HEALTH EXTENSION PROFESSIONAL MANAGED COMMUNITY ART REFILLING GROUP (HEP_CAG) AND
PEER LEAD COMMUNITY ART DISTRIBUTION (PCAD)

TRAINING MATERIAL FOR
HEALTH EXTENSION PROFESSIONALS AND HEALTH CARE PROVIDERS
PARTICIPANT MANUAL

Table of Contents

Module 1

Introduction

Module Description: This module is designed to help participants get to know each other, understand the epidemiology of HIV and the national response for COVID-19 Pandemic, including Ethiopia's commitments to international and national targets, and introduced to the project: The USAID Community HIV Care and Treatment Activity.

Module objectives: By the end of this module, participants will be able to:

- Know each other;
- Describe the national situation of HIV in Ethiopia,
- Ethiopian national response for COVID 19 pandemic and its international commitments;
- List down the objectives and the outcomes of the training course;
- List down the teaching and evaluation methods;
- Identify the three 95's (95-95-95);
- Summarize the health extension program; and
- Describe the USAID Community HIV Care and Treatment Activity.

Time allotted: 3 hours

Session 1: Introduction to the course, getting to know each other and expectations

Session objectives: By the end of this session, you should be able to

- Know each other;
- List down the objectives and the outcomes of the training course; and
- List down the teaching and evaluation methods.

Time allotted: 30 minutes

1.1. Introduction of participants and expectations

Your facilitator will ask each of you to introduce yourself to the other participants. Please, include the following information when you introduce yourself:

- Your name;
- The name of your position, and where it is located: Region, Zone and wordea;
- How long you have worked in the position;
- What you expect from the course; and
- What you like or dislike.

1.2. Course description

This Three-days training course is designed to prepare health extension professionals and health care providers to acquire the necessary knowledge, skills and attitude **to manage community ART refill groups and peer lead community ART refill and distribution**. Particularly, they will be equipped with basics on the national HIV/AIDS prevention and control program, the extension program, and the management, monitoring and evaluation of the health extension professional managed community ART refill groups and peer lead community ART refill and distribution in COVID-19 pandemic period.

Course goal

The overall of goal of this course is to equip you with the knowledge, skills and attitude needed to manage community ART refill groups and peer lead community ART refill and distribution (CAGs/PCARD).

Course objectives

This is a three-days course. By the end of the course, you should be able to;

- Describe the national situation of HIV in Ethiopia, Ethiopian national response and its international commitments;
- Ethiopian national response for HIV during COVID- 19 pandemic
- List down common opportunistic infections and how they are screened using symptoms;
- Describe the first line ARV regimens and their common side effects;

- Support and monitor adherence to ART;
- Describe the differentiated care model of HIV service delivery and the health extension and peer managed community ART refill or distribution groups;
- Describe how CAGs are formed, function, and managed; and
- List down the tools used to monitor HEW-CAG /PCARD and describe how to use them.

Course structure

The course is modular and contains three modules:

- Module 1: Introduction

- Module 2: HIV care and treatment

- Module 3: Community ART Refill and distribution Model

- Module 4: HE-CAG/PCARD Implementation guide and SOP

- Module 5: Monitoring and Evaluation

1.3. Training Methods

We expect you to participate actively in the teaching-learning process. A number of methods will be used during this training:

- Interactive mini-lectures using PowerPoint
- Small group work and group discussions
- Plenary group discussions
- Demonstrations

1.4. Evaluation methods

You will be evaluated using three methods. The first method is the pre-test/post. You are expected to get 70% on the post-test to successfully complete this course. The second method is your daily evaluation. Your facilitators will evaluate your performance daily on a scale of 5 (1 – Very poor; 2 – Poor; 3 – Fair; 4 – Good; and 5 – Excellent). In addition, there will be post-training at your work place.

The course will also be evaluated using three methods. The difference between your pre-test and post-test results will be used to evaluate the course. In addition, you will be asked to evaluate how the course is delivered (training content, training venue, training materials, facilitators, etc) on daily basis and at the end of the course. These evaluations are taken as important inputs to improve the training further.

Session 2: The National HIV Situation and the National Response

Session objectives:

At the end of this session, you will be able:

- Describe the epidemiologic features and impacts of HIV at global, regional and national level;
- Identify factors that facilitate HIV transmission;
- List down the strategies, interventions and principles for HIV/AIDS prevention, care and treatment;
- Identify the priority interventions in Ethiopia;
- Identify the progresses made; and
- List down challenges and possible solutions.

Time allotted: 60 minutes

2.1 Global Epidemiology

I. People living with HIV

- In 2018, there were **37.9 million** [32.7 million–44.0 million] **people living with HIV**.
  - ☞ **36.2 million** [31.3 million–42.0 million] **adults.**
  - ☞ **1.7 million** [1.3 million–2.2 million] **children (<15 years).**
- **79%** [67–92%] of all people living with HIV **knew their HIV status.**
- About **8.1 million (21%)** people **did not know that they were living with HIV**.
- **24.5 million** [21.6 million–25.5 million] people were **accessing antiretroviral therapy** (end of June 2019). People living with HIV. Source: AIDS Epidemic Update 2019
- **37.9 million** [32.7 million–44.0 million] people **globally were living with HIV**.
- **1.7 million** [1.4 million–2.3 million] people became **newly infected with HIV**.
- **770 000** [570 000–1.1 million] people **died from AIDS-related illnesses.**
- **74.9 million** [58.3 million–98.1 million] people have become **infected with HIV since the start of the epidemic.**
- **32.0 million** [23.6 million–43.8 million] people **have died from AIDS-related illnesses** since the start of the epidemic.

Adults and children estimated to be living with HIV | 1990–2017
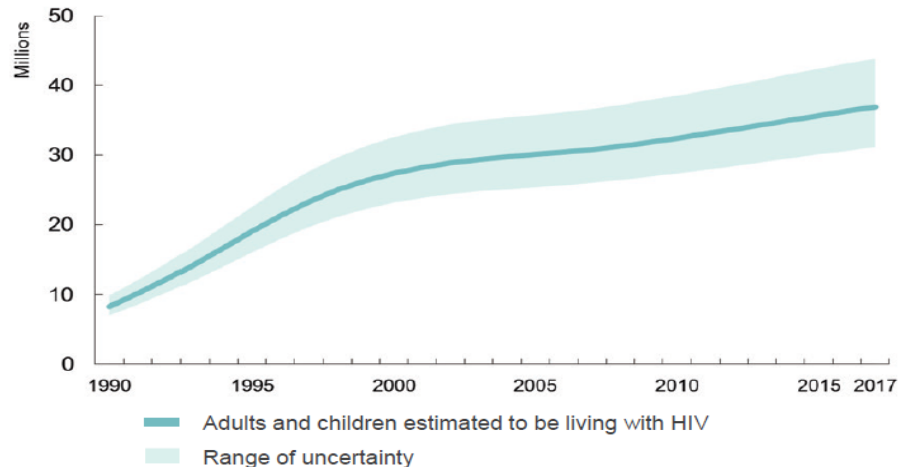
II. **People living with HIV accessing ART**

- As of end of June 2019, **24.5 million** [21.6 million–25.5 million] people were **accessing antiretroviral therapy.**

- 23.3 million [20.5 million–24.3 million] people living with HIV were accessing antiretroviral therapy, up from 7.7 million [6.8 million–8.0 million] in 2010.

- 62% [47–74%] of all people living with HIV were accessing treatment.

   – **62%** [47–75%] of **adults aged 15 years and older** living with HIV had access to treatment, as did **54%** [37–73%] of children aged 0–14 years.

   – **68%** [52-82%] of **female adults aged 15 years** and older had access to treatment however, just **55%** [41-68%] **of male adults aged 15 years** and older had access.

- **82%** [62– >95%] **of pregnant women living with HIV** had access to antiretroviral medicines.

III. **AIDS-related deaths**

- **AIDS-related deaths** have been reduced by more than **56% since the peak in 2004**.

- In 2018, around 770 000 [570 000–1.1 million] people died from AIDS-related illnesses worldwide, compared to **1.7 million** [1.3 million–2.4 million**] in 2004 and 1.2 million** [860 000–1.6 million] **in 2010.**

- **AIDS-related mortality has declined by 33% since 2010**.

2.2. Ethiopia: Epidemiology

I. HIV prevalence: EDHS 2016

- **HIV prevalence**: Among women and men **age 15-49 in Ethiopia, 0.9% are living with HIV**.
- HIV prevalence is **higher among women than men (1.2% versus 0.6%).**
- HIV prevalence is **seven times higher in urban areas than in rural areas (2.9% versus 0.4%).**
- HIV prevalence **ranges from less than 0.1% in Somali to 4.8% in Gambela**.
- HIV prevalence is **0.3% among young women and 0.1% among young men age 15-24**.

Figure 3.1 HIV prevalence by age
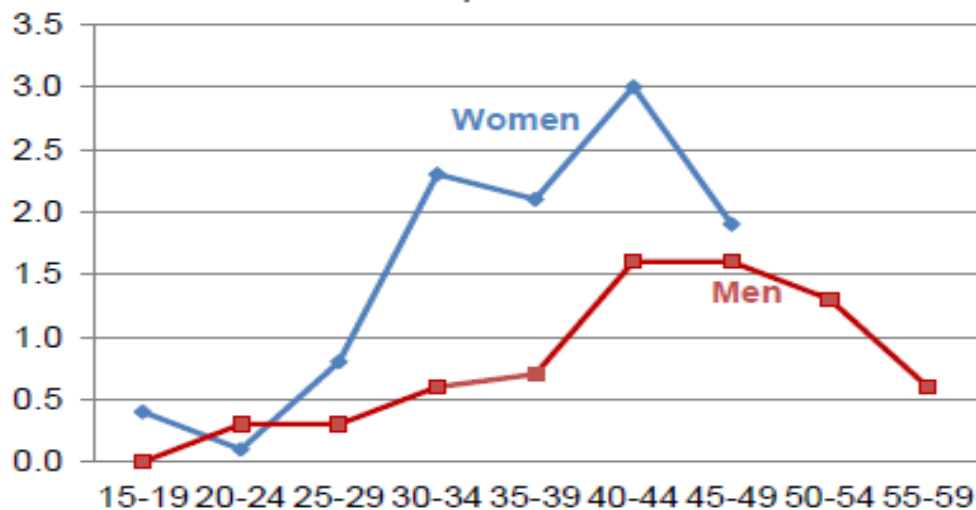
II.   The National HIV/AIDS Strategic Plan of Ethiopia

Vision: Ending AIDS by 2030

Guiding principles

- Effectiveness and efficiency

- Balanced approach: prevention and treatment.

- Quality of services

- Multi-sectoral engagement

- Partnership

- Sustainability

- Inclusiveness

Goal:

- Prevent 70,000 to 80,000 new HIV infections over the investment period.

- Save 500,000 - 550,000 lives over the investment period

III.   Strategies in HIV prevention, care and Treatment

Four strategic objectives

1. Implement high impact and targeted prevention program

2. Intensify Targeted HIV testing and counseling services

3. Attain virtual elimination of Mother to child Transmission of HIV

4. Optimize and sustain quality Care and Treatment

IV.   95-95-95 Target

By 2030,

- 95% of all people living with HIV will know their HIV status (95% diagnosed).

- 95% of all people with diagnosed HIV infection will receive sustained antiretroviral therapy (95 % on HIV treatment).

- 95% of all people receiving antiretroviral therapy will have viral suppression (95% virally suppressed).

The 90-90-90 Performance
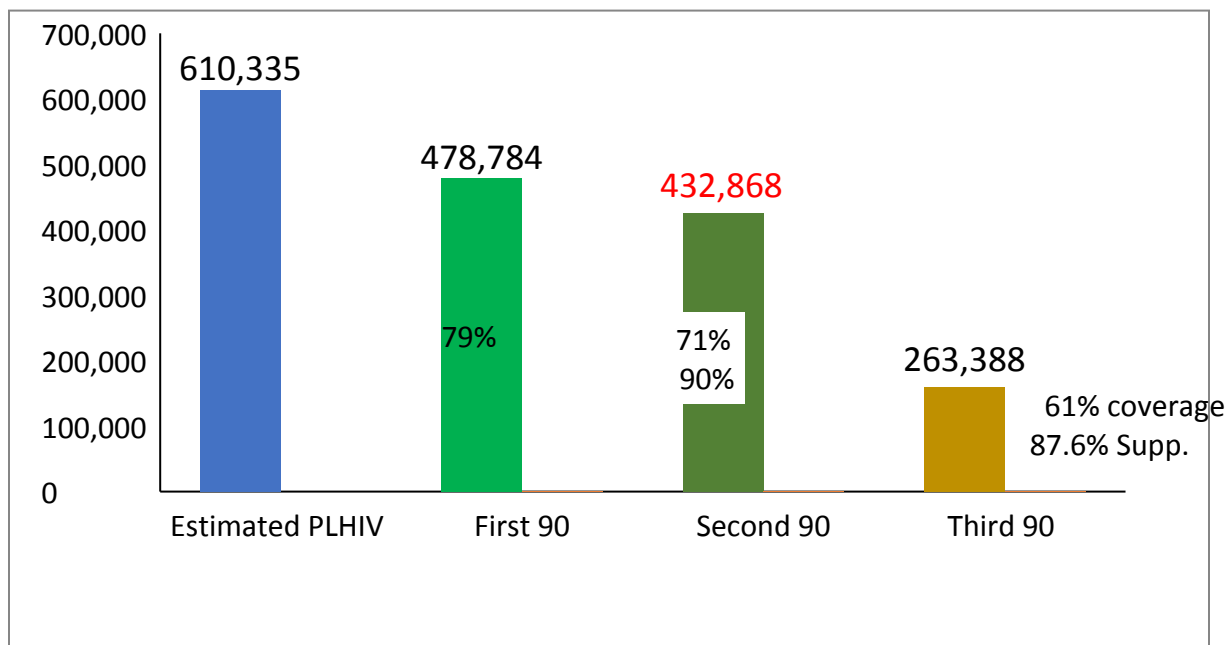
V. Challenges to attain the three 90's

1. Challenges on 1st 90
- Gaps in demand creation activities to reach target population
- Weak collaboration for mobilization of target population
- Missed opportunities in ICT, PNS
- Low implementation of targeted testing
- Week linkage of the identified positives in the facility and gaps on referral linkages to community/other facilities

2. Challenges on 2nd 90
- Delay in early ART initiation
- Low performance
- Gaps in linkage especially outside of the testing HFs
- Delayed implementation and no proper reporting of appointment spacing

3. Challenges on 3rd 90
- VL Service interruptions
- Low performance of routine VL

- Documentation and communication gaps of sample referral and results-
  a. No immediate notification for high VL results from testing sites
  b. Weak timely action of patients with VL>1000

VI.   The way forward

- Intensify demand creation for HIV testing services (HTS)

- Collaborate with regional HAPCO offices to improve mobilization of target population

- Intensify clinical mentorship and supportive supervision

- Intensify targeted HIV testing services in high yield service outlets and ensure linkage for treatment.

- Strengthen index case family testing

- Capacity building of health care providers

- Targeted outreach HIV testing and counseling services

- Strengthen linkage and referral of clients to care and treatment services

- Strengthen escorted linkage of HIV positives & referral audit

- Strengthen Community-facility linkage of identified positives

- Scale up Partner Notification Service at all facilities

- Strengthen Catchment area meeting and clinical Mentorship

- Strengthen Public Private Partnership

- Increase data use for decision (M and E) at all levels

- Lost to follow up tracing including Pre-ART clients

- Improve implementation of ASM, documentation and reporting

- Shifting delivery of ART for stable patients to lower level(offloading)

- Prevention, diagnosis and treatment of opportunistic infections (OI)

- Peer to peer support

- Community adherence groups

Session 3: The Health Extension Program

Session objectives: By the end of this session, you should be able to:

- List down the objectives of the HEP,
- Identify the implementation strategies and the guiding principles of the HEP,
- **Identify challenges of the HEP and suggested solutions.**

Time allotted: 45 minutes

I. Introduction

Ensuring universal primary health coverage is one of the primary agenda of the Government of Ethiopia. The HEP has been the principal vehicle in expanding access to essential health services packages to all Ethiopians, with specific focus on women and children. HEP is under pinned by the core principle of community ownership that empowers communities to manage health problems specific to their communities, thus enabling them to produce their own health. FMOH developed the urban health extension program based on the experience of the rural health extension program. Prior to the implementation of urban health extension program, female health extension professionals previously trained as clinical nurses were recruited and trained for three-months.

II.   **Packages:** Fifteen packages under four major themes:

- Promotion of hygiene and environmental sanitation

- Prevention and control of major communicable diseases

- Promoting and providing family health services and H

- First aid and injury prevention.

III.   **Core principle: Provision of family and community centered services**.

- **Focus:** Preventive, Promotive, and rehabilitative services targeting households, youth centers and the schools.

IV. Objective of the HEP

General Objective

- Expand equitable access to quality primary health services to the urban population through family and community-centered approaches.

Specific Objectives

- Ensure universal coverage of quality essential health services

- Enhance the health promotive and disease prevention skills of the community through improving the health literacy of the community and improve health care utilization.

- Build community-based referral system

V. Implementation Strategies

- Community engagement

- Planning, monitoring and evaluation

- Continuous professional development & vocational training

- Partnership, collaboration and coordination

- Equitable and quality health care services.

VI. Guiding principles

- Prevention-focused

- Family-centered

- Team approach

- Community engagement

- Equity

- Innovation

- Quality services

Session 4: The USAID Community HIV Care and Treatment Activity

By the end of this session, you will be able to:

– Describe the USAID Community HIV Care and Treatment Activity and its priority interventions and focus areas.

Time allotted: 45 minutes

Project HOPE background

- Founded in 1958

    - Health

    - Opportunity for

    - People

    - Every where

Vision

- To become the highest people-impact and most donor-preferred international organization working to improve health through education and humanitarian aid

Mission

- To achieve sustainable advances in health care around the world by implementing health education programs and providing humanitarian assistance in areas of need

Global Health Practice Area

- **Practice Area**

1. Infectious Disease (TB & HIV)

2. Chronic Disease (Diabetes)

3. Women & Children's Health (HE, ES, RH, FP,NM&CH)

4. Health System Strengthening (TA, Supply chain)

5. Humanitarian Assistance/Disaster Relief

Project HOPE Ethiopia Partners

➢ FMoH

➢ FHAPCO

➢ RHBs

Local Partners

Eleven local implementing partners including NEP+ and **NNPWE**

Core interventions

- Support HF initiated ICT- all sites

- Assisted self-testing for refusing partner(s) of index clients

- LTFU tracing based on HF line lists

- DSDM of UHEW-CAG implementation in AA and Gambella

- COMMCARE: implementation at scale

- New recruitment of C&S clients, service delivery and graduation.

- Referral linkage to HFs and other service providers-map.

- M&E, RDQA, QAI, Local Capacity building

CHCT Activity Background

The Project HOPE led (CHCT) program will access to comprehensive HIV prevention, care and treatment services by reinforcing the role of community health workers and communities.

Results Framework

AO: Accelerate and sustain HIV epidemic control in Ethiopia through delivery of high-impact community-based HIV services

Obj. 1: Community health and support systems for service delivery strengthened (5 IRs)

Obj. 2: Organizational and technical capacity of community structures strengthened (2 IRs)

Obj. 3: Data collection and use for learning and program improvement strengthened (3 IRs)

IR-1: The provision of high impact prevention, care, support, and treatment services at the community level improved

SIR-1: Improved community-based HIV prevention

SIR:2 Improved community-based care and support services for PLHIV

SIR3: Improved community-based care and treatment services for PLHIV

Implementation Model

➢ CHCT will use a socio-ecological model (SEM) that puts individual PLHIVs and other target populations at the center of the intervention. Include but are not limited.

SYSTEMS
Coordination & collaboration with government structures; capacity building of local partners; strengthening the referral linkage system; improve community based M & E system; and collaborate on supply chain management

COMMUNITY
Community dialogue on stigma and discrimination; Test and START; viral load; and GBV

HOUSEHOLD
VSL; promotion of hygiene, safe water and malaria prevention; index testing; identifying adherence supporter; training of caregivers of CLHIV on how to take care of their children; and education on reduction of stigma and discrimination

INDIVIDUAL
Case management through household visits or support group: Linkage for ART; adherence assessment and support; psychosocial support; screening and referral for TB, STI, depression, substance abuse and drug side effect; nutritional assessment and counseling; monitoring for viral load; skills building on positive living; and referrals

Module 2

HIV Prevention, Care and Treatment

Module Description: This module is designed to help you understand the basics of care and treatment of people living with HIV. You will learn the cascade of care including, the manifestations of common opportunistic infections and their screening, and first line ARVs and adherence to ART.

Module objectives: By the end of this module, you will be able to:

- Identify common opportunistic infections and describe how they can be screened;
- List down the first line ARV regimens and their common side effects; and
- Identify factors affecting adherence to HIV care and treatment and how to address them.

Time allotted: 120 minutes (2hours)

Session 1: Common Opportunistic Infections

Session objectives:

At the end of this session, you will be able:

- Describe the cause, clinical manifestation, and prevention modalities of common opportunistic infections: Tuberculosis & STIs.

Time allotted: 120 minutes

1.1. Tuberculosis

Overview

Tuberculosis is a chronic infectious disease caused by *Mycobacterium tuberculosis*; another name for these bacteria is TB bacteria or tubercle bacilli. TB usually affects the lungs (80% of TB cases are of this type), hence the name pulmonary TB (PTB). When other organs of the body are affected, such as the bones, joints, lymph-nodes, gastro-intestinal tract, meninges (coverings of the brain), or the reproductive system, kidneys and bladder (also known as the genito-urinary tract), the disease is called extra-pulmonary TB (or EPTB).

Transmission of Tuberculosis

When an adult with infectious TB coughs, sneezes, sings or talks, the TB bacteria may be expelled into the air in the form of small particles called droplet nuclei, which cannot be seen except through a microscope. Transmission occurs when a person in close contact inhales (breathes in) the droplet nuclei.

Risk Factors

- Poverty, causing poor living conditions and diet;
- Prolonged close contact with someone with active TB;
- Extreme ages (the very young or old age groups);
- Malnutrition;
- Inaccessible health care, making it harder to diagnose and treat TB;
- Living or working in a place or facilities such as a prison or a refugee camp, where there is overcrowding, poor ventilation, or unsanitary conditions
- Healthcare professionals, with increased chances of exposure to TB
- Lowered immunity. e.g. HIV/AIDS or diabetes, and drug treatments for cancer.

Natural History of Tuberculosis

Not all exposed to Tuberculosis develop disease. Only 10 – 30% of those exposed develop infection. Only 10 % develop active disease, five percent develop within two years and the remaining five percent many years later. The remaining 90% become latent: they do not develop TB and will not be infectious. Of those who develop active TB, if untreated, 50% die within five years, 25% remain sick, and 25% will recover due to their strong immune defences, but they could become sick again at any time if the TB bacteria are latent.

Symptoms

Active Pulmonary TB disease (PTB)

Pulmonary TB has several manifestations.

> ➢ The most common is a persistent cough that lasts for two weeks or more accompanied with the production of whitish sputum.
> ➢ Other key symptoms are spitting of blood, weight loss, and low-grade fever, loss of appetite, night sweating, chest pain and shortness of breath or difficulty in breathing.

Extra-Pulmonary TB disease (EPTB)

The symptoms of EPTB will vary depending on the organ affected. They can include:

> ➢ Back pain and swelling on the spine
> ➢ Long-lasting bone infection
> ➢ Painful joint swelling (usually affecting one joint)
> ➢ Painful urination, blood in urine, and frequent urination
> ➢ Hoarseness of voice, pain on swallowing
> ➢ Headache, fever, neck stiffness, vomiting, irritability, and convulsions
> ➢ Swelling of the lymph node with draining pus and long-lasting ulcers resistant to antibiotic treatment.

Diagnosis
> ➢ Presence of symptoms
> ➢ Sputum microscopy
> ➢ Gene expert
> ➢ Chest x-ray
> ➢ Biopsy
> ➢ Sputum culture

TB-HIV Coinfection

TB is the most frequent life-threatening opportunistic infection and a leading cause of death among HIV infected people. Tuberculosis contributes to more rapid progression of HIV disease. On the other hand, HIV increases susceptibility to be infected with *M. tuberculosis*, the risk of progression to TB disease and the incidence and prevalence of TB. The lifetime risk of HIV positive individuals who develop TB is 20-37 times greater than HIV negative individuals.

It is essential for both TB and HIV control programs to work together and intensify the implementation of TB/HIV collaborative activities to reduce the dual burden of TB/HIV in populations at risk or affected by both diseases.

Nationally Recommended TB/HIV Collaborative Activities

A. Strengthen the Mechanisms for integrated TB and HIV services delivery

- Strengthen the coordination mechanism for integrated TB/HIV services at all levels;
- Conduct surveillance to determine HIV burden among TB patients and TB burden among HIV patients;
- Carry out joint TB/HIV planning for integrated TB and HIV services delivery;
- Conduct monitoring and evaluation of collaborative TB/HIV activities.

B. Reduce the burden of TB in HIV infected people and initiate early antiretroviral therapy (The three I's i.e. **I**ntensive case finding, **I**NH Preventive Therapy and **I**nfection control)

- Intensify TB case finding and ensure quality TB treatment;
- Initiate TB prevention with earlier initiation of ART and Isoniazid preventive therapy (IPT);
- Ensure Tuberculosis infection control in healthcare and congregate settings.

C. Reduce the burden of HIV in patients with presumptive and diagnosed TB.

- Provide HIV testing and counseling to presumptive and confirmed TB patients;
- Provide HIV prevention services for presumptive and confirmed TB patients;
- Provide co-trimoxazole preventive therapy for HIV positive TB patients;
- Ensure HIV/AIDS prevention, treatment and care for HIV positive TB patients;
- Provide antiretroviral therapy for HIV positive TB patients.

1.2. Sexually Transmitted Infections

Overview

Sexually transmitted infections (STIs) are generally acquired by sexual contact. The organisms that cause sexually transmitted diseases may pass from person to person in blood, semen, or vaginal and other bodily fluids. Sometimes, these infections can be transmitted non-sexually, such as from mother to infant during pregnancy or childbirth, or through blood transfusions or shared needles. It's possible to contract sexually transmitted diseases from people who seem perfectly healthy, and who may not even be aware of the infection. SITs don't always cause symptoms, which is one of the reasons experts prefer the term "sexually transmitted infections" to "sexually transmitted diseases."

Causes

Sexually transmitted infections can be caused by:

- ➢ Bacteria (gonorrhea, syphilis, chlamydia)
- ➢ Parasites (trichomoniasis)
- ➢ Viruses (human papillomavirus, genital herpes, HIV)

Sexual activity plays a role in spreading many other infectious agents, although it's possible to be infected without sexual contact.

Risk factors

Anyone who is sexually active risks exposure to a sexually transmitted infection to some degree. Factors that may increase that risk include:

- ➢ Having unprotected sex**.**
- ➢ Improper or inconsistent use of condoms can also increase your risk.
- ➢ Having sexual contact with multiple partners.
- ➢ Having a history of STIs**.**
- ➢ Anyone forced to have sexual intercourse or sexual activity. E.g. Rape
- ➢ Abusing alcohol or other substances.
- ➢ Being young, (Half of STIs occur in people between the ages of 15 and 24).

Transmission from mother to infant

Certain STIs — such as gonorrhea, chlamydia, HIV and syphilis — can be passed from an infected mother to her child during pregnancy or delivery. STIs in infants can cause serious problems and may be fatal. All pregnant women should be screened for these infections and treated.

Symptoms

Sexually transmitted infections (STIs) can have a range of signs and symptoms, including no symptoms. That is why they may go unnoticed until complications occur, or a partner is diagnosed. Signs and symptoms that might indicate an STI include:

➢ Sores or bumps on the genitals or in the oral or rectal area
➢ Painful or burning urination
➢ Discharge from the penis
➢ Unusual or odd-smelling vaginal discharge
➢ Unusual vaginal bleeding
➢ Pain during sex
➢ Sore, swollen lymph nodes, particularly in the groin but sometimes more widespread
➢ Lower abdominal pain
➢ Fever
➢ Rash over the trunk, hands or feet

Signs and symptoms may appear a few days after exposure, or it may take years before any noticeable problems appear, depending on the organism.

Complications

Because many people in the early stages of an STI experience no symptoms, screening for STIs is important in preventing complications.

Possible complications include:

➢ Pelvic pain
➢ Pregnancy complications
➢ Eye inflammation
➢ Arthritis
➢ Pelvic inflammatory disease
➢ Infertility
➢ Heart disease
➢ Certain cancers, such as HPV-associated cervical and rectal cancers

Prevention

There are several ways to avoid or reduce your risk of sexually transmitted infections.

➢ Abstain. The most effective way to avoid STIs is to abstain from sex.
➢ Stay with one uninfected partner.

- Wait and verify. Avoid sexual intercourse with new partners until both have been tested for STIs.
- Use condoms consistently and correctly.
    - N.B. Non-barrier forms of contraception, such as oral contraceptives or intrauterine devices, don't protect against STIs.
- Don't drink alcohol excessively or use drugs.
- Communicate. Before any serious sexual contact, communicate with your partner about practicing safer sex. Reach an explicit agreement about what activities will and won't be OK.
- Male circumcision.

Session 2: Screening for Common Opportunistic Infections

Session objectives: By the end of this session, you should be able to:

➢ Describe what screening is; and
➢ Identify and use tools used to screen common opportunistic infections: Tuberculosis and STIs

Time allotted: 60 minutes

2.1. Definition

Screening refers to the detection of an infection in an individual *who does not show any signs or symptoms* of the disease. It is carried out using specific tests called screening tests. Screening will help you to detect an infection early and organise appropriate treatment so as to reduce complications and prevent transmission to others.

An example of screening that may be familiar to you is screening the blood of pregnant women for HIV infection.

2.2. Screening for Tuberculosis

When selecting people for TB screening you should always be aware that certain individuals are at high risk of becoming infected and developing tuberculosis, in particular, contacts of those who are in prison, drug abusers, diabetic patients and People Living with HIV (PLHIV).

Identification of presumptive TB cases (formerly 'TB suspects') involves screening of patients for signs & symptoms of TB, with particular attention to cough of two weeks or more duration. Other symptoms that help to identify TB suspects include fever, night sweating, and weight loss. Presumptive TB cases' identification should be made both at community and health facility levels.

Health extension professionals and the community in general can perform the identification of such cases at community level. Especially the Health Development Army should work aggressively in identifying individuals suspected of having TB as early as possible. All identified presumptive TB cases should promptly be referred to a nearby diagnostic HF for sputum smear examination and for further clinical evaluation.

Presumptive TB Case (formerly known as Tuberculosis suspect):

Any person who presents with symptoms and/or signs suggestive of tuberculosis, in particular cough of two weeks or more duration is a presumptive TB case. The most common symptom of pulmonary TB is a productive cough for more than 2 weeks, which may be accompanied by other respiratory symptoms (shortness of breath, chest pains, and hemoptysis) and/or constitutional symptoms (loss of appetite, weight loss, fever, night sweats, and fatigue).

You need to screen every PLHIV during each encounter for TB using the following four questions. If the client has **any of the four symptoms below,** he/she might have active TB and needs referral to the nearby health facility for further evaluation and treatment.

Screening Questions to Identify TB Suspect Cases

	Question	Yes	No
1.	Has an individual had a cough for > 2 weeks?		
2.	Has an individual has blood stained sputum?		
3.	Has the individual had chest pain?		
4.	Has the individual had fevers for >2 weeks?		
5.	Has the individual had loss of appetite?		
6.	Has the individual had an observed weight loss?		
7.	Has the individual has night sweats for >2 weeks?		
8.	Has the patient in close contact with someone with TB in the past year?		

Interpretation of result:

1. If the 'YES' to question 1, the individual is a pulmonary TB suspect. Regardless of 'Yes' answers to the other questions, refer the patient to health facility for TB evaluation. If an individual has a cough of less than two weeks and shows with any of the other symptoms, refer the individual to health facility for TB evaluation.

Source: *FMOH Tuberculosis, leprosy, and TB/HIV prevention and control program manual, 2012.*

Screening Questions to Identify TB in HIV Positives (Adults & Adolescents)

Ask every person living with HIV these screening questions.

S.No	Question	Yes	No
1.	Do you have cough currently?		
2.	Do you have fever?		
3.	Have you lost weight?		
4.	Do you have night sweats?		

Interpretation of result:
1. If response is 'YES' to any one of the above questions, the individual is a TB suspect (screened positive) and should be referred to the health facility for TB evaluation.
2. If the response is 'NO' to all four questions, the individual is not TB suspect (screened negative). Please re-screen the individual after 3-6 months.

Source: *FMOH Tuberculosis, Leprosy, and TB/HIV prevention and control program manual, 2012.*

TB screening for children more than one year old and living with HIV

Children living with HIV who have any of the symptoms of poor weight gain, fever, current cough or contact history with TB case may have active TB and should be evaluated for TB and other conditions. If you find any of the above symptoms, refer to the health facility for workup.

Poor weight gain is defined as:

- Reported weight loss or very low weight (weight for age less than –3 z-score);

- Underweight (weight for age less than –2 z-score);

- Confirmed weight loss (>5%) since the last visit; or

- Growth curve flattening.

2.3. Screening for STIs

Most individuals with sexually transmitted diseases do not have symptoms. A significant proportion of women and men with STIs do not have symptoms or have minimal symptoms and do not realize that anything is wrong. Silent asymptomatic infections can be more serious than symptomatic ones. Identifying and treating such patients prevent the development of complications for the individual patient and help reduce transmission in the community.

Why do we need to screen for STIs?

Untreated sexually transmitted infections (STIs) lead to the following complications: Upper genital tract infections, infertility, chronic pelvic pain, cervical cancer, and chronic infection with hepatitis viruses and HIV.

The approach to STI diagnosis and management is based upon disease or symptom-specific syndromes, including vaginal discharge, urethral discharge, ulcerative genital disease, nonulcerative genital disease, and pelvic pain. However, many patients have asymptomatic disease, which increases the risk of complications and sustained transmission in the community. Thus, screening is an important approach to identify and treat infected individuals, who would otherwise go undetected. Routine screening for all potential STIs in all patients is cost-prohibitive; targeted screening of asymptomatic patients in specified risk groups is more feasible.

STI screening should include the following three questions of all persons aged 15-49 years, regardless of clinical presentation:

- ➢ Do you have any genital discharge?
- ➢ Do you have any genital ulcers?

➢ Has/have your partner(s) been treated for an STI in the last 8 weeks?

Session 3: Introduction to ART

Session objectives:

By the end of this session, you should be able to:
- ➢ Describe the benefits and goals of ART;
- ➢ Name the different classes of antiretroviral drugs;
- ➢ Indicate the classes to which different antiretroviral drugs belong;
- ➢ Explain why we need to use a combination of 3 antiretroviral drugs;
- ➢ Explain the difference between a first-line and second-line ARV regimen;
- ➢ Describe the dosing and side effects all 1st and 2nd regimens

Allotted time: 30 minutes

Introduction:

HIV is a retrovirus. Therefore, drugs against HIV are called anti-retroviral drugs. Giving ARV drugs in the correct way, with adherence support, is called ARV Therapy -shortened to ART. There are three big groups of antiretroviral drugs available:

- – The NRTI: this stands for 'Nucleoside and Nucleotide Reverse Transcriptase Inhibitors (divided into NsRTI and NtRTI)
- – The NNRTI: this stands for 'Non-Nucleoside Reverse Transcriptase Inhibitors
- – The PI: stands for Protease Inhibitors

The nucleoside and non-nucleoside inhibitors (NRTI and NNRTI) both have the same "target". They **prevent HIV from entering the infected cell's nucleus**, **so HIV cannot start making new copies.**

Protease inhibitors (PI): when the central part (nucleus which contains cellular DNA) of the body cell makes parts of the HIV virus after infection, these parts have to be cut and put together in the right way before the new HIV copies can leave the cell. Protease inhibitors prevent this "cut and putting together' from happening correctly, **so the newly produced virus parts cannot leave the infected cell and infect other cells.**

This shows that protease inhibitors and nucleoside/non-nucleoside inhibitors work at different steps in the process that HIV goes through when it makes new copies of itself inside cells.

Combination therapy makes sense for lots of reasons. Here are the most important ones:

- – It takes three drugs to have sustained viral suppression (low level of virus in the body). HIV makes new copies of itself very rapidly. Giving a single drug or two drugs might suppress

viral replication for a short period of time but resistance to the drug develops soon. Whenever ART is given, it is administered as a **minimum of three drugs combination.**

- Antiretroviral drugs from different drug groups attack the virus in different ways. Hitting two targets **increases the chance of stopping HIV and protecting new cells from infection.**

- Combinations of anti-HIV drugs may **overcome or delay resistance.**

3.1 Benefits and Goal of ART

Benefits of ART

- ☞ Prolongs life and improves quality of life
- ☞ Households can stay intact
- ☞ Decreased number of orphans
- ☞ Reduces mother-to-child transmission of HIV
- ☞ Increased number of people who accept HIV testing and counselling
- ☞ Increased awareness in the community, since more people take the test
- ☞ Decreased stigma surrounding HIV infection since treatment is now available
- ☞ Increased motivation of health professionals, since they feel they can do more for HIV patients
- ☞ Less money spent to treat opportunistic infections and provide palliative care
- ☞ Businesses can stay intact.

Goal of ART

The goal of ART is to reduce the number of virus in the blood and ensure viral suppression.

3.2 First line and second line ART

A *first-line regimen*: a combination of drugs that will be used in a patient who has no prior ART experience. This means that the patient has never taken ARV drugs before.

Second-line regimen: given to individuals who develop failure of therapy. The second-line regimen is stronger, **with more side effects, more food restrictions, and may require taking more drugs**. Even second-line regimen can fail, if not taken well.

Session 4: First line ARV regimens

Session objectives:

By the end of this session, you will be able to:

- Explain the all first-line ARV regimens;
- Determine correct dose for the first-line ARV regimens;
- Describe the side effects all first line regimens; and
- Advise patients on how to take each of the first-line ARV regimens.

Time allotted: 40 minutes

4.1 First line regimens

Using simplified, less toxic and more convenient regimens as fixed-dose combinations is recommended for first-line ART. Once-daily regimens comprising **NRTI backbone (TDF + 3TC) and one NNRTI (EFV**) are maintained as the preferred choices in adults, adolescents and children older than ten years. For children younger than three years a PI-based regimen is the preferred approach.

Updated summary of first-line ART regimens. 2018 National Guidelines for Comprehensive for Comprehensive HIV Prevention, Care and Treatment,

Population	Preferred first-line regimens	Alternative first-line regimens	Special circumstances c
Adults (including those with TB/ HIV- co infection)	TDF+ 3TC+ DTG (FDC)	TDF + 3TC + EFV* AZT + 3TC + DTG AZT + 3TC + EFV	AZT+ 3TC + ATV/r** TDF+ 3TC+ ATV/r
Adolescent girls and women of childbearing potential who are on consistent & reliable contraception	TDF+3TC+DTG (FDC)	TDF + 3TC + EFV* AZT + 3TC + DTG AZT + 3TC + EFV	AZT+3TC+ATV/r TDF+3TC+ATV/r
Women & adolescent girls who have desire for pregnancy or are pregnant	TDF+3TC+ EFV* (FDC)	AZT + 3TC + EFV	TDF+3TC+ ATV/r AZT+3TC + ATV/r
Adolescents (10 to 19 years OR weight ≥30 kg) (*Including those with TB/HIVb- co infection*.)	TDF+3TC+DTG (FDC)	TDF+3TC+EFV * AZT + 3TC + EFV ABC + 3TC + EFV	TDF+3TC + ATV/r AZT+3TC + ATV/r
Children less than 10 years or weight. ≥ 20kg)	ABC + 3TC + DTG	ABC+ 3TC+LPV/r AZT+3TC+DTG	ABC+3TC+EFV/NVP*** AZT+3TC+EFV/NVP AZT+3TC+LPV/r

Children between 4 weeks and 10 years and body weight <20kg	ABC+3TC+LPV/r	No alternative first line regimen for this group.	ABC+3TC+EFV**** AZT + 3TC +EFV AZT + 3TC +LPV/r

a) ABC or boosted PIs (ATV/r, LPV/r) can be used in special circumstances. For those clients who could take neither DTG nor EFV due to contraindication and/or side effects.

b) In case of TB-HIV co-infection, the dose of DTG should be 50mg **BID**.*TDF+3TC+EFV400 (FDC) and TDF+3TC+EFV600 (FDC) can be used interchangeably based on stock availability.

** WHO recommends ATV/r as alternative first-line when DTG or EFV can't fit. Besides, LPV/r has more side effects and drug interactions. LPV/r has also pill burden impact. The only concern when using ATV/r as first- line is transmitted resistance that would affect its use as second line ARV.

*****Caution**: co-administration of ABC with NVP in pediatric patients will increase the risk of hypersensitivity reaction and requires extreme precaution.

**** EFV is for children 3 years and older

Source 2018 National Guidelines for Comprehensive for Comprehensive HIV Prevention, Care and Treatment,

4.2 Dosage of Antiretroviral Drugs

The following table summarizes the dosage of antiretroviral drugs for adolescents and adults:

Generic name	Dose
Nucleoside reverse-transcriptase inhibitors (NRTIs)	
Abacavir (ABC)	300 mg twice daily or 600 mg once daily
Emtricitabine (FTC)	200 mg once daily
Lamivudine (3TC)	150 mg twice daily or 300 mg once daily
Zidovudine (AZT)	250–300 mg twice daily
Nucleotide reverse-transcriptase inhibitors (NtRTIs)	
Tenofovir (TDF)	300 mg once daily
Non-nucleoside reverse-transcriptase inhibitors (NNRTIs)	
Efavirenz (EFV)	400–600 mg once daily
Etravirine (ETV)	200 mg twice daily
Nevirapine (NVP)	200 mg once daily for 14 days, followed by 200 mg twice daily
Proteases inhibitors (PIs)	
Atazanavir + ritonavir (ATV/r)	300 mg + 100 mg once daily
Darunavir + ritonavir (DRV/r)	800 mg + 100 mg once daily[a] or 600 mg + 100 mg twice daily[b]
Lopinavir/ritonavir (LPV/r)	400 mg/100 mg twice daily
	Considerations for individuals receiving TB therapy In the presence of rifabutin, no dose adjustment required. In the presence of rifampicin, adjusted dose of LPV/r: (LPV 800 mg + RTV 200 mg twice daily or LPV 400 mg + RTV 400 mg twice daily).or, SQV/r (SQV 400 mg + RTV 400 mg twice daily), with close monitoring.
Integrase strand transfer inhibitors (INSTIs)	
Dolutegravir (DTG)	50 mg once daily
Raltegravir (RAL)	400 mg twice daily

[a] For individuals with no previous use of protease inhibitors.
[b] For individuals with previous use of protease inhibitors.

Source: WHO Consolidate Guidelines on the use of antiretroviral drugs for treating and preventing HIV infections, 2016. Page 388.

See annex for simplified weight-based dosing for infants and children.

4.3 Side effects of ARVs used in first line regimens

ARV	Common associated toxicity
AZT or ZDV	GI intolerance Anemia / neutropenia Lactic acidosis Myopathy Nail discoloration
EFV	CNS toxicity Teratogenicity (first trimester only) Very rare severe or fatal skin reaction (SJS)
NVP	Hypersensitivity reactions Hepatitis Severe/fatal hepatic necrosis Very rare severe or fatal skin reaction (SJS)
3TC	Very safe
TDF	Renal toxicity
ABC	Hypersensitivity reaction
DTG	Hepatotoxicity Hypersensitivity Reactions.
Kaletra	GI intolerance Diarrhea Mild liver enzyme elevations

4.4 Advising patients on how to take each of the first-line ARV regimens.

Your facilitator will give you a case scenario and you will practice advising patients on taking on each kind of the first line ARV regimens.

Session objectives:

By the end of this session, you should be able to:

- Define adherence;
- Identify barriers to adherence;
- Identify adherence support tools; and
- List down ways to monitor adherence for individuals who are on ART.

Time allotted: 40 minutes

5.1 Definition and importance of adherence

WHO defines treatment adherence as "the extent to which a person's behavior – taking medications, following a diet and/or executing lifestyle changes – corresponds with agreed recommendations from a health care provider."

For ART, a high level of sustained adherence is necessary to suppress viral replication and improve immunological and clinical outcomes; decrease the risk of developing ARV drug resistance; and reduce the risk of transmitting HIV.

Exercise

In a group of four, identify potential barriers to adherence to ART; provide possible solutions, and how you monitor adherence?

5.2 Barriers to adherence

Individual factors: Limited knowledge on the course of HIV infection and treatment and adverse effects; lack of clear information or instruction on medication; forgetfulness; travel; changes in daily routines; depression or other illness; a lack of interest or desire to take the medicines; and substance or alcohol use.

Medication-related factors: Adverse events; the complexity of dosing regimens; the pill burden; and dietary restrictions.

Health system factors: Frequent visits to the health facilities; travelling long distances to reach health services; and bearing the direct and indirect costs of care.

Specific population groups face additional challenges to adherence, and these should be considered when implementing the recommended interventions.

Pregnant and postpartum women

The pregnancy and postpartum period present significant biological, social and economic challenges that may affect treatment adherence. **Pregnancy-related conditions such as nausea and vomiting** may negatively affect treatment adherence.

Adolescents

Adolescents face specific challenges, **including psychosocial issues such as peer pressure**, the perceived need to conform and inconsistent daily routine. Adolescents are often left out of decisions and have limited opportunities to discuss their concerns, and there is limited availability of adolescent-specific treatment literacy and adherence counselling tools. For adolescents who are transitioning from pediatric to adolescent care, additional challenges may include assuming increased responsibility for their own care, issues relating to disclosure to peers or partners, difficulties in navigating the health-care system, lack of links between adult and pediatric services and inadequately skilled health professionals.

Infants and young children

Successfully treating a child requires the commitment and involvement of a responsible caregiver. Parents and other family members of children living with HIV may themselves be living with HIV, and suboptimal HIV care and treatment for family members could result in suboptimal care for the child. Other challenges include lack of nutrition support, limited choice of pediatric formulations, poor palatability of liquid formulations, high pill or liquid volume burden, large pill size, frequent dosing requirements and difficulties in swallowing tablets

People with mental health conditions and substance use

People with HIV with uncontrolled depressive symptoms are more likely to have poor adherence to ART. Adherence is complicated by mental health comorbidity that results in forgetfulness, poor organization and poor comprehension of treatment plans.

Similarly, use of alcohol and other substances may also contribute to poor adherence to ART. Alcohol and substance use can lead to forgetfulness, poor organization and diversion of monetary resources

5.3 Supportive Interventions

Program level interventions:

- ☞ Reduce out-of-pocket payments at the point of care.
- ☞ Using fixed-dose combination regimens for ART.

- ☞ Strengthening drug supply management systems to reliably forecast, procure, and deliver ARV drugs and prevent stock-outs.
- ☞ Avoiding imposing and maximize adherence should begin before ART is initiated.
- ☞ Developing an adherence plan and education are important first steps.

Patient level interventions:

- ☞ Patient education, counseling, and peer support.
- ☞ Substance use and mental health interventions: Improving well-being by treating depression and managing substance use disorders improves HIV treatment outcomes.
- ☞ Nutritional assessment, care, and support
- ☞ Reminder and engagement tools: Mobile phone text messages, alarms, phone calls, diaries and calendars.

5.4 Monitoring adherence to ART in routine Program and care settings

A combination of approaches is required.

- ☞ Viral load monitoring
- ☞ Pharmacy refill records
- ☞ Self-report
- ☞ Pill counts

Annex 1: Dosing of Antiretroviral drugs in children

Drug	Strength of tablet or sprinkle sachet or capsule (mg)	No. of tablets or sprinkle capsules/sachets by weight band											
		3–5.9kg		6–9.9kg		10–13.9 kg		14–19.9kg		20–24.9kg		25–34.9kg	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
ABC/3TC/NVP	60mg/30mg/50mg	1	1	1.5	1.5	2	2	2.5	2.5	3	3	4	4
LPV/r sprinkles	40mg/10 mg	2	2	3	3	4	4	5	5	6	6	—	
ABC/3TC/ LPV/r	30mg/15mg/ 40mg/10mg	2	2	3	3	4	4	5	5	6	6	—	
AZT/3 TC/ LPV/r	30mg/15mg/ 40mg/10mg	2	2	3	3	4	4	5	5	6	6	—	
DRV/r	240/40mg	—	—	—	—	1	1	1	1	2	1	—	
ATV/r	100/33mg	—		—		1		1		2		—	
ABC/3TC	120/60mg	1		1.5		2		2.5		3		—	
TDF/3TC	75mg/75mg	—		—		1.5		2		2.5		3–3.5[a]	
TDF/3TC/ EFV	75mg/75mg/ 150mg	—		—		1.5		2		2.5		3–3.5[a]	
TDF/3TC adult double scored[b]	300mg/ 300mg	—		—		one third		one half		two thirds		1	
TDF/3TC/EFV adult double scored[b]	300mg/300mg/ 600mg	—		—		one third		one half		two thirds		1	

[a] 3 tablets for 25–29.9 kg and 3.5 tablets for 30–34.9 kg.
[b] A double-scored tablet has two score lines on one side of the tablet and one score line on the other side, enabling it to be divided into thirds or halves as needed

Source: Source: National Guidelines for Comprehensive HIV Prevention, Care and Treatment, 2017.

Module 3

Community Based Differentiated ART Service Delivery Models

Module Description: This module is designed to help participants understand **differentiated service delivery model of HIV care,** its principles, building blocks, the types of differentiated HIV service delivery model. It helps participants understand how the different models, particularly **the community based ART refill groups** work, how they are formed, and function. In addition, introduces the participants to the **HEW-CAG & PCAD** implementation manual and standard operating procedure (SOP), and the monitoring and evaluation of HEW-CAGs & PCAD.

Module objectives: By the end of this module, participants will be able to:
- Describe the several types of the differentiated service delivery models of HIV care;
- Describe what community ART refill groups are and how they are formed and function;
- Identify the main components of the UHEW-CAG & PCAD implementation manual and the standard operating procedure (SOP)
- Describe how the models will be monitored and evaluated.

Time allotted: 4 hours

Session 1: Differentiated Service Delivery Model of HIV

Session objectives: By the end of this session, the participants should be able to:

- Define differentiated care;

- Explain why differentiated care is important;

- Define who a stable client is;

- Identify elements to consider when differentiating care;

- Describe the building blocks of differentiating care.

Time allotted: 40 min

1.1.   Differentiated Service Delivery Model (DSDM): Definition

"Differentiated care is **a client-centered approach** that simplifies and adapts HIV services across the cascade to reflect the **preference and expectations of various groups of people** living with HIV (PLHIV) while reducing unnecessary burdens on the health system."

The central driver to adapting service provision is the client's needs.

Differentiated care applies across the HIV continuum to all three of the 95-95-95 targets (95% of people living with HIV should know their status; 95% who know their status should be on ART; 95% of those on ART should be virologically suppressed). Differentiated care includes models of care appropriate/suited to testing people unaware of their HIV status to viral suppression of HIV clients enrolled in care.

I.   What are the three 95's (95-95-95)

- By 2030, 95% of all people living with HIV will know their HIV status (95% diagnosed).

- By 2030, 95% of all people with diagnosed HIV infection will receive sustained antiretroviral therapy (95% on HIV treatment).

- By 2030, 95% of all people receiving antiretroviral therapy will have viral suppression (95% suppressed).

II.   Why do we need differentiated care?

We need differentiated care because of the following reasons:

- To improve clients' lives: Differentiated care can improve the quality of care and access to treatment for PLHIV.

- To improve health system efficiencies and outcomes: DSDM improve retention in care and adherence to effective treatments.

- To support "treat all": DSDM reduce the burden on the health systems.

- To reach 95-95-95

1.2.   What is differentiated ART delivery?

Differentiated ART delivery is a component of differentiated care. It aims to improve retention and viral suppression by optimizing models of drug and care delivery. **Differentiated ART delivery focuses specifically on clients who are on treatment.** Models of differentiated ART delivery can be

divided **into four categories**: health care professional-managed group models; client-managed group models; facility-based individual models; and out-of-facility individual models. In all of these models, clients continue to have clinical consultations as part of their package of care.

1. **Facility-based individual models**

When clients have an **ART refill visit**, they bypass any clinical staff or adherence support and proceed directly to receive their medication (e.g., **appointment spacing and "fast-track" ART refill model).**

2. **Out-of-facility individual models**

ART refills and, in some cases, clinical consultations are provided to individuals outside of health care facilities. These models are inclusive of **community pharmacies, outreach models and home delivery**.

3. **Health care professional-managed group models**

Clients **receive their ART refills in a group**. Either a professional or a lay healthcare staff member manages this group. Meet within and/or outside of health care facilities.

4. **Client-managed group models**

Clients **receive their ART refills in a group**. Group is managed and run by clients themselves. Generally, client-managed groups meet outside of health care facilities.

1.3. Core principles of DSDM

Client-centered care

"Focused and organized around the health needs, preferences, and expectations of people and communities, upholding individual dignity and respect, especially for vulnerable populations, and engage and support people and families to play an active role in their own care by informed decision-making."
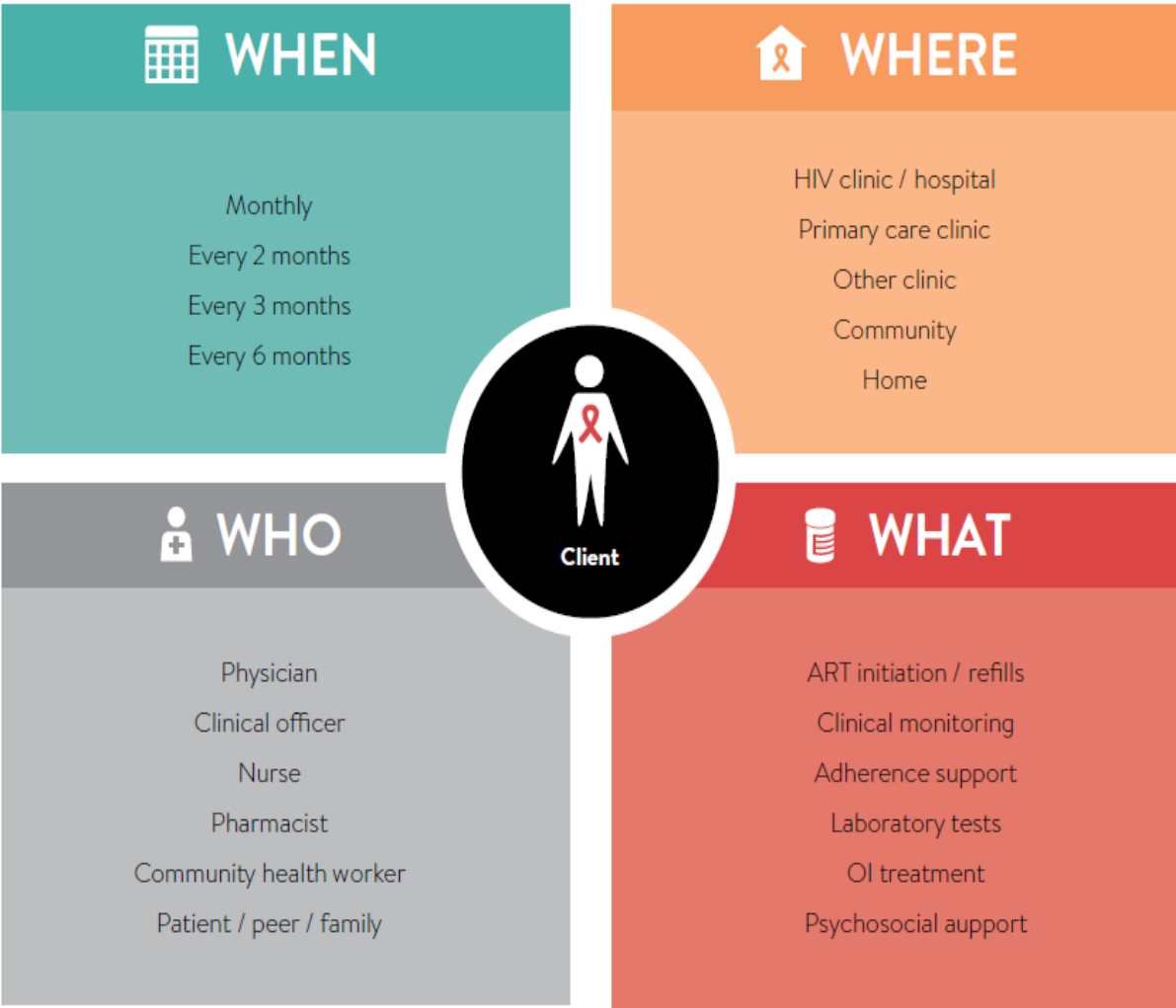
- **Health systems efficiency**

"one- size-fits -all" approach Vs Differentiated care

1.4. Key Elements to Consider when Differentiating Care

Differentiated ART delivery should be implemented as a response to specific challenges or barriers faced by clients and where differentiation may serve to improve quality of care, outcomes and client satisfaction. Deciding how to differentiate ART delivery should be based on a local assessment and according to the following three elements:

☞ Context
☞ Clinical characteristics, and
☞ Specific populations.

1.5. Building Blocks of the Differentiated Service Delivery Models

WHEN

Monthly

Every 2 months

Every 3 months

Every 6 months

WHERE

HIV clinic / hospital

Primary care clinic

Other clinic

Community

Home

Client

WHO

Physician

Clinical officer

Nurse

Pharmacist

Community health worker

Patient / peer / family

WHAT

ART initiation / refills

Clinical monitoring

Adherence support

Laboratory tests

OI treatment

Psychosocial aupport

Session 2: Community-Based Differentiated HIV Care and Treatment Models

Session objectives: By the end of this session, the participants should be able to:

- Define Health Extension Professional Managed Community ART refill group (HEP_CAG)
- Define who a stable client is
- List down the benefits of CAGs
- Define Peer lead community based ART distribution (PCAD)
- Identify critical enablers that need to be considered during the implementation of the model.

Time allotted: 120 minutes

1.

Healthcare Professional- Managed Community ART Refill Groups

1.1 What are health care professional-managed group models?

One of the four models of ART delivery described in the previous session. In this model, clients receive their ART refills in a group. Either a professional or a lay healthcare staff member manages this group. The groups meet within and/or outside of health care facilities.

Health care professionals are responsible for the management of the provision of ART drug supply, care and support to groups of stable clients. **Six to 10 stable clients meet for 30-60 minutes** and are facilitated by a lay health care professional – in our case the Health extension professional – who provides a brief symptom screen, referral where necessary, peer support and distribution of pre-packed ART to all the members present every 3 months (4 times a year).

1.2 Who is a stable patient?

WHO defines stable patients as "as those who have received ART for at least one year and have no adverse drug reactions that require regular monitoring, no current illnesses or pregnancy, are not currently breastfeeding, have good understanding of lifelong adherence and evidence of treatment success (i.e. two consecutive viral load measurements below 1000 copies/mL). In the absence of viral load monitoring, rising CD4 cell counts or CD4 counts above 200 cells/mm3, an objective adherence measure, can be used to indicate treatment success."

1.3 Who is eligible for this model?

Eligibility criteria for community based differentiated ART refill or distributions
- ✓ Is greater than 18 years of age;
- ✓ Provided consent to participate in the UHEW-CAG;
- ✓ Have received ART for at least one year and have no adverse drug reactions that require regular monitoring;
- ✓ **Is still on first line regimen;**
- ✓ **Is on the current regimen at least for three months**;
- ✓ Have no current illnesses or pregnancy and are not currently breastfeeding;
- ✓ Have good understanding of lifelong adherence; and
- ✓ Have evidence of treatment success (i.e. two consecutive viral load measurements below 1000 copies/mL). ALTERNATIVELY, rising CD4 cell counts or CD4 counts above 200 cells/mm3 (in the absence of viral load determination).
- ✓ Clinicians confirm the client's eligibility for membership.
- ✓ The above criteria does not consider the current COVID 19 pandemic.
- ✓ In the context of COVID 19, it recommended being more flexible and the criteria need to be inclusive enough to accommodate unstable clients.
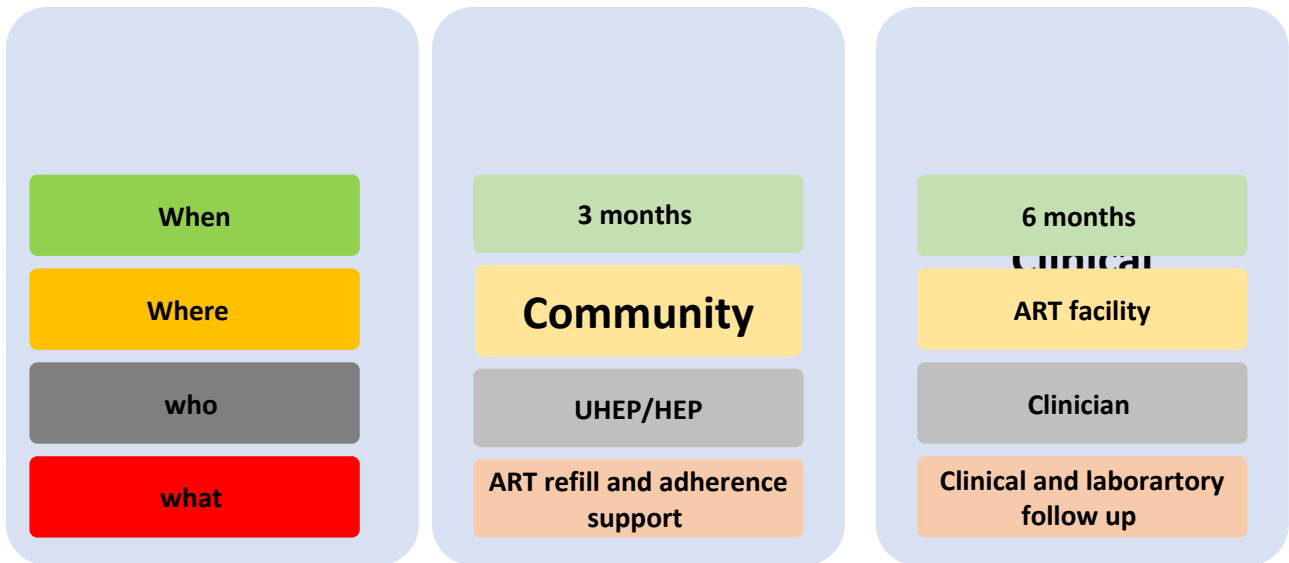
Additional Criteria in the COVID -19 context

The recruitment criteria need to be inclusive enough to accommodate a variety of clients as recommended by FMOH and other global guidance's. Besides, recruiting stable clients for community based ART refill services, other marginally eligible clients (those who may not fulfil all the WHO stable client definition or criteria but do not have a condition that may require a more frequent clinical visit) can be included.

1.4 Benefits Community Based Differentiated ART Refill or Distributions.

- Reduce pressure for medication refills at the health facility.

- Reduce the frequency/burden of travels to facilities

- Provide opportunities for tailored counselling and health education.

- Improve client care and treatment outcomes.

- Empowering patients to take more responsibility to manage their own health.

- Encouraging peer-to-peer support.

- Ensure continuity of care and treatment services for PLHIVs COVID 19 amidst pandemic.

- Accelerated decongestion of health facilities to minimize transmission of COVID-19 and protect PLHIV
- CCAGs support key aspects of effective health system management including:

1.5 Building Blocks of the HEP_CAG Model

When	3 months	6 months
Where	**Community**	ART facility
who	UHEP/HEP	Clinician
what	ART refill and adherence support	Clinical and laborartory follow up

1.6 Formation of HEP-CAGs

The HEP_CAG groups will comprise of **6 – 10 individual members**. This is just for mapping of clients living in same localities but the service provision will be individually or through home-to-home delivery depending on the individual client preferences until the COVID 19 pandemic ends. The refill will be changed to group based refill after the COVID 19 pandemic ends.

The formation of the HEP-CAGs involves the following steps:

   A. Health facilities Level:

- HF based ART service providers will educate and counsel all clients on ART during the clients' regular follow-up visits or telephone consultation & obtain consent from clients for community based refilling at residential areas or home.

- Mapping and recruitment of clients for the community-based refill will base on their location or residential areas.

- HF based service providers will support those clients who gave consent to be included in the community based refill service and prepare a list of clients that are living in the same locality or register to the community based ART refill register.

- Adjust their appointment date by considering the available stock of ARVs at each client's hands and **making same day refilling arrangements at their preferred community site.**

- The members will **select their team leader** who is responsible for leading and representing the team and identifying and addressing challenges in consultation with the HEP.

- Communicate the list to the designated service provider to conduct the community-based refill (HEPs or CEFs).

B. ART pharmacy Level:

- Receive the list of identified clients for community-based refill from the ART clinic.

- Pre packing of ARV and other OI drugs (if any) by ART pharmacy prior to the refill appointment date.

- Provide the pre-packed or pre labeled medication for HEPs or pears representing the groups.

- Updating of pharmacy based refill registers.
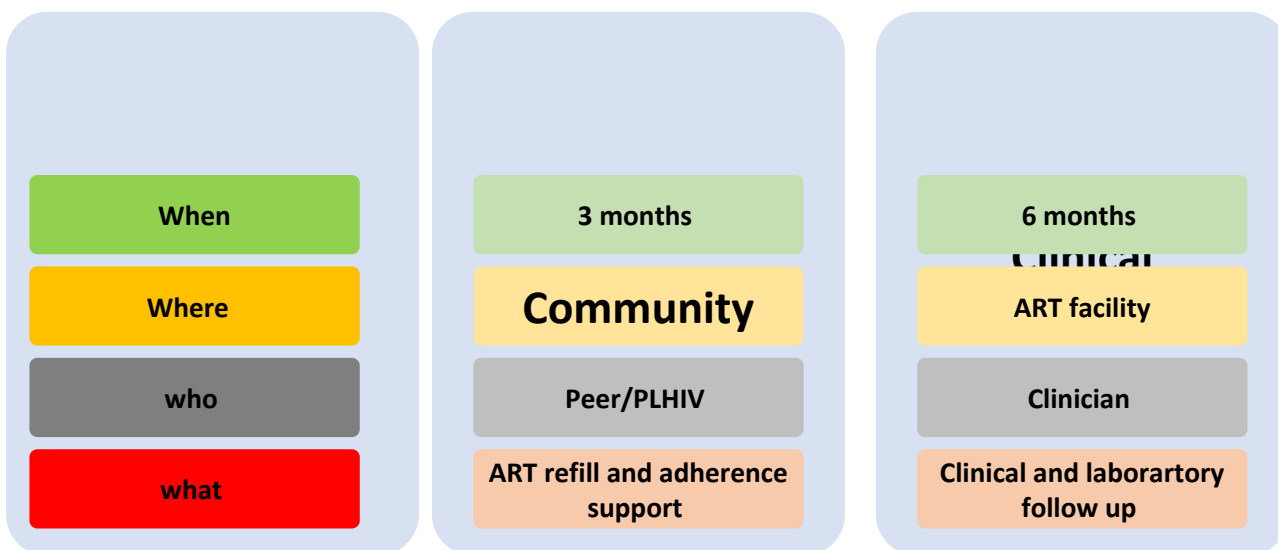
C. Community level:

- HEP/CEF will remind clients prior to the ART refill date.

- The service provider who is responsible to do the community-based refill will appoint clients with in a few minutes interval and refill individually or distribute their medication to their home depending on their preferences.

- Conduct brief assessment of adherence and screen for common OIs.

- Refer or advise clients with identified clinical conditions or significant adherence barriers.

- **Follow and arrange a refill time** and date for those who will not be reached at the appointment date or who missed the refill for various reasons.

- Document the refill status of each clients on the refill register.

2. Peer lead Community Based ART Distribution (PCAD)

The peer lead Community based ART distribution (PCAD) groups are self-forming groups of PLHIV comprising of stable clients living in the same community/locality. In PCAD, group members will take turns to pick up ARVs at the health facility and distribute among the other group members in the community.

Each client will get clinical evaluation and lab monitoring service as per the national guideline. They will manage their own health and take action with the support of community and facility based healthcare workers. The PCAD group members share experiences about living positive with HIV, and are empowered to offer and receive peer psychosocial support and follow-up.

2.1 Building Blocks of the PCAD Model

When	3 months	6 months
Where	**Community**	ART facility
who	Peer/PLHIV	Clinician
what	ART refill and adherence support	Clinical and laborartory follow up

2.2 Formation of PCAD

It is recommended that the PCAD groups comprise of **6 individual members on average** but it is possible to include more members depending of specific contexts. However, the group size had better not exceed 12, if in case there is a need to include more than six members.

   A. **Health Facility Level:**

1. Healthcare workers will conduct the following activities:

   - Identify and map clients by their locations

   - Educate, counsel and sensitize clients about PCAD

   - Register consented clients for PCAD on the community based DSD register

- Oversee completeness of tools

- Train, monitor, supervise and follow up with PCAD Group Leaders

- Ensure implementation and quality assurance of the groups' functionality and operations

- Coordinate the preparation for clinic visits for patients in PCAD e.g. retrieval of files, prepacking medicines, ensure availability of PCAD monitoring forms etc.

2. Stable clients will be listed in accordance to their locations, preferably villages.

3. Sensitize all stable clients, one-on-one or as a group, explaining the implications and benefits of joining a PCAD group.

4. Encourage stable clients to form groups on their own to foster ownership and belonging. These groups should be formed guided by;

- Locality of proposed group members

- Ability to read and write for at least one of the proposed group members

- Group size i.e. 6 members on average per group

5. Assess each client's readiness to join a group. In this assessment process, the following questions can be asked:

   a. Have you disclosed to anyone? If yes, to who? If not, why not?

   b. Would you like to know other clients who would like to form a group in your community?

   c. Are you willing to be known by them?

   d. Would you like to consent to join a group? If all answers are "Yes" then the client will be included in the group. If "No" to any question, the health worker should support the client accordingly.

6. Orient the newly formed groups on the approach about their roles and responsibilities (the do's and don'ts of the group).

7. Support the group to develop a visit plan that ensures all members attend health facility visits at six months' intervals for comprehensive clinical evaluations and every twelve months for VL monitoring.

8. Support the group to develop a drug refill schedule and appoint individual members to pick the drugs from the health facility every three months on rotation bases.

9. At three months' intervals, drug refills will give to each individual during group drug refill meetings or individual distribution at a chosen community site of clients home.

10. Communicate the group appointment dates to the members and record in the facility PCAD register.

11. VL monitoring will done for all group members during the comprehensive clinical evaluation visits. The group members' VL monitoring visits should be harmonized to ensure that it is aligned with the health facility visits for comprehensive clinical evaluation.

12. Support the PCAD group members to select a peer leader to undergo additional training (e.g. TB screening, other OI identification and referral, nutritional and adherence assessment, etc.). The leader must have basic reading/writing skills.

13. Assign each group a unique identifier (PCAD Group ID).

14. Record all patients joining PCAD in the appropriate registers and update registers to track the events for each client over time.

15. Document the clinical evaluation visits for each individual on the appointment card.

B. ART pharmacy Level:

- Receive the list of identified clients for community-based refill from the ART clinic.

- Pre packing or labeling of ARV and other OI drugs (If any) by ART pharmacy prior to the refill appointment date.

- Provide the pre-packed or pre labeled medication for HEPs or pears representing the groups.

- Updating of pharmacy based refill registers.

C. Community Level

1. Peer leaders will conduct an introductory meeting at community level with all the necessary precaution to prevent COVID 19.

2. Group members will agree on the location and method (individual, home-to-home or as small group) of the refill service. The group members will agree on the method of refill (individual, ho-t0home or small COVID 19 risk free size). Health posts, PLHIV association offices, youth centers, Idir offices, individual member's home etc. can be considered as a refill site.

3. Agree and develop a drug refill schedule and appoint individual members to pick the drugs from the health facility every three months on rotation bases.

4. Develop a visit plan that ensures all members attend health facility visits at six months' intervals for comprehensive clinical evaluations and every twelve months for VL monitoring.

5. The refill will happen individually at a specific location or can be distributed to individual home by the individual member who picked the medications from the HF or by the peer leader depending on their consensus or preference.

6. Group members will agree on the mode of facilitation for the group members that will be selected to pick drugs on behalf of the group in a given month, e.g. group contributions or from their savings (if any).

7. Group members will be encouraged to meet monthly to promote bonding, provide psychosocial support to each other and also conduct their other group activities e.g. Income generating activities, loans and saving activities.

8. The community level adherence assessment will be conducted during the drug pick-up meeting or individual refill or home delivery and the findings will be documented on the PCAD monitoring form.

3. Critical enablers

Several critical enablers need to be considered during the establishment and implementation of CAGs:

1. **Reliable procurement and supply-chain management** is critical for implementing UHEW-CAGs. Thus, PFSA, FMOH/PMED, and FMOH/HIV Team should ensure the proper supply chain management of ARVs.

2. **New Tasks.** For HEP-CAGs to function well, new key tasks such as responsibility for the training and monitoring of groups need to be clearly assigned to specific cadres. The urban health extension professionals are well positioned to undertake these tasks.

3. **Mechanisms to identify problems** with other HEP-CAG members should be clearly put in place.

4. **Additional training.** HEPs need to be trained to screen for STIs, tuberculosis (TB) and other common opportunistic infections (OI), to identify ART related toxicities, and to support adherence. Thus, urban health extension professionals participating in this pilot will be provided with additional training. Please, refer to the SOP for details.

5. **Systematic supervision** of the implementation and outcomes of the model should also be a prerequisite of any community-based model. Thus, a quarterly supervision will be done to pilot sites.

Session 3: Formation of Community Based differentiated ART Refill or Distributions

Session objectives: By the end of this session, you will be able to

- Describe group structure and list down the stages in group formation;
- List down the steps involved in HEW-CAG/PCAD formation; and
- Identify the role of the urban health extension professional, other personnel, and associations of PLHIV in HEW-CAG.

Time allotted: 60 minutes

3.1. Group structure

A group's structure is the internal framework that defines members' relations to one another over time. The most important elements of group structure include **roles, norms, values, communication patterns, and status differentials.**

Roles: a tendency to behave, contribute and interrelate with others in a particular way. Roles may be assigned formally. A key role in a group is the leader, but there are other important roles as well, including task roles, relationship roles, and individual roles.

Norms are the informal rules that groups adopt to regulate members' behaviour. Norms refer to what should be done and represent value judgments about appropriate behaviour in social situations.

Inter-member Relations are the connections among the members of a group, or the social network within a group.

Values are goals or ideas that serve as guiding principles for the group.

Communication patterns describe the flow of information within the group and they are typically described as either centralized or decentralized. With a centralized pattern, communications tend to flow from one source to all group members.

Centralized communications allow standardization of information but may restrict the free flow of information.

Decentralized communications make it easy to share information directly between group members. When decentralized, communications tend to flow more freely, but the delivery of information may not be as fast or accurate as with centralized communications

Status differentials are the relative differences in status among group members. When a group is first formed the members may all be on an equal level, but over time certain members may acquire status and authority within the group.

3.2. The stages of team formation

A new team may not perform well when it first comes together.

Forming a team takes time, and members often go through recognizable stages as they change from being a collection of strangers to a united group with common goals. Generally, there are five stages in the development of small groups: Forming, Storming, Norming, Performing, Adjourning.

Forming

In this stage, most team members are positive and polite. Some are anxious, as they haven't fully understood what work the team will do. Others are simply excited about the task ahead. The leader plays a dominant role at this stage, because team members' roles and responsibilities aren't clear.

This stage can last for some time, as people start to work together, and as they try to get to know their new colleagues.

Storming

Next, the team moves into the storming phase, where people start to push against the boundaries established in the forming stage. This is the stage where many teams fail. Storming often starts where there is a conflict between team members' natural working styles. People may work in different ways for all sorts of reasons but, if differing working styles cause unforeseen problems, they may become frustrated.

Storming can also happen in other situations. For example, team members may challenge your authority, or jockey for position as their roles are clarified. Or, if you haven't defined clearly how the team will work, people may feel overwhelmed by their workload, or they could be uncomfortable with the approach you're using.

Some may question the worth of the team's goal, and they may resist taking on tasks. Team members who stick with the task at hand may experience stress, particularly as they don't have the support of established processes or strong relationships with their colleagues.

Norming

Gradually, the team moves into the norming stage. This is when people start to resolve their differences, appreciate colleagues' strengths, and respect your authority as a leader. Now that your team members know one another better, they may socialize together, and they are able to ask one another for help and provide constructive feedback. People develop a stronger commitment to the team goal, and you start to see good progress towards it.

There is often a prolonged overlap between storming and norming, because, as new tasks come up, the team may lapse back into behavior from the storming stage.

Performing

The team reaches the performing stage, when hard work leads, without friction, to the achievement of the team's goal. The structures and processes that you have set up support this well. People who join or leave won't disrupt performance.

Adjourning

Many teams will reach this stage eventually. For example, project teams exist for only a fixed period, and even permanent teams may be disbanded through organizational restructuring.

Team members who like routine, or who have developed close working relationships with colleagues, may find this stage difficult, particularly if their future now looks uncertain.t the Free Newsletter!

3.3 Leadership Activities at Different Group Formation Stages

Stage	Activities
Forming	• Direct the team, and establish clear objectives, both for the team and for the individual team members.
Storming	• Establish processes and structures. • Build trust and good relationships between team members. • Resolve conflicts swiftly if they occur. Provide support, especially to those team members who are less secure. • Remain positive and firm in the face of challenges to your leadership, or to the team's goal. • Explain the "forming, storming, norming, and performing" idea, so that people understand why problems are occurring, and so that they see that things will get better in the future. • Coach team members in assertiveness and conflict resolution skills , where this is necessary.
Norming	• Step back and help team members to take responsibility for progress towards the goal.
Performing	• Delegate tasks and projects as far as you can. Once the team is achieving well, you should aim to have as light a touch as possible. You will now be able to start focusing on other goals and areas of work.
Adjourning	• Take the time to celebrate the team's achievements – you may work with some of your people again, and this will be much easier if people view past experiences positively.

Source: Mind tools. Available at https://www.mindtools.com/pages/article/newLDR_86.htm

3.4. The Refill Process for Enrolled Clients During COVID-19 Period

- The ART refill will be through individual or home-to-home refill using HEPs and peer leaders (PLHIV) and family members until the risk of COVID-19 ends. Whenever the HEPs are overburdened in response to COVID-19 and unable to do the refill, community engagement facilitators will support and undertake the community based refill.

- Provide emotional support and close follow up through health extension professionals and community engagement facilitators.

- Keeping them well informed on the prevention modalities of COVID-19 through provision of an ongoing health education.

- All the necessary precautions should be taken to prevent COVID-19 infection for service providers and service users during the community based ART refill or distribution.

- Prior identification and notification of the ART refill dates through phone call by health extension professionals and/or community engagement facilitators through their leaders.

3.5. Important Precaution and Procedures to Prevent COVID 19 During Refill

- Both the clients and service providers need to follow all the recommended COVID-19 prevention modalities:
    - Avoid any physical contact
    - Keeping the recommended physical distance (two meters)
    - Hand washing or using alcohol/sanitizer before providing or receiving the drugs
    - Using face mask at the time of group meeting (both clients and service providers)
    - Avoided touching mouth, nose, eye with hands

- Shorten the contact duration at the time of the ART refill by making a very brief discussion on adherence status, encountered challenges and any arising concern of clients.

- Make an individual based refill (clients will collect their medication from a community based refill site one after the other with in few minutes difference) or a home based ART distribution until the risk of COVID 19 ends.

3.6. Addressing Missed Appointments from the Community Based Refill

Few clients will miss the community based refill service at the appointment date. In case of missed appointments, the HEP or Peer leader will communicate the client through telephone immediately (on the day of the refill) or physically through home visits. If this is not successful, the HEPs or Peer leaders will communicate the client status and address to community based service providers or other responsible individuals for tracing of them.

3.8 The roles and responsibilities of HEP_CAG and PCAD Service providers

The roles and responsibilities of each member of the team involved in the delivery of ART through Community based refill or distribution are outlined in the table 1 below:

Cadre	Task
ART focal and /or Health Facility Focal Person for Community based ART Refill or Distribution	☞ Organize regular follow up discussions (using MDT meetings) with health facility ART team members on the community-refilling service. ☞ Analyze and evaluate community based ART refilling implementation data. ☞ Ensure follow-up of patients with negative outcomes ☞ Orientation of new and existing staff on the community based ART refill models. ☞ Promotion of community ART refill activities at health facility. ☞ Provide information and counsel on the importance of minimizing the frequency of HF visits to avoid exposure to COVID 19 infection. ☞ Identify those who missed their follow up visit or LTFU cases and provide the list to community based service providers for early tracking and re-engagement. ☞ Analyze and report the outcomes of the community-based refill to health facility team. ☞ Work with and support the health extension professionals.
Clinician/ART service providers	☞ Provide information and counsel on the importance of minimizing the frequency of HF visits to avoid exposure to COVID 19 infection. ☞ Give emphasis and recruit clients for community based ART refill or distribution. ☞ Decide upon the eligibility for an individual PLHIV to join community based ART refill model. ☞ Prescribe ART for all members considering a same appointment date for the next refill at the community level for those who are living in the same locality. ☞ Conduct or ensure routine clinical and laboratory monitoring is conducted. ☞ Inform all clients to come to the health facility any time if they encounter any problem in between the expected health facility visits.
Pharmacy personnel	☞ Pre-package the ARVs and other drugs prior to the refill appointment dates. ☞ Distribute the pre-packaged ARVs and other drugs to the health extension professional, assigned peer (PLHIV) ART or CEFs (when needed).
Lab personnel	☞ Collect blood for CD4, viral load and other laboratory tests as needed or as per the standard of care recommendation.
HEP supervisor	☞ Monitor the performance of community based ART refill by health extension professionals. ☞ Follow all precautions are being under taken to prevent COVID 19 infection for service providers and service users during the community based ART refill or distribution. ☞ Ensure the availability & usage of PPE during refilling time.

	☞ Provide supportive supervision for health extension professionals on community based ART refill service.
	☞ Ensure timeliness and accuracy of documentations and conduct review of forms.
Health Extension Professionals	☞ Involve in analyzing and mapping of PLHIVs in the same locality in collaboration with the health facility staffs and associations of people living with HIV.
	☞ Support & facilitate the identification of new community based ART refill clients.
	☞ Ensure consented members are registered.
	☞ Coordinate and manage the community ART refill process.
	☞ Work closely with the CAG leaders.
	☞ Pick drugs from the pharmacy and sign for them.
	☞ Conduct brief Screening of common opportunistic infections and side effects of ARVs.
	☞ Conduct individual based or home based ART refill according to their preference for clients identified and mapped from the same locality.
	☞ Complete the ARV distribution and patient review form.
	☞ Identify clients that face challenges and address accordingly.
	☞ Work with health facility CAG focal persons in hospitals or ART focal at health centers.
	☞ Ensure that CAG members attend their clinical review visit at the health facility.
	☞ Ensure all precautions should maintained to prevent COVID 19 infection for service providers and service users during the community based ART refill or distribution.
PCAD Peer Leaders	☞ Facilitate group meetings.
	☞ Lead discussions during meetings.
	☞ Record the pill count on the group register during the meeting before drug refilling.
	☞ Check on the adherence of group members.
	☞ Facilitate the assignment of individual members to collect the medications form health facilities on behalf of the other members at their turn.
	☞ Ensure communication between the health worker and the group members in case any problems occur in the group.
CAG Group Leader	☞ Remind and notify the appointment dates for all members of the community ART refill under their supervision through phone call.
	☞ Assist the refill service providers and coordinate the refilling process by maintaining all necessary precaution to prevent COVID-19.
	☞ Check adherence of all the refill members under their supervision.
	☞ Ensure communication between the health professionals or health extension professionals and the refill members in case of any problems occur.
	☞ Arrange community based refill options through discussion with members.
	☞ Arrange home or other refilling options for those who missed their ART refill appointment.
Community Refill Members	☞ Participate actively in the community based ART refill service.
	☞ Report any adverse drug effects, OIs or other issues to the group leader or HEP or other

	service providers.
	☞ Support and share experiences to other group members.
	☞ Inform to peer leaders, HEPs, or other service providers at any time they feel unwell even if they are not due.
	☞ Advise other members to seek medical care at clinics when needed.
	☞ Support the recruitment of other clients for HEP_CAG and PCAD in the community.
	☞ Support health education and adherence messaging within membership.
	☞ Facilitate pill counts within membership for their medicines and report pill counts to the group representative or group leader.
	☞ Collect medications from health facility on behalf of the whole membership when their turn is due.
	☞ Attend health facility at any time they feel unwell even if they are not due.
	☞ Pick up the medication for themselves and for other group members as per the schedule and consensus.
	☞ Distribute medicines correctly to other group members when assigned.
	☞ Advise other members to seek medical care at health facilities when needed

Session 4: The HEP-CAG/PCAD Implementation Manual and Standard Operating Procedure (SOP)

Session objective:

By the end of this session, you will be able to:

- Get familiarized with the implementation manual and SOP of the HEP-CAG and PCAD

Time allotted: 75 minutes

This is a PowerPoint presentation and a group discussion. You will receive the hand out for this session.

Session 5: Monitoring and Evaluation Community ART Refilling Model

At the end of this session, participants will be able to:

- Define what monitoring and evaluation is, its use, and main components of an M and E plan;

- Identify and differentiate between conceptual frameworks, results and logical frameworks, and logic models;

- Define indicators, identify criteria to select them, and list down attributes of good indicators;

- Discuss why data quality is important and list down data quality dimensions; and

- Identify and use M and E tools to be used during the implementation of community ART refilling models.

5.1 Introduction to Monitoring and Evaluation

What is monitoring and evaluation?

- Monitoring and evaluation is the process by which data are collected and analyzed in order to provide information to policy makers and others for use in program planning and project management.

Monitoring of a program or intervention involves the collection of routine data that measure progress toward achieving program objectives. Used to track changes in program performance over time. Its purpose is to permit stakeholders to make informed decisions regarding the effectiveness of programs and the efficient use of resources. Monitoring is sometimes referred to as process evaluation because it focuses on the implementation process.

Monitoring asks the following key questions:

- How well has the program been implemented?

- How much does implementation vary from site to site?

- Did the program benefit the intended people? At what cost?

Evaluation measures how well the program activities have met expected objectives and/or the extent to which changes in outcomes can be attributed to the program or intervention. The difference in the

outcome of interest between having and not having the program or intervention is known as its "impact". Is commonly referred to as "impact evaluation."

Evaluations require:

- Data collection at the start of a program (to provide a baseline) and again at the end, rather than at repeated intervals during program implementation

- A control or comparison group in order to measure whether the changes in outcomes can be attributed to the program

- A well-planned study design

Why monitoring and evaluation?

Monitoring and evaluation helps program implementers:

- Make informed decisions regarding program operations and service delivery based on objective evidence

- Ensure the most effective and efficient use of resources

- Objectively assess the extent to which the program is having or has had the desired impact, in what areas it is effective, and where corrections need to be considered

- Meet organizational reporting and other requirements, and convince donors that their investments have been worthwhile or that alternative approaches should be considered