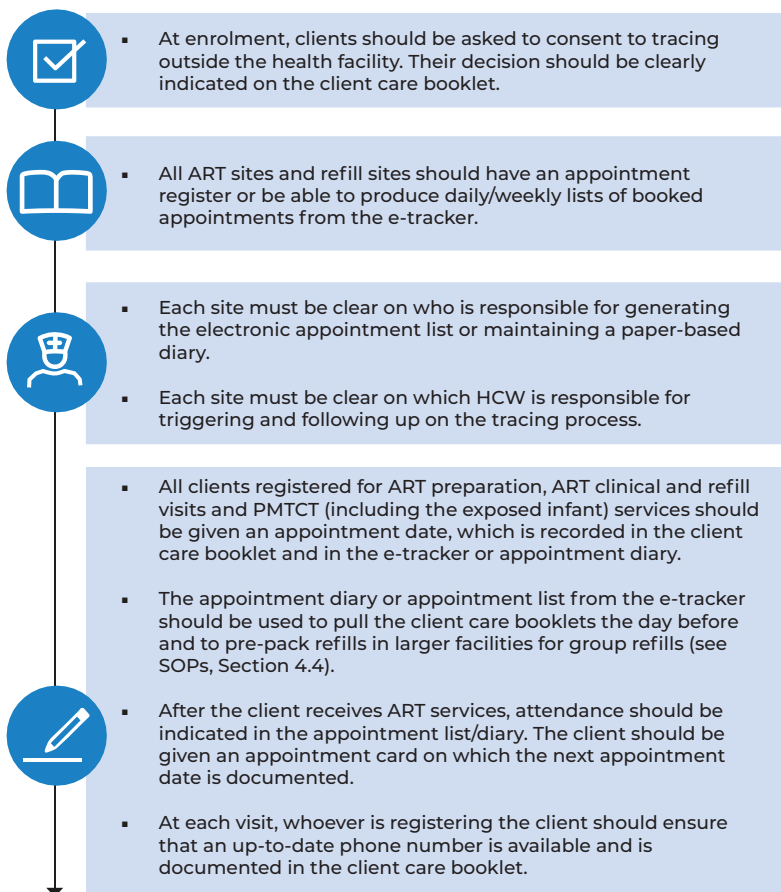
To enter any of the ART delivery options for clients successfully established on ART, the client must meet the definition as detailed in Section 4.4. However, at any point, the client may be assessed and considered as not being successfully established on ART should the following situations occur:

- Poor adherence, missed appointments
- Patient develops viral load > 50 copies/ml or has a decreasing CD4 count
- Patient develops a concurrent OI, TB or other medical condition requiring additional medical follow up

If these situations occur, the client should be referred to the appropriate differentiated intervention, such as enhanced adherence counselling pathway or treatment of TB. The client will then continue in this intervention until they again meet the eligibility criteria for clients successfully established on ART.



## STANDARD OPERATING PROCEDURE FOR TRACING CLIENTS WITH MISSED APPOINTMENTS





- Files of clients who have missed appointments should be set aside in a missed appointment tray/area.
- If the client has not attended their appointment three days after they were booked, the tracing procedure should be triggered.



- Tracing should first be attempted by phone, firstly contacting the client and if not reachable the treatment supporter.
- If the client is reached by phone, a date for attendance should be agreed and documented in the client care booklet and entered into the e-tracker.
- If this date is not kept, the client should continue to be traced until they are declared lost to follow up (non-attendance for three months from their booked appointment).



- Where the client or treatment supporter cannot be reached by phone on three consecutive days, the lay worker, community health nurse or community health worker should attempt to reach the client at home.



- If the client is not reached on the first occasion, a second attempt should be made after seven days. When the client is reached, a date for attendance should be agreed on.
- If the client has not attended after three months attempt one further phone call and /or home visit. If client is not found document as loss to follow up.



- If a client is re-initiated to ART, a viral load test should be conducted before ART initiation.
- The outcome of the defaulter tracing should be indicated in the client care booklet. Outcomes of tracing include:
  - On ART at the clinic (incorrect documentation)
  - Lost to follow up
  - Died
  - Moved away and not on treatment
  - Official transfer out
  - Self-transfer to another health facility; still on ART.



5.0

## DIFFERENTIATED SERVICE DELIVERY FOR HIV IN SPECIFIC POPULATIONS

### 5.1 Differentiated service delivery for HIV in children and adolescents



#### 5.1.1 Differentiated HIV testing services for children and adolescents (10–19 years)

In 2020, the estimated ART coverage for children in Ghana was 39.4%. Identification of children with HIV is a priority, but targeted strategies should be employed to ensure efficient use of resources.

The following children should be routinely offered opt-out PITC:

- Any child or adolescent of an HIV-positive mother or sibling living with HIV (as part of the PMTCT programme or through index client testing) (see SOPs Section)
- Any child or adolescent in an inpatient or malnutrition ward
- Any child or adolescent presenting to the emergency department
- Any child or adolescent presenting to MCH, EPI or OPD services with symptoms or signs suggestive of HIV infection
- Any child or adolescent with TB
- Any child or adolescent with an STI
- Any child attending the under-5 clinic.

HTS for children older than five years and adolescents presenting to the OPD should be offered if the adolescent/guardian answers “yes” to any of the following questions:

- Has the child/adolescent ever been treated for TB?
- Has the child/adolescent had recurring skin problems (such as herpes zoster)?
- Has the child/adolescent had recurrent ear discharge?
- Has the child/adolescent presented with significant weight loss?
- Has the child/adolescent had vaginal or urethral discharge, genital ulcers, lower abdominal pain, painful swelling in the genital area scrotum or groin?
- Has one or both child/adolescent natural parents died?

If a child has previously been tested with a documented result, re-testing is not indicated unless there is suspicion of recent exposure (multiple blood transfusions, sexual abuse or new symptoms).

Testing children for HIV often poses challenges for healthcare workers regarding the management of disclosure and the issue of consent. In Ghana, the age of consent for HIV testing is 16 years. However, for children below this age, two important principles should be applied:

### Principle 1: The mature minor

The consent of a parent or caregiver is required before performing an HIV test on a child who is younger than 16 years. However,

any person who is between 14 and 16 years and is sexually active, married, pregnant, a parent or requests HTS is considered to be a mature minor and is able to give full informed consent.

## Principle 2: The best interests of the child

If a parent or caregiver will not or cannot give consent for a child younger than 16 years and the child is not classified as a mature minor, the healthcare worker can exercise the “best interests of the child” principle and seek approval from the person in charge of the clinic or hospital to perform the HIV test. This includes when:

- A child is ill and HIV diagnosis will facilitate appropriate care and treatment
- A child is a survivor of sexual abuse
- A child is sexually active
- A child is concerned about mother-to-child transmission
- A child has been exposed to HIV through vertical or sexual transmission
- A child expresses concern that, given an HIV-positive result, he or she will be denied access to care and treatment by a parent/caregiver.

In some cases when this principle is applied, a temporary shelter or foster home may have to be provided upon consultation with the hospital authority/medical social welfare department.



Please do not avoid performing HTS for children and adolescents. If you do not feel comfortable testing a child or adolescent, please seek further support from your supervisor or local mentorship team.

### 5.1.2 Point-of-care nucleic acid testing to diagnose HIV among infants and children younger than 18 months of age

PoC NAT to diagnose HIV among infants and children younger than 18 months of age is strongly recommended by WHO due to its overwhelming benefits such as:

- more rapid testing and return of results to caregivers and clinicians;

- increased retention in the testing-to-treatment cascade;
- fewer health facility visits for caregivers to receive results and more reliability in the timing of results and possibly more likelihood for test documentation;
- increased equity with adult HIV testing – same-day testing and receiving the result;
- increased access to ART and faster initiation, which may reduce mortality; and
- improved quality of services.

### **Implementation considerations:**

- PoC infant diagnosis technologies should be used within the current infant diagnosis algorithm at any point when a NAT is required.
- If PoC cannot be done, alternative options must be found, ensuring rapid laboratory-based testing.
- Adequate human resources, training (including technical, result interpretation, counselling and supply chain), service and maintenance and quality assurance should be carefully considered.

### **5.1.3 Differentiated ART initiation for children and adolescents**

- The recommendation for rapid initiation within seven days (including same-day initiation) should be followed for children and adolescents. However, it should be recognized that education of the caregivers responsible for delivery of a younger child's ART may take more sessions.
- Where possible, two caregivers should be educated, especially where it is determined that the child may spend time in different houses (grandmother, aunt, etc.).
- Adolescents should be engaged in the basic HIV and ART education and in making an adherence plan.
- How the basic HIV and ART education is carried out will depend on the age of the child and the decision made with the guardian on disclosure.
- Disclosure may be introduced in phases according to the age of the child.

- Although individual children's ability to understand the concepts of HIV and ART will vary by age, it is encouraged to aim for full disclosure by age 8 to 10.
- Usually, one can start mentioning to a 4-6 year old HIV-infected child that they have a chronic disease that requires regular clinic visits and medicines every day. This discussion can be initiated when the child starts to ask questions about the disease or medications he/she is taking or when the child acts in a way to suggest that he/she is feeling isolated from other children because of the disease.
- Before their early teen years, HIV-infected children should know that they are infected with HIV, learn how it is spread and how to stay healthy.



#### 5.1.4 Presumptive treatment for exposed infants

- Where there is a high index of suspicion of HIV infection in a newborn (e.g., has signs and symptoms of HIV) but an EID result is not available, the infant should be put on presumptive treatment.
- Presumptive treatment is the administration of a triple-drug regimen at therapeutic doses to the infant with the goal of minimizing transmission and drug-resistant HIV (HIVDR) selection in the event of established infection despite prophylaxis.
- At least one specimen must be collected prior to initiating any presumptive treatment so that an EID test can be performed as soon as possible. If the test is positive continue the triple-drug therapy but confirm with another EID test. Interrupt triple-drug therapy if the EID result is negative and continue monitoring the infant per the national guidelines.

#### 5.1.5 Differentiated ART delivery for children and adolescents

##### Where is ART provided?

- Paediatric ART initiation and management should be decentralized to all ART facilities, ensuring that there are trained health service providers.

- A family approach should be taken. In facilities where ART care and MCH services are separate, follow up of both the mother and the child should be performed in MCH until the child is five years old.
- After five years of age, a family approach should be implemented in the ART/OPD setting, which ensures that the mother and child are seen on the same day.
- Adolescents should be seen in the OPD/ART clinic, but booked on the same day and offered group refill options (See Section 4.4).

### **Who provides ART?**

- Healthcare workers, including nurses, should receive specific training to provide ART follow up for children and adolescents.

### **Who provides psychosocial support?**

- Psychosocial support for children and adolescents is particularly important. Ongoing assessment of disclosure status should be made each time the child is reviewed with the aim of achieving full disclosure by the age of 10.
- Every clinic should have at least one healthcare worker trained to perform paediatric disclosure counselling and one healthcare worker who is focused on providing adolescent-friendly services. One of the most important factors is for healthcare workers to approach adolescents and young adult clients in a non-judgmental manner.
- Adolescent or young adult peer educators have been shown to provide additional support for adherence and retention.
- Larger sites should try to identify 2-3 adolescent champions who should receive some basic training and may support treatment literacy activities and tracing of those clients who default.
- Adolescent peers may be based at facility level to help facilitate clinic activities on child and adolescent clinic days, and engage with clients in the community to provide additional adherence support.



## When is ART delivered for children?

Clinics should book HIV-positive children and their mothers on the same day to enable peer support for both the guardian and the older children and adolescents.

To be eligible for 6-monthly clinical visits, a child successfully established on ART is defined as:

- receiving ART for at least six months;
- no current illness, which does not include well-controlled chronic health conditions;
- good understanding of lifelong adherence (by parent, caregiver or client): adequate adherence counselling provided; and
- evidence of treatment success: at least one suppressed viral load result within the past six months (if viral load is not available: CD4 count >200 cells/mm<sup>3</sup> or CD4 count >350 for children 3-5 years or weight gain, absence of symptoms and concurrent infections).

**Table 7:**

Frequency of follow up for children and adolescents on ARV

Age	Where	Frequency of clinical visits	Frequency of ART refill visits	Grouping
0-2 years	MCH family approach with integrated mother and child follow up	Week 2 Month 1, monthly	N/A All clinical visits	Book HIV-positive mother and child on same day to enable peer support for caregivers
2-5 years	MCH family approach with integrated mother and child follow up	Week 2, Month 1 Month 2, Month 3, 3 monthly	N/A All clinical visits	Book HIV-positive mother and child on same day to enable peer support for caregivers

Age	Where	Frequency of clinical visits	Frequency of ART refill visits	Grouping
5-10 years	Family approach with integrated mother and child follow up in ART clinic/ OPD	<p>Week 2, Month 1 Month 2, Month 3, Month 6</p> <p>3 monthly until successfully established on ART</p> <p>Once successfully established on ART, move to 6 monthly</p>	3-monthly refill through differentiated refill option	Book HIV-positive mother and child on same day to enable peer support for caregivers –“paediatric refill group”
10-19 years	In ART/OPD clinic	<p>Week 2, Month 1 Month 2, Month 3, Month 6</p> <p>If successfully established on ART, 6 monthly</p>	3-monthly refill through differentiated refill option	“Adolescent group ART follow up”

## Group ART follow up for children and adolescents

### Family group ART follow up

For mothers of children who are having monthly or three-monthly clinical review in MCH and for those children older than five years who are attending the ART/OPD clinic every three months, it is recommended that they are booked on a particular day of the week/month (depending on clinic numbers). Clients should be offered the opportunity to participate in group discussion facilitated by a healthcare worker or lay worker. Peer-to-peer sharing of experience should be encouraged.

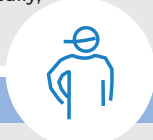
### Facility-based adolescent group refill

Once successfully established on ART, adolescents may receive their ART through a group approach. This approach provides additional peer support and should integrate tailored adolescent health education activities (including SRH education) alongside collection of ART. As HIV care is decentralized, the numbers of adolescents in any given facility are likely to be small, but a group approach should still be offered where possible. If an adolescent does not choose to join a group, they will continue to receive three-monthly refills via the standard ART clinic follow up.

## STANDARD OPERATING PROCEDURE FOR ADOLESCENT GROUP ART REFILL



WHEN	WHERE
3-monthly refill; 6-monthly clinical review; Ideally, outside school hours	Room at health facility
WHO	WHAT
Healthcare worker or lay worker; Encourage engagement of adolescent peers	ART; CTX; SRH education; Interactive games and activities



### **What preparation is needed before implementing this refill model?**

- Healthcare workers should be trained on specific facilitation methodologies for adolescents.
- If feasible, 1-2 peers should be identified. These peers will co-facilitate the group sessions and provide additional support as required in the community, including tracing of defaulters.
- Pre-packing of medication will facilitate groups being led by lay workers.
- These groups will function as a support group while also providing ART refills.

### **Where?**

The group meets in a defined room at the ART facility or health centre/CHPS refill site.

### **When?**

The group meets every three months. Each group is booked at a specific time to collect their refill. Ideally, the group should select the timing of their refill. Groups may be booked after school hours or at weekends.

### **Who?**

The healthcare or lay worker facilitates the group. Where possible, an adolescent peer may also facilitate the group discussion.

### **How are the groups formed?**

Groups can be made up of between five and twenty clients. In order to facilitate group formation, a designated healthcare worker in the clinic should be allocated to coordinate group formation. Groups are formed primarily by the healthcare worker.

They may be formed as the healthcare worker screens clients and determines them as eligible, as consent has been provided by the caregiver, and as referral is made to the designated focal point for the groups. Groups may be formed from existing support groups.

It is suggested that children and adolescents are grouped according to their age groups (10-14, 15-19 and 20-24). The list of group members with the contact details should be kept in the facility-held ART group register (Appendix 2). Each group should

be given a specific group number, which is indicated on the front of the client care booklet and on their appointment card

### **What happens during the refill?**

Once group members have arrived (a maximum of 15 minutes after the booked time for the group meeting should be given before the activities start), the healthcare worker leading the group should facilitate discussion. Clients are asked as a group if they have any specific clinical problem or TB symptoms, such as any coughs, sweats or weight loss. Any client with a clinical issue is then directed to see the healthcare worker. There should be a specific activity for the day chosen from a selection of topics that can be rotated at each group meeting. The choice of topics should recognize the age and developmental status of each group.

### **Topics may include the following:**

- Growing up: changing bodies, changing emotions, feeling good about ourselves
- Coping with difficult situations, problem solving
- Sex and relationships: love and sex, safer sex, social pressures to have sex
- Unwanted pregnancy and use of contraception; PMTCT
- Living with HIV
- ART and adherence
- Disclosure
- Relationships with family and friends.

There should also be time allocated for recreational activities, such as singing and games.

The length of the discussion depends on the participants, but the entire session should not take longer than 90 minutes.

The healthcare worker then distributes pre-packed and labelled medication to each group member individually.

### **What happens at the six-monthly clinical visit?**

All the group members should be aligned to receive their clinical review at the same time. For adolescents successfully established on ART, this should be twice a year. At this visit, they still meet

as a group for the discussion and activities, but the healthcare worker also sees them individually. Once a year, the HIV viral load sample is drawn. Aligning the clinical visit for the group facilitates uptake of viral load testing and allows the group to discuss viral load results and other issues that are raised at the clinical review.

### How are the client care booklets filed?

The client care booklets should be filed together in a file indicating the group number. This facilitates pulling of files on days when group refill options are booked.

### What happens for the group refill?

#### STEP 1

- Use the e-tracker appointment list or patient appointment diary to identify which groups are attending the next day.
- Pull the client care booklets for groups identified.

#### STEP 2

- In settings where a lay worker will distribute ART to the group (or where the team feels that pre-packing of medication will facilitate dispensing in the group room by the HCW), send the patient care booklets to the dispensing point for ART to be dispensed and pre-packed in named bags.

#### STEP 3

- At the time of the refill, the client care booklets and pre-packed medication should be sent to the group meeting room.
- The clients in the group attend at the specified time for their group.
- If any clinical problem is identified, they are referred to see the HCW. This may be in the clinic, or the HCW may also consult where the group is facilitated if space allows.

#### STEP 4

- Facilitated discussion is held for 30-40 minutes and there are games and activities for another 30-40 minutes.
- The HCW distributes ART to the clients.
- The HCW distributing the medication should complete the client care booklet according to the SOPs.

**STEP 5**

- The client care booklets are sent to the data clerks for entry into the e-tracker.
- The next refill date is written into the appointment diary indicating the group number.
- If any client does not collect medication as per their appointment, the standard defaulter tracing system should be triggered.

## 5.2 Differentiated service delivery for HIV in pregnant and breastfeeding women



### 5.2.1 Differentiated HIV testing services for pregnant and breastfeeding women.

HIV testing should be made available in the ANC, labour and delivery ward and PNC. Pregnant and breastfeeding women should be re-tested according to the national HIV testing guidance.

### 5.2.2 SRH/HIV service integration

The main principle of providing ART to pregnant and breastfeeding women is to provide an integrated service where the mother can receive the following services on the same day, in the same room and from the same healthcare worker:

- ANC/PMTCT/ART
- Delivery/PMTCT/ART
- Postnatal care/PMTCT/ART, including the care of the HIV-exposed baby.

### 5.2.3 Differentiated ART delivery for pregnant and breastfeeding women

#### Where?

Any accredited ART or PMTCT site should provide PMTCT services. ART and sexual and reproductive health (SRH) services should be integrated and provided at MCH clinics, antenatal wards, labour and delivery wards or postnatal clinics. In postnatal services, HIV-

positive mothers and their exposed infants should be seen in the same clinic (MCH/under 5) in a “family approach”.

### When?

- All pregnant women should be tested for HIV at their first ANC visit. Those found to be HIV positive should be offered same-day initiation of ART at the first ANC visit. Explain that the motivation to start ART is to suppress the mother’s viral load and to protect the baby.
- Re-testing for pregnant women should be done during the 3rd trimester. All pregnant women should be tested at 34 weeks of pregnancy.
- Integrated testing for HIV, syphilis and hepatitis B should be offered to all pregnant women. Where a client tests positive, refer to the 2020 consolidated HIV care guidelines for treatment and management of syphilis and hepatitis B for pregnant women.
- PMTCT services should be available during standard clinic hours, and must also be available 24 hours a day in the maternity unit to ensure that services are provided to women during labour and delivery. Women newly initiated during ANC should be seen two weeks after initiation and monthly thereafter till delivery.
- After delivery, the infant should be seen within 3-7 days, at six weeks and monthly thereafter until six months (these visits should coincide with the normal child welfare clinic visits).
- After six months, the mother and exposed baby should be seen together every three months in a “family” approach until the child has tested HIV negative at 18 months or 12 weeks after complete cessation of breastfeeding.

Women successfully established on ART and receiving their ART through one of the differentiated models of ART described in Section 4.4, may choose to continue to receive their ART through this model. However, they must attend the additional antenatal and postnatal visits, including the appropriate follow up of the HIV-exposed infant.





## Who initiates ART?

Any trained healthcare worker should initiate ART to a pregnant or breastfeeding mother (refer to the task-sharing guidelines for Ghana, 2017).

## Who should provide psychosocial support?

Trained healthcare workers should provide psychosocial support. Where possible, linking a newly diagnosed pregnant mother with an HIV-positive woman who has already undergone PMTCT has been shown to support adherence, disclosure to partners and reduce loss to follow up.

## Monitoring treatment of pregnant and breastfeeding women.

- Whenever possible, use same-day point-of-care testing for viral load testing of pregnant and breastfeeding women to expedite the return of results and clinical decision-making. If this is not available, viral load specimens and results for pregnant and breastfeeding women should be given priority across the laboratory referral process (including specimen collection, testing and return of results).
- Adherence counselling should be provided at all antenatal care and postnatal visits to ensure that viral suppression is maintained throughout pregnancy and breastfeeding.
- For all pregnant women, regardless of ART initiation timing: conduct viral load testing at 34–36 weeks of gestation (or at the latest at delivery) to identify women who may be at risk of treatment failure and/or may deliver infants at higher risk of perinatal transmission. See chapter 6 for actions to be taken when VL >50 copies/ml.
- For pregnant women receiving ART before conception: conduct a viral load test at the first antenatal care visit (or when first presenting) to identify women at increased risk of in utero transmission.
- For pregnant women starting ART during pregnancy: conduct a viral load by three months after ART initiation to ensure that there has been rapid viral suppression. See chapter 6 for



actions to be taken when VL >50 copies/ml. If viral load testing is expected to be undertaken in close proximity to the planned viral load at 34–36 weeks of gestation, the first viral load test can be delayed until weeks 34–36 of gestation.

- For all breastfeeding women, regardless of when ART was initiated: conduct a viral load test three months after delivery and every six months thereafter to detect viraemic episodes during the postnatal period.

### 5.3 Differentiated service delivery for HIV in key populations



#### 5.3.1 Differentiated HIV testing services for key populations

Key populations (KPs) are defined in Ghana as female sex workers (FSW), men who have sex with men (MSM), transgender people, people who inject drugs (PWID), and prisoners. HIV prevalence in key populations (FSW, MSM and PWID) is considerably higher than in the general population (FSW 4.6%<sup>1</sup>; MSM 18%<sup>2</sup>). Testing key populations is therefore high yield; however, to reach key populations, community-based mobilization and testing is required. In addition, for members of key populations who test negative, it is an important opportunity for linkage to effective prevention services and regular HIV re-testing. HIV re-testing is recommended every three months in key populations with ongoing high-risk behaviours.

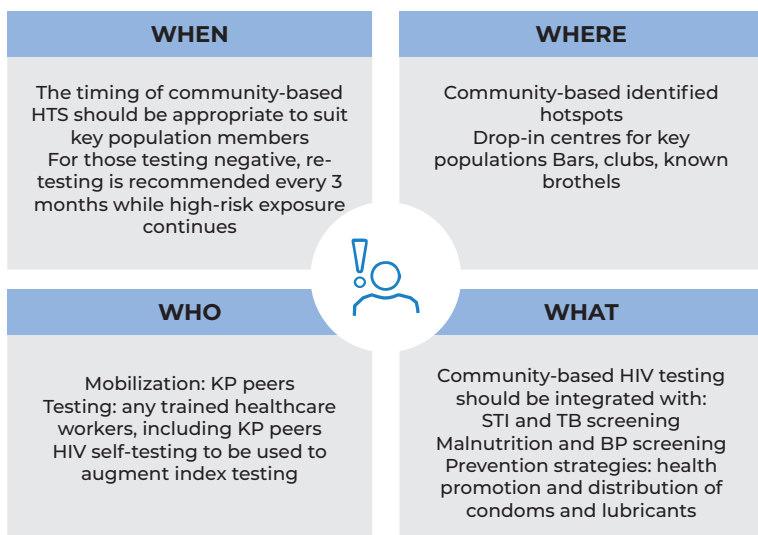
The building blocks of HTS should be adapted to reach out to key populations (KPs) in the community.

The role of peers and KP case managers in mobilization, testing and linkage to care and treatment should be highlighted as a key strategy in reaching KPs.

HIV self-testing (HIVST) in these high-risk populations should serve as an approach to augment the reach of hidden and hard-to-reach key populations.

---

2020 IBBSS  
2017 Ghana Men's Study II



### 5.3.2 Differentiated ART delivery for key populations

The SOPs for HIV care for key populations in Ghana provide the full details of the clinical service package that should be provided in Ghana.

With respect to ART delivery, all key populations who are defined as successfully established on ART, should be offered the same differentiated refill options as the general population (see Section 4.4).

#### Where is ART provided?

Key populations will receive ART within the public health system, including at decentralized ART sites if they choose.

In addition to the option of health centre and CHPS refill sites, existing drop-in centres for key populations may function as refill sites. A designated staff member must be responsible for collecting ART for clients from the named ART site using the SOP described in Section 4.4. Home visits may also be conducted to deliver ART to clients.

### **Who provides ART for key populations?**

Lead healthcare workers should be trained in KP competencies and sensitization. Further training should aim to include HCWs across ART sites.

Lay counsellors, including peers, should complement the work of trained HCWs in providing ART services to KPs, including adherence support and tracing of clients who miss appointments.

### **What services are provided?**

In addition to ART, each key population requires a specific medical package. For details of the package, please refer to the Ghana 2017 SOPS for key populations. Provision of this medical package should be integrated with the delivery of ART via the chosen differentiated ART follow-up model.



## **DIFFERENTIATED ART DELIVERY FOR CLIENTS WITH HIGH VIRAL LOAD**



By 2025, the goal is for 95% of all people living with HIV in Ghana to have access to viral load testing and for 95% of those clients on ART to be virologically suppressed, defined as having a VL <50 copies/ml.

Having a functional laboratory is only one part of the strategy to ensure viral load scale up. In addition, the following aspects must be implemented:

- Healthcare worker education on how and when to take viral load samples and interpretation of viral load results.
- Healthcare worker education on the delivery of enhanced adherence counselling for clients with a viral load >50 copies/ml.

- Implementation of programmatic clinic systems to ensure uptake of viral load and action on results (for example, flagging systems).
- Client education to raise awareness, create demand for testing and ensure understanding of VL results.

### Client education

Client education on viral load is an essential step in the VL implementation plan. Clients should know:

- When their viral load should be taken
- Why it is being taken
- How to interpret the result.



- Key messages on viral load (outlined in Appendix 4) should be given to clients during ART preparation and prior to blood sample collection for VL.
- This session can be conducted as a group if patients are triaged for viral load and blood drawn together.
- An undetectable viral load does not mean that the virus is no longer there. Make sure that the patient understands this, and that they know that they must continue to take their ARVs if their viral load is suppressed.

### Identifying clients due for viral load testing

- Clients should be routinely tested six and twelve months after ART initiation and then annually.
- Ideally, the months on ART should be documented in the client care booklet, or clients may be identified by using their month of initiation to indicate when VL is due.
- The e-tracker is programmed to flag those clients who are due for VL testing.
- Through education, clients themselves should request VL testing annually.



### Task sharing of specimen collection and point-of-care testing

- Where applicable and staff capacity is limited, task sharing of specimen collection can be conducted using non-laboratory healthcare workers.
- Where portable PoC devices are available, non-laboratory healthcare workers can conduct point-of-care testing.

WHEN	WHERE
<ul style="list-style-type: none"> <li>DBS – within 6 weeks (preferably within the first week of life but not later than six weeks) and at 9 months.</li> <li>Viral Load – Six month and 12 month after ART initiation and subsequently annually.</li> </ul>	<ul style="list-style-type: none"> <li>Point of care (ART center, ANC, Wards, CWC, etc.)</li> </ul>
WHO	WHAT
<ul style="list-style-type: none"> <li>Trained HCW (Nurse, Midwives, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>DBS sample</li> <li>Viral Load sample</li> </ul>



### Implementation considerations:

- Training of health care workers is needed before implementation.
- PoC testing is currently limited to laboratory personnel due to limited equipment and infrastructural challenges. However, should portable, easy to operate PoC devices become available, non-laboratory healthcare workers should be trained to conduct PoC testing using those devices.
- Implementing a wide network of decentralized specimen collection and/or point-of-care testing requires centralized support from national laboratories and the programme to ensure adequate training, mentorship, service and maintenance, continuous quality assurance and accurate data entry at the point of care.

## Action on receipt of the first viral load result

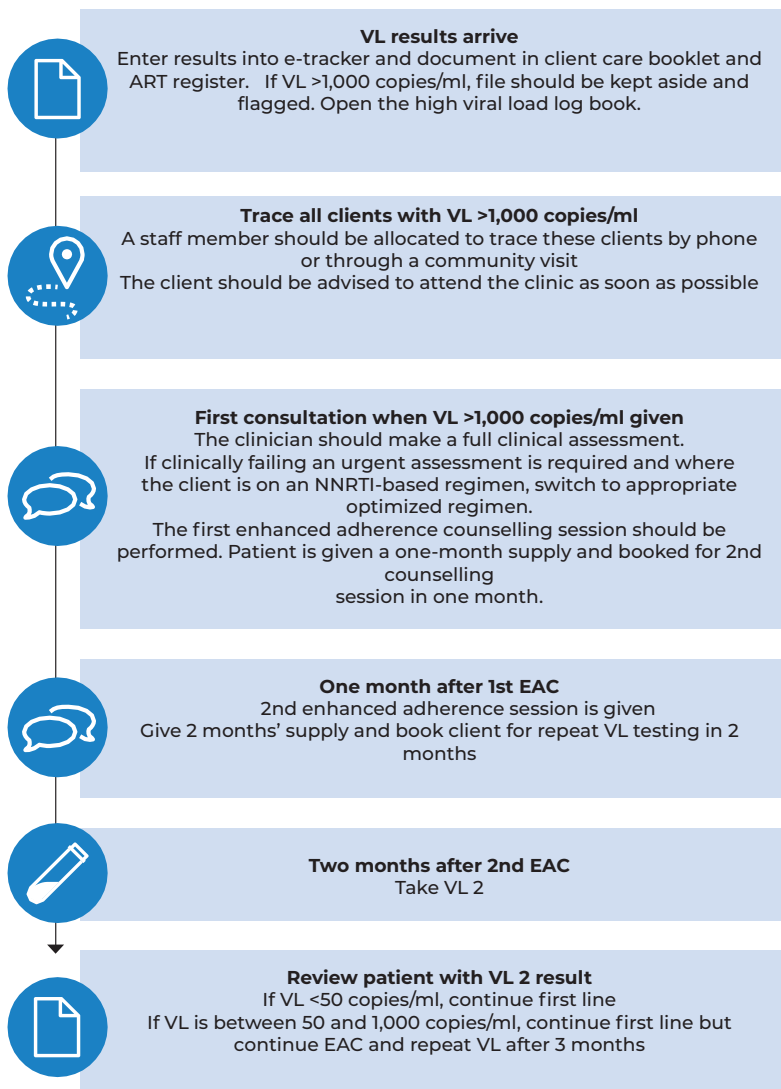
When the VL results are received:

- The viral load result should be entered into the e-tracker by the data officer.
- The client care booklet should be pulled, and the VL result documented in the follow-up visit form.
- For clients with VL >1,000 copies/ml, the file should be flagged manually or electronically to indicate that this client needs action to be taken on their VL result.
- For clients with VL between 50 and 1,000 copies/ml the file should also be flagged manually or electronically to indicate that these clients need action to be taken on their VL result.
- The client must be traced and asked to come to the clinic as soon as possible. The client may be phoned or traced via a community worker using the clients' tracing information.
- The high viral load summary form (Appendix 5) should be opened. As the steps of the VL algorithm are worked through:
- The healthcare worker should complete the patient information, previous VL results and ARV information.
- The healthcare worker performing enhanced adherence counselling (EAC) should complete the details of each session.





**Figure 5:** Action on receipt of viral load results >1,000 copies/ml





**Action plan for a client with a first viral load of less than 50 copies/ml (viral suppression)**

- When the patient is suppressed, the client should be congratulated and encouraged to continue with their current regimen.
- If they meet the additional eligibility criteria, they should be offered the options for differentiated ART service delivery for clients successfully established on ART that are available (see Section 4.4).



**Action plan for a client with a first viral load of between 50 and 1,000 copies/ml (low viraemia)**

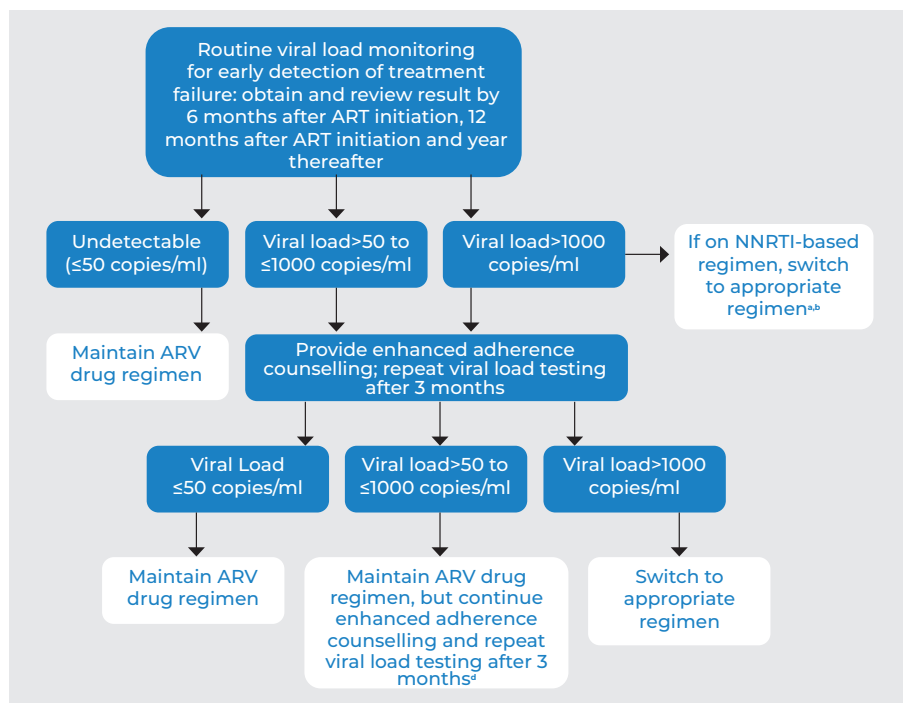
- Flagging systems should be in place to identify who has a VL >50 copies/ml.
- Clinics should offer enhanced adherence counselling and repeat VL testing after 3 months.
- If VL persists between 50 and 1,000 copies/ml, maintain ARV regimen but continue adherence counselling and repeat VL after 3 months.
- Consider switching ART for those receiving NNRTI-based regimens based on clinical considerations.
- Actively address any adherence concerns.

**Action plan for a client with a first viral load of more than 1,000 copies/ml (high viraemia)**

- If the client already has signs of clinical failure, discuss urgently with a clinician to decide on future management. Adherence will have to be assessed, but factors such as duration on treatment and previous ART exposure should be considered when assessing likelihood of resistance and the urgency of immediately switching to a second-line regimen.
- The clinician should make a thorough clinical assessment. All the standard steps of an ART follow-up consultation should be completed, but in addition the clinician should:
  - ▶ Take a history and examine client for signs of OIs (Refer to Chapter 7 for Advanced HIV Disease).
  - ▶ Perform a thorough screening for TB.

- ▶ Inquire about adherence to ARVs and use of other medications (orthodox or herbal).
  - ▶ Inquire about mental health (for example, depression, alcohol or other substance use).
  - ▶ Carry out enhanced adherence counselling session 1 as soon as possible and session 2 (Appendix 6) one month later.
- With the client's permission, link with the community health nurse or community health worker in their home area who may be able to give additional adherence support in the community.
  - Clients who are in group models may benefit from having other group members attend their EAC sessions with them.
  - Repeat the viral load test three months after the first EAC session.

### Treatment monitoring algorithm



Adherence counselling should be provided at all visits to ensure that viral suppression is maintained or given priority throughout care.

---

<sup>a</sup> Switch after a single elevated VL should be considered.

<sup>b</sup> A second viral load may be considered before regimen switch if DTG-based regimens are unavailable and the results of a viral load test can be returned and acted on rapidly.

<sup>c</sup> Conduct same-day testing using point-of-care viral load testing for a repeat viral load test, where available, to expedite the return of results. If not available, viral load specimens and results for a repeat viral load test should be given priority across the laboratory referral process.

<sup>d</sup> Consider switching ART for those receiving NNRTI-based regimens based on clinical considerations and address any adherence concerns.

### **Programmatic strategies to ensure completion of EAC and repeat VL testing**

Every appointment for a client whose last VL was >50 copies/ml should be flagged using the e-tracker appointment list and/or in the appointment register. Hence, anyone appearing with this flag will either need EAC or be due their repeat VL test. If a client defaults on their appointment for EAC or repeat VL testing, they should be traced as per the standard defaulter tracing system.

District HIV focal points should be supplied with a list from the laboratory indicating, for each health facility, the clients with a VL >50 copies/ml. Mentors may then use these lists to assess whether clients have completed EAC and repeat VL testing. It is suggested that mentors check the lists four months after receipt (for example, if results are received in January, check in April) to see the outcome of EAC and repeat VL testing.

### **Action plan for the repeat viral load result**

#### **Repeat VL after counselling is <50 copies/ml**

If the repeat viral load has suppressed to less than 50 copies/ml, the client should be congratulated and can continue their first-line medication. Discuss the importance of good adherence and the goal of maintaining a viral load less than 50 copies/ml. They should return to or be offered their differentiated ART delivery refill option of choice.

**Repeat VL after counselling is between 50 and 1,000 copies/ml**

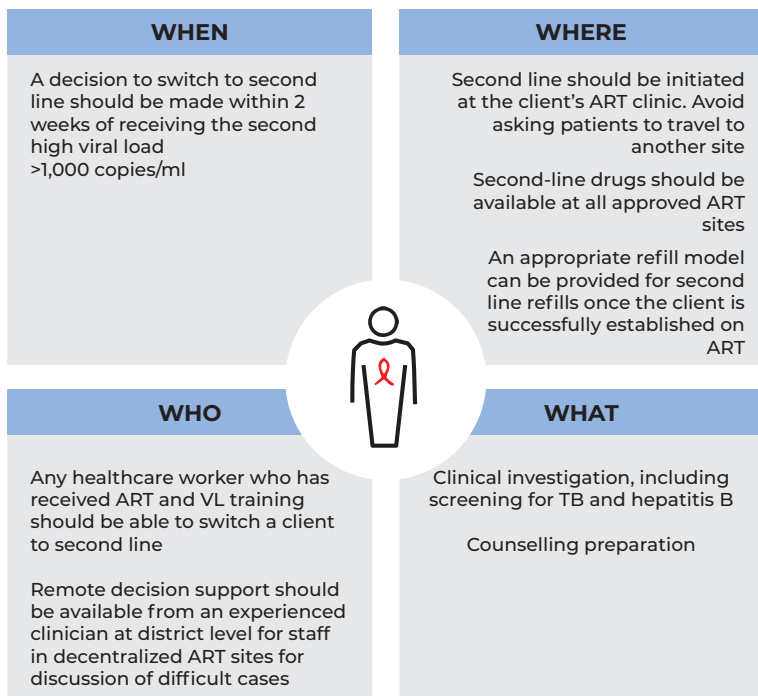
The ART regimen should be maintained for clients with a repeat VL of between 50 and 1,000 copies/ml. Enhanced adherence counselling should be offered and any adherence concerns actively addressed. VL should be repeated after 3 months and EAC continued.

**Repeat VL after counselling is >1, 000 copies/ml**

If the second viral load remains more than 1,000 copies/ml, the client's case should be discussed in a multidisciplinary approach. This does not have to be at a formal meeting, but the team involved in the client's clinical care must discuss the outcomes of the EAC sessions and clinical review. The completed high viral load form may act as a summary for this discussion. The preferred second-line regimens may be found for adults and children in the Consolidated HIV Care Guidelines for Ghana 2021.

## Switching to second line

**Figure 6:** Differentiated service delivery model for switching to second-line ART



### Follow up on second line

Follow up on second line will then follow the same schedule as when first line was initiated:

- Week 2, Month 1, Month 2, Month 3, Month 4, Month 6
- VL should be performed at Month 6 on second line
- If VL is <50 copies/ml, the client may then be offered differentiated models of ART delivery, as described in section 4.4, taking into consideration the eligibility criteria.

## Access to third-line antiretrovirals

Clients failing second-line antiretroviral regimens (i.e., they have had two consecutive viral loads of more than 1,000 copies/ml three months apart and after an adherence intervention) should be referred to the regional or tertiary level for possible genotyping and assessment for a third-line regimen.

## Special considerations for children and adolescents at risk of treatment failure



The viral load algorithm is the same for children and adults. All the principles outlined in this section apply to the management of viral load and high viral load in children. However, these additional points should be considered:

- Children and adolescents have higher rates of treatment failure than adults.
- Children are usually dependent on a caretaker for administration of their ARVs and, for many who are orphaned, that caretaker often changes or is elderly.
- When a child is identified with a high viral load, the multidisciplinary team at the clinic should discuss this case and consider a home visit.
- A common barrier to adherence for children and young adolescents is non-disclosure. Working with the caretaker to fully disclose is therefore an essential step in the enhanced adherence process for a failing child.
- An assessment by a social worker may also be needed.
- Further community support for this child should be explored.

There may be another adult or peer on ART living in the same community who may be willing to support the child and their family as a daily treatment supporter to improve adherence to medication.

- Ensuring this child's follow up through enhanced adherence counselling and repeat viral load is imperative.
- If the second viral load remains more than 1,000 copies/ml, the child's case should be discussed by the team as soon as possible to decide on an appropriate switch to second line.

- If on a PI-based first-line regimen, non-adherence is more likely than resistance. However, discuss with an experienced clinician to decide whether genotyping is indicated.





**7.0**

## **DIFFERENTIATED ART DELIVERY FOR CLIENTS WITH CO-INFECTIONS, CO-MORBIDITIES AND ADVANCED DISEASE**

### **TB/HIV integration**

The aim of TB/HIV integration is to ensure that:

- All clients diagnosed with TB are tested for HIV as an entry point to HIV care.
- Intensified case finding (ICF) is implemented so that all HIV-positive clients are screened for TB at every clinical visit. TB screening does not need to be performed at every refill visit unless the client has a respiratory complaint.

- For any HIV-positive client with a positive symptom screen for TB, that investigation is carried out using Xpert MTB/Rif as the first diagnostic test. Whether Xpert MTB/Rif is available or not, smear microscopy should be done as an adjunct to support client monitoring.
- All HIV-positive clients are aware of what symptoms are related to TB and that they should report any time.
- The delay in initiating ART in co-infected clients is reduced.
- Prevention of TB through the provision of TB preventive therapy is enhanced.
- Prevention of TB through ensuring effective TB infection control policies is enhanced.

The goal should be that all clinicians and nurses are able to commence both TB and HIV treatment and provide a one-stop service for the client.

### Where are TB/HIV services provided?

In health facilities where the TB and ART clinics are separate:

- For clients whose first diagnosis is TB, TB treatment and ART should be initiated within the TB clinic. After successful completion of TB treatment, they are transferred to the ART clinic.
- For clients on ART who develop TB, they should receive their TB treatment and ART in the TB clinic for the duration of their TB treatment. After completion of TB treatment, they should be referred back to the ART services.
- In health centres and CHPS sites where both TB and HIV services are provided, the goal is to provide refills for both diseases in the same clinic room.

### When are TB/HIV services provided?

Provision of ART and TB medications should be on the same day. ART initiation should follow TB initiation as soon as possible within two weeks of starting TB treatment and no more than eight weeks after.

Refill durations should be aligned during the period of TB treatment.

### **Who provides TB/HIV services?**

Healthcare workers working in the TB clinic should be trained to deliver ART. All health workers in the ART clinic should also be trained to deliver TB care.

Services should be provided by any healthcare worker trained in TB and ART management.

### **NCD/HIV integration**

People living with HIV are at higher risk of developing cardiovascular disease. Hence, identifying cardiovascular risk factors and initiating management of hypertension and diabetes is becoming increasingly important as clients live longer on ART.

### **Health education**

Health education messages to prevent non-communicable diseases (NCDs) should be integrated into the routine health education messages at the OPD and in ART counselling. These should include advice on stopping smoking, a healthy diet that includes the reduction of salt, and taking regular and adequate exercise.

### **Screening for hypertension and diabetes**

Once on ART, screening for hypertension and assessment of overall cardiovascular risk should be integrated into the clinical review visit. For those with symptoms or who are at higher risk (obese, family history of diabetes, hypertension, ischemic heart disease), checking of fasting blood glucose may be carried out as part of routine annual monitoring investigations within the context of good clinical practice.

### **Where is integrated NCD/HIV care provided?**

If HIV care is provided in a separate ART clinic, other chronic co-morbidities should be managed in the ART clinic in an integrated manner where possible.

Where HIV care is already integrated in the OPD, HIV and other chronic co-morbidities should be managed in the OPD on the same day.

## When is integrated NCD/HIV care provided?

Clients with multiple uncomplicated chronic co-morbidities should receive follow up for all conditions, ideally on the same day.

Clients with co-morbidities who are successfully established on ART should receive their medication refills through the same differentiated model of care as their ART. Where the same refill duration is not available, the additional medication may be collected directly from the pharmacy with the clinical review occurring every six months.

## Who provides integrated NCD/HIV care?

Ideally, the same clinician should provide follow up for different chronic co- morbidities. Where task sharing has not occurred for a particular condition or where the case is medically complicated, the client should be triaged to see a physician assistant/nurse practitioner or doctor.



## Additional considerations for NCD among children, adolescents and adults.

The following should be considered within the context of providing integrated NCD/HIV care to clients:

- Earlier initiation of antiretroviral treatment to prevent complications.
- Monitoring growth, musculoskeletal and neurocognitive development especially for children and adolescent living with HIV (CALHIV).
- Screening for cardiac, hypertension, renal, diabetes and neurocognitive disease should be done for all PLHIV including CALHIV.
- Assessment of psychosocial status (schooling, guardianship) and mental health of adolescents and adults.
- Management of common mental health disorders and psychosocial support.
- Optimal nutrition.
- Catch up or re-vaccination according to WHO guidelines e.g.,

pneumococcal and influenza vaccination.

- Human papillomavirus vaccination for adolescents.
- Cervical cancer screening after sexual debut.
- Liaison with disability and rehabilitation services.
- School-based programmes to provide educational support.
- Leverage existing early child development platforms for supporting children living with HIV.
- Linkage to community-based psychosocial support services.
- Where NCD is identified but cannot be managed in the same clinic, arrangements should be made for co-management with other providers preferably on the same day.
- Children from age 3 should be screened for hypertension at every visit and blood sugar checked at least once a year.



### **COVID-19 and future pandemics/HIV integration**

The COVID-19 pandemic slowed HIV community mobilization efforts while exposing weak health systems and deteriorating socio-economic conditions. The pandemic resulted in interruptions to health services and supplies, affecting ART and other essential services for many PLHIV.

There is the need to develop mitigation measures such that COVID-19 and other future pandemics do not cause massive interruptions to HIV services as was witnessed. The following operational considerations are proposed to maintain essential HIV services in the context of COVID-19 but can be adapted for future pandemics.

#### **General considerations:**

- HIV facility visits should be limited to those that are considered medically essential to reduce the risk and burden to recipients of care and healthcare providers.
- Facilities should consider shifting HIV services to within the community, fully engaging community cadres or setting up temporary clinics within the community where applicable.
- For clients that require a facility visit, ensure all infection

prevention and control protocols are observed. Streamline clinic patient flow, stagger clinic appointments and conduct HIV care and treatments services in dedicated spaces that are physically separate from the pandemic treatment areas. PLHIV with pandemic infections should however be treated at the dedicated areas for the pandemic treatment.

- Where applicable, health care providers and patients should use telehealth options such as phone calls or other virtual options for routine or non-critical consultations (including HIV adherence counselling), with careful consideration for patient privacy and confidentiality. This can also be applied to peer support groups and home visits.

### **Prevention:**

- Condom distribution, PrEP, and PEP may be particularly important during periods of ongoing confinement, in addition to preventive and psychosocial services for gender-based violence and child protection. Innovative ways such as using digital platforms where applicable, can be employed.
- HIV testing may be affected by reductions in facility utilization and community testing activities, however, it should be prioritized for patients with clinical suspicion of or known exposure to HIV, and in healthcare settings providing antenatal care, TB, sexually transmitted infection or malnutrition services. HIVST can be utilized where applicable to screen persons for further testing. Patient tracking, tracing and linkage to care should be conducted over the telephone or a virtual platforms. Only when impossible should in-person tracking be conducted in which case, PPEs should be provided.
- All stable HIV patients should receive full dose COVID-19 vaccine based on National recommendations.

### **ART:**

- Six-month multi-month scripting should be offered to eligible clients.

**Viral Load:**

- Where prioritization is required, VL and early infant diagnosis services should first be provided to children, pregnant and breastfeeding women, and adults with recently documented non-suppression.
- Consideration should also be given to those with signs of treatment failure, and patients requiring initial VL assessment after ART initiation.

**Considerations for managing advanced disease**

A package of interventions including screening, treatment and/or prophylaxis for major opportunistic infections, rapid ART initiation and intensified adherence support interventions should be offered to everyone presenting with advanced HIV disease.

Advanced HIV disease for adults and adolescents (and children five years and older) is defined as having a CD4 cell count of less than 200 cells/mm<sup>3</sup> or WHO clinical stage 3 or 4 disease.

Children older than two years who have been receiving ART for more than one year and are clinically stable should not be considered to have advanced disease and should be eligible for multi-month ART dispensing (see new definition of clients successfully established on ART in Section 4.4).

Advanced HIV disease includes people presenting to care for the first time following an HIV diagnosis and people who have treatment failure and consequent increase in viral load and decline in CD4 cell count. Individuals who had previously initiated ART and are re-engaging with care after a period of ART interruption should be assessed for advanced HIV disease and should be offered the advanced HIV disease package as appropriate.

**Assessing advanced HIV disease**

CD4 count should be used to identify people with advanced HIV disease. If not available, WHO staging should be used. All children younger than five years who are not already receiving ART are considered to have advanced HIV disease.

Unavailability of same day CD4 count results should not be a barrier to initiating ART on the same day.

STOP package of interventions for clients with advanced HIV disease

	Screen	Treat	optimize	Prevent
<b>When</b>	At all times PLHIV including children and adolescents interact with health service including community outreach  When re-entering HIV/TB service provision  (Reference guidelines on screening for specific diseases)	When diagnosed with Advanced HIV Disease	At initial diagnosis -Rapid initiation  At re-entry do enhanced adherence counselling	After initial active treatment  After screening if there is no disease, put on preventive therapy
<b>Where</b>	Health facility Community outreach	Facility based	Facility based	Health facility Community outreach
<b>Who</b>	HCW Community Cadre	HCW Community Cadre	HCW Community Cadre	HCW Community Cadre  Patient
<b>What</b>	TB  Cryptococcal antigen  Nutritional status  NCD	Refer to ART/ TB guidelines  Refer to Standard Treatment Guidelines for NCD management	Rapid initiation and adherence counselling	Infection Prevention Control  Lifestyle modification





# **APPENDICES**

# APPENDIX 1:

## Questionnaire for baseline assessment of differentiated service delivery for HIV

### Differentiated HTS

Access to HTS	
How many (%) hospital sites offer HTS	
How many (%) health centres offer HTS	
How many (%) CHPS sites offer HTS	
M&E	Facility
Estimated total people living with HIV	
Estimated number of adults living with HIV	
Number of adults tested in the past 6 months	
Estimated number of children living with HIV	
Number of children tested in the past 6 months	
% of STI clients tested for HIV in the past 6 months	
% of TB clients tested for HIV in the past 6 months	
% of IPD clients tested in the past 6 months	
% of emergency room clients tested in the past 6 months	
Where are HTS offered?	
Is PITC offered from all entry points (OPD, IPD, emergency room, ANC, Family Planning, TB, STI, nutrition, laboratory)?	
Is facility-based index client testing offered?	
Is community-based index client testing offered?	
Is targeted outreach testing performed at least once per quarter?	
When are HTS offered?	
Are HTS available during working hours every day?	
Are HTS available overnight and at weekends in maternity and IPD?	
Who is supporting and performing HTS?	
How many staff members are trained to perform HTS?	
Differentiated HTS for children and adolescents	
How many staff members are trained to perform dried blood spots for early infant diagnosis?	
Are screening questions used in the OPD to identify children who should be tested?	
How many staff members are trained to perform paediatric disclosure counselling?	

Are adolescent peers involved in mobilizing other adolescents for testing?	
<b>Differentiated HTS for specific populations</b>	
Are HTS adapted for any key populations (such as moonlight testing, involvement of peers)?	
Are HTS adapted for men?	
<b>Differentiated ART delivery</b>	
Current Access to ART and PMTCT	
How many ART sites are in the district	
How many PMTCT sites are in the district	
<b>M&amp;E</b>	<b>Facility</b>
Number on ART	
Adult retention at 12 months	
Adult retention at 48 months	
Paediatric retention at 12 months	
Paediatric retention at 48 months	
PMTCT retention at 12 months	
PMTCT retention at 48 months	
Is there an appointment system?	
Is the defaulter tracing standard operating procedure carried out?	
<b>Healthcare worker workload</b>	
How many patients does each HCW see on an ART day?	
How many days of the week is ART given?	
From what time is ART provided and until what time?	
Health service providers' perception of workload	
<b>Client barriers</b>	
How far are clients travelling to reach the clinic?	
What are the costs of transport for clients?	
How long do clients wait from when they arrive to when they leave the clinic?	
What are the biggest challenges to accessing ART?	
Describe the refill options to a group of clients. Which options address clients' challenges? Is more than one option warranted?	
<b>Differentiated ART delivery for clients successfully established on ART</b>	
What maximum refill is given routinely for clients successfully established on ART?	
What is the schedule for clinical follow up in the clinic?	
What is the schedule for counselling follow up?	
Is there an "individual model based at facilities" refill option?	

Is there a “group model managed by healthcare workers” refill option?	
Is there an “individual model not based at facilities” refill option?	
Is there a “group model managed by clients refill” option?	
Describe the refill options to a group of HCWs. Which options address their and their clients’ challenges? Is more than one option warranted?	
<b>Differentiated ART delivery for children and adolescents</b>	
Is a family approach offered for children aged 0-5 years and their mother in MCH?	
How frequently are children aged 0-2 years seen?	
How frequently are children aged 2-5 years seen?	
Is group ART follow up offered for adolescents?	
Are adolescent peers involved in adherence support and defaulter tracing?	
<b>Differentiated ART delivery for pregnant and breastfeeding women</b>	
Is PMTCT/ART and ANC integrated?	
Is a family approach offered postnatally for HIV-positive breastfeeding women and their exposed babies?	
<b>Differentiated ART delivery for key populations</b>	
Is there a healthcare worker trained in the medical package for key populations?	
Are peers involved in treatment literacy and tracing activities for key populations?	
Are refills available from drop-in centres?	
<b>Differentiated ART delivery for patients with high viral load</b>	
Is there a flagging system to identify who needs a viral load taken?	
Is there a flagging system to identify who has a VL >50 copies/ml?	
Is enhanced adherence counselling implemented?	

# APPENDIX 2:

## Facility group ART follow up register

Facility group ART follow up register									
Facility name:				Meeting time:					
Group number:									
Group member number	ART number	Full name	Sex	Date of birth	Mobile number	Date ART initiation	Date joined club	Date permanently left club	Reason left club*
1				.. / .. / ....		.. / .. / ....	.. / .. / ....	.. / .. / ....	
2				.. / .. / ....		.. / .. / ....	.. / .. / ....	.. / .. / ....	
3				.. / .. / ....		.. / .. / ....	.. / .. / ....	.. / .. / ....	
4				.. / .. / ....		.. / .. / ....	.. / .. / ....	.. / .. / ....	
5				.. / .. / ....		.. / .. / ....	.. / .. / ....	.. / .. / ....	
6				.. / .. / ....		.. / .. / ....	.. / .. / ....	.. / .. / ....	
7				.. / .. / ....		.. / .. / ....	.. / .. / ....	.. / .. / ....	
8				.. / .. / ....		.. / .. / ....	.. / .. / ....	.. / .. / ....	
9				.. / .. / ....		.. / .. / ....	.. / .. / ....	.. / .. / ....	
10				.. / .. / ....		.. / .. / ....	.. / .. / ....	.. / .. / ....	
11				.. / .. / ....		.. / .. / ....	.. / .. / ....	.. / .. / ....	
12				.. / .. / ....		.. / .. / ....	.. / .. / ....	.. / .. / ....	
13				.. / .. / ....		.. / .. / ....	.. / .. / ....	.. / .. / ....	
14				.. / .. / ....		.. / .. / ....	.. / .. / ....	.. / .. / ....	
15				.. / .. / ....		.. / .. / ....	.. / .. / ....	.. / .. / ....	
16				.. / .. / ....		.. / .. / ....	.. / .. / ....	.. / .. / ....	
17				.. / .. / ....		.. / .. / ....	.. / .. / ....	.. / .. / ....	
18				.. / .. / ....		.. / .. / ....	.. / .. / ....	.. / .. / ....	
19				.. / .. / ....		.. / .. / ....	.. / .. / ....	.. / .. / ....	
20				.. / .. / ....		.. / .. / ....	.. / .. / ....	.. / .. / ....	
*Reason for leaving club: 1. TFO 2. Moved to another club 3. Permanently returned to clinic care 4. LTFU 5. Died 6. Other									
Club appointment dates									
.. / .. / ....	.. / .. / ....	.. / .. / ....		.. / .. / ....		.. / .. / ....	.. / .. / ....	.. / .. / ....	
.. / .. / ....	.. / .. / ....	.. / .. / ....		.. / .. / ....		.. / .. / ....	.. / .. / ....	.. / .. / ....	
.. / .. / ....	.. / .. / ....	.. / .. / ....		.. / .. / ....		.. / .. / ....	.. / .. / ....	.. / .. / ....	

# APPENDIX 3:

## Monthly health centre/CHPS refill monitoring form

Monthly health centre/CHPS refill monitoring form													
Facility name:													
Month of ART collection:													
To be completed by HCW at HC or CHPS refill site			To be completed by HCW at ART site			To be completed by HCW or lay cadre at health centre/CHPS site							
Full name	ART number	Date of refill	ARV regimen prescribed / quantity	CTX quantity prescribed	Date dispensed	Pregnant (P) or on family planning (FP)	TB symptoms*	Other 'alert' problems **	ARV tablets remaining	CTX tablets remaining	Comment	Date assessed and ART distributed	Date of next appt
1		.. / .. / ....			.. / .. / ....							.. / .. / ....	.. / .. / ....
2		.. / .. / ....			.. / .. / ....							.. / .. / ....	.. / .. / ....
3		.. / .. / ....			.. / .. / ....							.. / .. / ....	.. / .. / ....
4		.. / .. / ....			.. / .. / ....							.. / .. / ....	.. / .. / ....
5		.. / .. / ....			.. / .. / ....							.. / .. / ....	.. / .. / ....
6		.. / .. / ....			.. / .. / ....							.. / .. / ....	.. / .. / ....
7		.. / .. / ....			.. / .. / ....							.. / .. / ....	.. / .. / ....
8		.. / .. / ....			.. / .. / ....							.. / .. / ....	.. / .. / ....
9		.. / .. / ....			.. / .. / ....							.. / .. / ....	.. / .. / ....
10		.. / .. / ....			.. / .. / ....							.. / .. / ....	.. / .. / ....

\*TB symptoms: Ask if the member has a current cough of any duration, is losing weight, has night sweats or has had contact with TB patient in last month

\*\*Alert problems: Ask if the member has any ankle swelling, puffiness of the face, breathlessness, diarrhea for more than 2 weeks, severe headache

## APPENDIX 4:

### Counselling guidance for choosing a differentiated ART option

When you have just started ART, you will be asked to come to the clinic regularly to see your healthcare worker. This is so that we can check that you are well and you are not having any problems with your treatment.

Once your viral load is low (<1,000 copies/ml) and you are well, you will be offered some options for how to collect your drugs in the future. You will need to see the clinician every six months but can collect three-monthly refills (and in some sites, six-monthly refills) depending on the option you choose.

Describe those options that have been selected for your site:

The first option is where you see the clinician every six months and we give you a three-monthly supply of ART. In between the clinical visits, you can collect your medication directly from the pharmacy. Once a year, you will also have your viral load checked so that we are sure that the drugs are working.

The second option is a group refill. If you would like to meet other people living with HIV and share experiences, this could be a good option. If you would like to know more about what the groups are like, please speak with your healthcare worker or the lay worker representative. Also, if you would like to attend a group meeting as a visitor to see if it could be for you, we can arrange this.

The third option is also a group refill but unlike the second option, you can join a group managed by your peers instead of the healthcare worker.

Lastly, we can also arrange for you to receive your ART refill from a health centre, CHPS site, drop-in centre or community pharmacy nearer to where you live or work. If this is more convenient, we can make the referral. In this option, you will receive your ART from that site every three months. We can also pay a home visit to deliver your medication but you will have to provide a written consent.

**Whatever option you choose, there are some important things to remember:**

- You must continue to see your clinician every six months and have a viral load performed every year.
- When you have a health problem, you must always report to the clinic:
  - ▶ If you have a high viral load
  - ▶ If you have symptoms of TB, such as coughs, night sweats and weight loss
  - ▶ If you have a severe headache not relieved by simple pain killers
  - ▶ If you have diarrhoea that persists for more than one week
  - ▶ If you are vomiting for more than three days
  - ▶ If you develop a new rash
  - ▶ If you develop any swelling of your feet/face or are unable to pass urine (if on TDF)
  - ▶ If you have severe sleep problems or develop enlarged breasts (if on EFV)
  - ▶ If you are breathless or dizzy (if on AZT).

If you become pregnant, you should attend the clinic and make an antenatal booking as soon as possible. Plans for follow up for you and the infant will then be discussed.



## Appendix 5:

### Key messages on viral load

#### **What is the goal of your ARV treatment?**

When you take your ARVs every day, they stop your HIV multiplying (making more HIV in your body) and prevent HIV from killing your CD4 cells (the soldiers of your body). Therefore, when taking ARVs, the quantity of HIV in your body will decrease.

#### **How to know if your ART treatment is working?**

By doing a viral load test. A viral load test measures the amount of HIV in your blood and is done by drawing blood.

#### **When to have a viral load test?**

The first viral load will be taken at 6 months and then again after 1 year on treatment. After this the viral load will be taken once every year. (Explain to the patient where the blood sample will be taken and the test processed). If there is a problem with your viral load, it is taken again 3 months later. It is your right to know your viral load result! Ask your healthcare worker for the test and for your results.

#### **What does an undetectable viral load result mean?**

- An undetectable viral load is a viral load of less than 50 copies/ml. It means that you have so little HIV in your blood, it can't be measured. This is because the multiplication of the virus has been stopped by the ARV treatment. An undetectable viral load in the blood does not mean you no longer have HIV. It just means it can't be seen with the tests we have.
- You can compare taking ART to weeding the garden: when you weed the garden regularly (or adhere well to ART), there is hardly any weed to be seen (or no HIV to be seen – your viral load is low or undetectable). But from the moment you stop weeding the garden (or stop taking ART), the weed will pop up again (or

HIV will multiply again). In the same way your viral load is undetectable when you adhere well to your treatment.

- An undetectable viral load is very good as it means you have your HIV under control. You should continue with your good adherence. You will now be seen less often by the clinician and will be offered easier ways to pick up your drugs.

### **What does a high viral load result mean?**

- You may be facing problems to adhere to your treatment. This is the most common cause for a detectable viral load.
- By solving your adherence problems early, you can get your viral load to low or undetectable.
- In other cases, you could be adherent but you have already become resistant to your treatment.
- If the viral load is high on two tests (3 months apart) your clinician will discuss whether a new drug regimen is needed for you.

# APPENDIX 6:

## High viral load summary form

Clinician: .....		Today's Date:..... <i>dd/mm/yy</i>
ARV number:.....	Patients Sex ( <i>circle one</i> ): Female / Male <i>dd/mm/yy</i>	
PATIENT Name:.....	Age (yrs) .....	Date of birth: .....
Referred from ( <i>Health facility that referred the patients for suspect of treatment failure</i> ): ..... <i>dd/mm/yy</i>		
Date of ART Initiation: .....	Place:.....	Regimen:.....
ART use before entering the program ( <i>circle all that apply</i> ):		NO / PMTCT / PEP <i>dd/mm/yy</i>
Current ART Regimen:.....		Since When:.....
Drug substitution ( <i>circle one</i> ): YES / NO		Date: .....
Previous TB treatment ( <i>circle one</i> ): YES / NO		
History of side effect ( <i>circle all that apply</i> ): NONE / Lipodystrophy / Anaemia / Lactic acidosis / Neuropathy / Jaundice / vomiting / chronic ranspor / neurological / others		
Drug interruption (>1 month) ( <i>circle one</i> ): YES / NO		Defaulted ( <i>circle one</i> ): YES / NO <i>dd/mm/yy</i>
1st VL result: .....		Date 1st VL taken:.....
Sick at time of test ( <i>circle one</i> ): YES / NO		

Clinical examination( <i>circle one</i> ) : STABLE / UNSTABLE / on TB TREATMENT / VERY SICK	
Weight (kg): ..... NEW WHO stage 3 – 4: ( <i>circle one</i> ): YES / NO	
Adherence enhancement ( <i>circle one</i> ): <85% POOR / 85-95% MODERATE / >95% GOOD	
1st session( <i>circle one</i> ): POOR / MODERATE / GOOD	
dd/mm/yy	
Counsellor name: .....DATE: .....	
Comments:.....	
2nd Session( <i>circle one</i> ): POOR / MODERATE / GOOD	
dd/mm/yy	
Counsellor name: .....DATE: .....	
Comments:.....	
3rd session( <i>circle one</i> ): POOR / MODERATE / GOOD	
dd/mm/yy	
Counsellor name: .....DATE: .....	
Comments:.....	
Barriers to adherence	
Behavioural: Disclosure to partner: YES / NO      Suspicion of alcohol abuse: YES / NO	
Medical:      Side effect: YES / NO	
Socioeconomic: Distance/transport : YES / NO      Stigma: YES / NO      Work/income: YES / NO	
Emotional: Suspicion of depression: YES / NO	

2nd VL result:..... Date 2nd VL taken: .

Date of discussion of the second line committee.....

FINAL DECISION (*circle one*): START 2nd LINE / CONTINUE 1st LINE / STOP ART

dd/mm/yy

2nd line regimen: .....Date initiating second line:.....

## APPENDIX 7:

### Session guides for high viral load enhanced counselling

#### Enhanced adherence session 1

**Healthcare workers should document their findings in the client care booklet and high viral load form**

Timing	Session 1: Date high viral load result received by patient
Duration	Minimum 30 minutes
Mode	Individual

Introduce yourself to the patient

#### Step 1: Viral load education review

Assess patient's understanding of viral load, high viral load and suppressed viral load. Ask the patient to explain to you what each means. If patient requires more explanation, you can say things like:

- The main job/work of your ARVs is to reduce the HIV in your body to a very small amount.
- We can measure this amount of HIV by taking a blood test that we call a viral load test. If ARV treatment is successful, the amount of HIV in the blood will be very low/small/suppressed, and you will be healthy.
- The reason it is important to take your medication every day is to make sure that treatment is successful and the amount of virus in the blood is low.
- We have noticed that your viral load is going up. This is not something that can be ignored. We have to find the cause, overcome it, and make sure that your viral load becomes suppressed. We are here to help you achieve this.
- Most of the time, the cause for a high viral load is when you sometimes forget to take your medication. Other causes may be due to you having been infected with a resistant virus.
- Learning to take these medicines is complex, but very possible. Just like learning anything new, it can be overwhelming at first and may take a lot of effort, but with practice, can become part of your daily routine.

## **Step 2: Discuss the patient's reason/explanation for his or her high viral load**

Sometimes the patient already knows why his/her viral load is going up. Here, you can give them a chance to give their own explanation. Often, they will tell you at this point that they are struggling with their adherence.

If they really don't know why their viral load is high, you can say:

*We notice that when people sometimes forget to take their ARVs every day, it gives the virus a chance to multiply. Do you think that you sometimes forget?*

Make a short note of the patient's explanation. Then move on to the next step.

## **Step 3: Review the time the medication is taken (dosing times) & create a medication schedule**

This step is to review the time that the patient has chosen to take their ARV doses. Establish what the patient is doing and where they are at the time they have chosen. For example, if the patient has chosen 9pm, but is already asleep in bed by 9pm, then that is not a good dosing time.

Establish with the patient whether the time they are meant to take their medication is appropriate or whether the time is a problem. The client should choose a time that is appropriate for them.

If the set time is a problem, determine a new, more appropriate time with the patient based on their schedule. Remind them that the time chosen is just a suggestion; medicines should always be taken on time, the same time each day. Write down the new medication schedule in the counsellor's notes and in their patient-held record.

In case of a missed dose, the replacement dose should be taken immediately if the time lapse is within 12 hours for a once-daily treatment regimen. If the time lapse is more than 12 hours, do not take the dose. The next dose should be taken as per the regular schedule.

In case of a missed dose, for twice-daily regimens, the replacement dose should be taken immediately if the lapse time is within six hours. If time-lapse is more than six hours, do not take the dose. The next dose should be taken as per regular schedule (per WHO client information, July 2016).

Other reminders that may be used include a cell phone alarm, a specific TV programme or radio programme, or taking the medication with meals.

#### **Step 4: Plan for storing medications**

Help the patient identify where at home they are going to keep their medications. If they are afraid of people seeing or finding the medication, then brainstorm a good place to keep them.

Storage place: \_\_\_\_\_

#### **Deciding on where to keep extra or emergency doses**

Keeping an extra supply of tablets in specific places is always helpful in emergencies.

Help the patient identify where they can keep an extra supply of medication in case they don't get home in time to take their medication. This could be: handbag, locker at work, backpack, jacket pocket, briefcase, car, etc. Ideally this supply should be kept at room temperature and out of direct heat or sunlight.

Emergency stock should be refilled every week. The intention is to ensure that emergency stock is not stored beyond its expiration date or stored for prolonged periods in less favourable conditions.

These tablets are then only to be used when not home in time to take the next dose. Extra/emergency supply will be carried in:

\_\_\_\_\_

#### **Step 5: Motivation cards**

This step can help patients learn strategies for remembering to take medications and for thinking helpful thoughts each time they look at their tablets. It is especially helpful for patients who have treatment fatigue, are depressed, or are stigmatizing themselves.

Introduce the patient to the notecard idea. Ask the patient to think of their own personal goals/dreams for their future. What are the three most important things they still want to achieve in their future?

Have them write it in their own language on a notecard or piece of paper:

For example: *“I want to see my children grow up”, “I want to be healthy for my job”.*

Ask the patient if they think that their ARVs can help them achieve these goals for the future? The answer will be “yes” because ARVs will prolong life.

Encourage the patient to place the notecard or paper where they will read it every day, preferably right before they take their medication. This will associate taking ARVs with the positive things they want for their future.

Top 3 goals for the future: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

*Do you think that your ARVs can help you achieve your goals for the future?*

### **Step 6: Discuss patient's support system**

Has the patient disclosed his or her status to any family, friends or co-workers?

You can ask the patient:

*Do you have any people in your life who you can talk to about your HIV and ARVs?*



Suggest to the patient that they enlist the support of their family, friends and co-workers in reminding them to take their medication if they have not already done so.

The members of the patient's support system are:

---

### **Step 7: Planning to improve adherence in patients who are using alcohol and substances**

The use of alcohol and illicit drugs has been shown to contribute to poor adherence to ARVs. While trying to address the use of these substances, we must support you to take your ARVs.

In the past, the message given to patients was that they shouldn't mix ARVs with alcohol or drugs; the result was often that some patients decided not to take their ARVs on the day that they used alcohol or drugs. Alcohol use should be discouraged and the client should be supported to stop abusing alcohol or drugs, but in the meantime, we want to help them to adhere to ARVs while using alcohol or drugs.

### **Step 8: Getting to your clinic appointment**

This step helps the patient solve problems associated with getting to his or her appointments.

Make a plan for getting to appointments:

- How do you get to your medical appointments?
- What would you do if your usual way of getting to your appointments was not an option (for example, public transport not working, or it was raining when you usually walk)?
- How do you usually get to the clinic? \_\_\_\_\_
- Back-up plan: \_\_\_\_\_  
If they are not able to come on their appointment date, remind the patient that if they are unable to make their appointment, they must make sure that they go to the clinic the next day, BEFORE they run out of medication.

### Step 9: Review plans for way forward

- Briefly summarize plans made above.
- Identify the steps that the patient needs to complete at home before your next visit, such as placing emergency doses in their handbags, and their new dosing time.

### Plan a way forward

- Inform the patient that they will be seen after one month.
- VL will be repeated after three months.
- VL results will be reviewed together and a way forward will be discussed.

### Enhanced adherence Counselling session 2

Timing	Session 2: One month after 1st EAC
Duration	Approximately 10 minutes
Mode	Individual
Tools	EAC session guide

## SESSION 2 (to be done the following month)

### Step 1: Identify any difficulties with plans, & problem solve any new issues

- Review action plan from previous session, for example, motivation card and emergency doses.
- Ask the patient if he/she thinks that adherence has improved in the past month. Enquire in a friendly way if any doses have been missed.
- If the patient has experienced any difficulties implementing the plans, brainstorm solutions to the identified problem.
- Use problem-solving skills to address any new issues that may have come up in the past month.

### Step 2: How to learn from mistakes

- This step may help clients prepare to recover from missing doses, which, in the long run, is likely to occur.

- If a mistake occurs, the best choice is to return to one's adherence programme as soon as possible instead of acting on hopeless thoughts and giving up.
  - Identifying what led to the mistake can provide important information that can help avoid future mistakes.
  - It should be stressed that mistakes are normal and not a big problem. They only become a big problem when they lead to giving up.
  - In case of a missed dose, for a once-daily treatment regimen, the replacement dose should be taken immediately if the time lapse is less than 12 hours. If the time lapse is more than 12 hours, do not take the dose. The next dose should be taken as per the regular schedule.
  - In case of a missed dose, for a twice-daily regimen, the replacement dose should be taken immediately if the lapse time is less than six hours. If the time lapse is more than six hours, do not take the dose. The next dose should be taken as per the regular schedule (per WHO client information, July 2016).
  - It is important to tell the patient that they must not beat themselves up if they miss a dose. They must tell themselves that they are only human and that mistakes happen, but that they must return to their medication schedule as soon as possible. If they continue to have many mistakes, then the patient must speak to their medical team as soon as possible.
  - **Make a plan with the patient:**
  - Positive thoughts you can think after you made a mistake
- 
- 

- What can you learn from a mistake that will help you avoid another in the future \_\_\_\_\_
-

**Step 3: Check your notes to see whether the patient has been referred to other services – if not, skip this step**

- This includes referrals to psychology services, substance abuse groups and social services.
- Ask patient if they attended the appointment.

**Step 4: Preparing for travel**

- Holidays are always a risk for poor adherence or default of treatment. Encourage patient to plan for holidays, to make sure that they have enough medication on hand before they leave town, and to remember to pack it.
- Make sure that all relevant information is on the client-held card – clinic phone number, patient's current regimen and doses, latest CD4 and VL, etc.
- Explain to them that if they are ever away from home and they run out of medication, they must go to the closest ART clinic and show their client-held card. Hopefully, that clinic can help them access medication.
- As back up, have the patient programme their local clinic phone number and unique ART number into their phone. This way, they have it on their phone in case they lose their patient notebook.
- Save on phone:
- Clinic number \_\_\_\_\_
- My ART number \_\_\_\_\_
- Identify where the patient usually travels to and ask if they know where the closest ARV clinic is.

**Step 5: Review plans**

- Give two-month supply of ART.
- If additional EAC sessions are needed, schedule appointment earlier.
- Repeat viral load should still be taken three months after result was given.

## Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

**Contact us:**

National AIDS / STI Control Programme  
Disease Control & Prevention Department

Ghana Health Service  
P. O. Box KB 547  
Korle-Bu - Accra  
GHANA

**Email:**

[info@nacp.org.gh](mailto:info@nacp.org.gh)

**Telephone:**

0302 618456-9  
0302 663957