Facilitator's guide for IMAI TB-HIV Co-Management Course

INTEGRATED
MANAGEMENT OF
ADOLESCENT AND ADULT
ILLNESS (**IMAI**)

TB-HIV

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World Health Organization

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This training manual is part of a training course for health workers (clinical officers and nurses) at first-level health facilities (health centres or district hospital outpatient clinics). It teaches them how to learn to use the IMAI *TB Care with TB-HIV Co-management* guideline module. It also makes reference to the *IMAI Chronic HIV Care with ART and Prevention* guideline module.

This three-day training course assumes that health workers have been previously trained in:

- **IMAI basic clinical training in HIV care, ART and prevention** (based on *IMAI/IMCI Chronic HIV Care with ART and Prevention* guideline module)
- **Provider-initiated testing and counselling short course for clinicians**
- **Basic first-level facility training in TB care**

In some cases, the TB clinic and the HIV Care clinic will be separate. In others, TB and HIV Care will be provided in the same clinic. This course is applicable to both situations.

These materials are based on input from:

- WHO's HIV Department Integrated Management of Adolescent and Adult Illness (IMAI) team: Sandy Gove, Akiiki Bitalabeho, Eyerusalem Negussie and others;
- WHO's Stop TB Department: Rose Pray, Haileyesus Getahun, and Karin Bergstrom who developed the STB first-level facility TB training course which formed the basis for the TB care with TB/HIV co-management guidelines module;
- Centres for Disease Control and Prevention (CDC) Global AIDS Program, Atlanta, USA: Bess Miller, Naomi Bock, and others;
- The IMAI Project, Brigham and Women's Hospital, Harvard University, Boston, USA; KJ Seung,
- Kimberly Zeller, Brown University Medical School, Providence, USA;
- Action by Churches Together - ACT International, Atlanta, USA.

The authors also gratefully acknowledge significant input from the CDC Global AIDS Program's Training Course on Diagnostic HIV Testing and Counselling in TB Programs.

Prior to use, please ask for the most up-to-date version of this course. We also ask that you provide feedback. We will continue to improve both the IMAI guidelines and these training materials and add additional training aids such as video materials and further photo booklet case exercises. Work is also ongoing to translate IMAI materials into several languages.

Prior to implementing this course, please check the www.who.int/hiv/capacity website (register on the IMAI Sharepoint website to get the most current drafts), or e-mail imaimail@who.int, or contact the IMAI team at WHO's Department of HIV/AIDS for updates and other implementation support.

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ACRONYMS

AFB	Acid Fast Bacillus
ART	Antiretroviral Therapy
ARV	Antiretroviral (drugs)
BCG	Bacillus Calmette-Guérin
BP	Blood pressure
CD4	Count of the lymphocytes with a CD4 surface marker per cubic millimeter of blood (mm^3)
COPD	Chronic obstructive pulmonary disease
DOTS	Directly observed therapy, short course
HIV	Human Immunodeficiency Virus
IM	Intramuscular
IMAI	Integrated Management of Adolescent and Adult Illness
INH	Isoniazid
IPT	Isoniazid preventive therapy
IRIS	Immune reconstitution syndrome
OI	Opportunistic Infection
PCP	*Pneumocystis jovani* pneumonia (Previously *Pneumocystis carinii* pneumonia)
PITC	Provider-initiated testing and counselling
PLHA	Persons or people living with HIV/AIDS, now referred to as PLHIV
PLHIV	Persons living with HIV
PMTCT	Prevention of Mother to Child Transmission (of HIV)
TB	Tuberculosis
TMP	Trimethoprim
VCT	Voluntary counselling and testing (also referred to as client-initiated testing and counselling)

Chapter 1: COURSE INTRODUCTION

Session objectives

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

- Know fellow participants and facilitators
- Recognize the role of the facilitator/s
- Recognize administrative arrangements
- Describe the learning objectives of this course
- Recognize the context of this training course and how module I is structured

The facilitator will lead the introduction to your fellow participants, course facilitators and course organizers. The course organizers will also brief you on any administrative arrangements related to this training.

TB and HIV are leading public health problems in many countries. In fact, TB is a common cause of morbidity and death in people infected with HIV. Health workers who provide care for patients with TB, as well as chronic HIV care, should be well prepared to: assess people with HIV for TB disease; recommend HIV testing and counselling for patients who either have or are suspected of having TB; manage HIV-infected patients with TB disease; and how to prevent the transmission of TB and HIV.

In countries with a generalized HIV epidemic, an integral part of good clinical care is for health workers to recommend provider-initiated HIV testing and counselling to patients with TB disease or to those who are suspected of having TB. TB is a common cause of morbidity in HIV-infected patients. Routine assessment of HIV-infected patients for TB-disease at enrollment and during each follow-up visit to the health facility is also an integral part of good clinical care, and health workers should be equipped to co-manage TB and HIV in a patient.

This TB/HIV co-management module has been developed for nurses and clinical officers who provide primary care at health centres or at district hospital outpatient clinics.

Objectives of this training:

- To review how to recommend HIV testing and counselling to TB patients and those suspected of having TB
- To provide evidence-based training on when to suspect TB disease in HIV-infected patients
- To provide evidence-based training in how to co-manage TB and HIV

This module includes nine chapters:

Chapter 1: Course introduction
Chapter 2: Basic introduction to TB and HIV
Chapter 3: Diagnosis of HIV infection in TB patients and those suspected of having TB
Chapter 4: Diagnosis of TB in HIV-infected patients
Chapter 5: What to do when TB disease develops in an HIV-infected patient
Chapter 6: What to do when a TB patient is found to be HIV-infected
Chapter 7: Deciding if a TB-HIV patient needs ART
Chapter 8: How to co-manage TB and HIV
Chapter 9: Providing special care for newborns, partners and other household contacts

Target audience for this training:
The target audiences of this training are:

- Nurses and clinical/health officers who are at primary facilities at health centres and at outpatient department of district hospitals.

This 2-day clinical course assumes that participating health workers have been previously trained in:

- **IMAI basic clinical training in HIV care, ART and prevention** (based on the *IMAI/IMCI Chronic HIV Care with ART and Prevention* guideline module)
- **Provider-initiated testing and counselling short course for clinicians**
- **Basic first-level facility training in TB care**

What does this module cover?

The module will take you through:

- The link between TB and HIV
- HIV testing and counselling in TB patients and those suspected of having TB
- Common symptoms of TB
- Assessing and classifying patients with cough or who have difficult breathing
- Sending sputum samples and responding to TB sputum results
- Managing HIV-infected patients with severe pneumonia when referral is not possible
- What to do when TB disease develops in an HIV-infected patient
- What to do when a TB patient is found to be HIV-infected
- When to refer an HIV-infected TB patient
- WHO clinical staging of the HIV-infected TB patient
- When to refer a patient for TB-ART co-treatment
- Initiating and monitoring cotrimoxazole prophylaxis therapy for a TB-HIV patient
- Special adherence considerations for HIV-infected TB patients
- Recording information on the TB treatment card and the HIV care/ART card
- Monitoring TB/ART co-treatment
- Patient and treatment supporter education and support
- Promoting and supporting chronic HIV care after completion of TB treatment
- INH preventive therapy and BCG immunization for household contacts who contract TB

Training methodology:

This course adopts a participatory and interactive approach. Participants will work through the sections with the aid of facilitators and Expert Patient Trainers (EPTs) and will learn through a combination of individual reading sessions, group discussions, facilitator-led drills, short answer exercises and case studies, and skill stations. The course is designed to maximize involvement of all participants.

Note on training methodology:

- Case studies should be done individually (with feedback from the facilitator).
- Drills are done in groups.

Training Materials for participants:

Each participant should receive:

- IMAI TB/HIV co-management training module: Participant's Manual (this manual)
- Country adapted *TB care with TB/HIV co-management* guideline module
- Country adapted *HIV Care with ARV Therapy and Prevention* guideline module
- Country adapted *IMAI Acute Care* guideline module

Chapter 2: BASIC INTRODUCTION TO TB AND HIV

Learning objectives

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

- The importance of TB in HIV-positive patients
- The importance of HIV in TB patients
- Commonly used terms such as "TB" and "TB-HIV".

2.1 Tuberculosis (TB)

Tuberculosis is caused by an organism called *Mycobacterium tuberculosis.* These organisms are also known as **tubercle bacilli.** Usually they affect the lungs, in which case the disease is called **pulmonary TB**. They can also affect organs other than the lungs, such as lymph nodes, bones, etc. in which case the disease is called **extra-pulmonary TB**. Pulmonary TB is the most common type of TB disease worldwide.

Cough is the most common symptom of pulmonary TB. Other symptoms include:

- Weight loss
- Fever
- Chest pain
- Night sweats
- Haemoptysis (coughing up blood)

When a person with pulmonary TB coughs or sneezes, tubercle bacilli are spread into the air in tiny droplets. Other people can breathe in these droplets and become infected by *Mycobacterium tuberculosis*.

Not all the people infected with TB after inhaling TB bacilli will develop active TB disease. In 9 out of 10 people with a strong immune system, the body keeps the TB infection quiet and asleep (*'latent TB')*. Latent TB infection does not cause a person to feel sick. The person does not have any symptoms and health workers cannot detect any signs or symptoms of the disease during assessment.

If the immune system becomes weakened by HIV, the sleeping TB infection may take advantage of this to become active and thereby causes **TB disease.** The patient then starts to show the symptoms listed above, i.e. cough, fever, weight loss, etc.

TB Infection versus TB Disease[1]

TB Infection	**TB Disease -- in the lungs**
M. tuberculosis in the body	
Tuberculin skin test reaction usually positive	
No symptoms	**Symptoms** such as cough, fever, weight loss
Chest x-ray usually **normal**	Chest x-ray usually **abnormal**
Sputum smears and cultures **negative**	Sputum smears and cultures usually **positive***
Not infectious	**Often infectious** before treatment
Not a case of TB	**A case** of TB

* In HIV-infected TB patients, sputum smears are more often negative, and up to half of the patients TB disease is not in the lung.

Usually, health workers talk about "TB" in order to say that "The patient has TB". What they mean by this is that the patient has TB disease (has symptoms such as cough, fever, weight loss, etc).

2.2 Tuberculosis and HIV

In HIV-positive people with TB infection, one out of ten will develop TB disease each year and more than 50% will develop TB in their remaining lifetime. This is a very high rate compared with people who are not HIV-infected. In any given year, people living with HIV are up to 50 times more likely to develop TB than those who are not HIV-infected.

When a person with HIV develops TB disease, we call this "TB-HIV co-infection". This means TB disease plus HIV infection. In countries with generalized HIV epidemic, it is common for many patients who are being treated for TB to have TB-HIV co-infection. It is very important to make sure that HIV-infected patients with TB disease receive both appropriate TB and HIV services. This is referred to as "TB-HIV co-management".

Furthermore, HIV-infected TB patients are at higher risk of dying from TB than HIV-negative TB patients. TB is a leading killer of people infected with HIV, and many of these deaths occur rapidly after TB disease develops. Therefore, it is very important to diagnose and treat HIV-positive TB patients as soon as possible.

All patients with TB disease need TB treatment (whether they have only TB disease or whether they have both TB and HIV). Some the patients with TB-HIV need ART as well.

When a patient who is taking TB treatment also takes ART, this is called TB-ART co-treatment.

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[1] *Tuberculosis infection control in the era of expanding HIV care and treatment: addendum to WHO Guidelines for the Prevention of Tuberculosis in Health Care Facilities in Resource-Limited Settings, 1999.*

Exercise: Write down what each phrase means. We will discuss these meanings in class later.

1. TB infection

_____

_____

2. TB disease

_____

_____

3. HIV infection

_____

_____

4. TB-HIV co-infection

_____

_____

5. TB-HIV co-management

_____

_____

6. TB-ART co-treatment

_____

_____

7. Pulmonary TB

_____

_____

10. Extra-pulmonary TB

_____

_____

Exercise: Short answers

1. Write down the difference between TB infection and TB disease

_____

_____

2. Describe how TB infection is transmitted from one person to another

_____

_____

3. Describe how TB disease is different in HIV-infected and non HIV-infected patients

_____

_____

_____

_____

Chapter 3: DIAGNOSIS OF HIV INFECTION IN TB PATIENTS AND THOSE SUSPECTED OF HAVING TB

Learning objectives

At the end of this session you should be able to:

- Explain why it is important to recommend provider-initiated HIV testing and counselling to TB patients and people suspected of having TB
- Recommend an HIV testing and counseling to TB patients and people suspected of having TB

Case study: Read the following case and note how you would manage the patient. We will go over the case at the end of this chapter.

	John is a 25-year-old married man who has two children. He is in really good health and has never been seriously sick. Four weeks ago he started coughing, but did not think much of it. It has been getting worse and now he is coughing up yellow mucus. He has also had fever which is worse at night. Last night he said it was "really bad". John thinks he has lost a bit of weight, but he is not that worried. He only came to the health centre because his wife made him do so. *How would you manage John?*

Health workers should recommend provider-initiated HIV testing and counselling to TB patients and those patients suspected of having TB.

3.1 Reason for recommendation of provider-initiated HIV test to TB patients and those suspected of having TB

Why should health workers recommend provider-initiated HIV test to TB patients and those suspected of having TB ?

Health workers should recommend **provider-initiated** HIV-testing to TB patients and those suspected of having TB because**:**

◆ **TB patients are very likely to have HIV infection:**

HIV affects the body by damaging the immune system which weakens its ability to fight off illnesses. This is called immunosuppression. The immunosuppression caused by HIV infection makes a person with latent TB infection more likely to progress to active TB disease. Studies in many sub-Saharan African countries indicate that up to half or more of TB patients are infected with HIV.

As HIV infection progresses, patients become less able to fight off other infections such as TB that may already be in their bodies, or new infections they may acquire, including TB.

HIV-infected patients progress more quickly from latent TB infection to active TB disease than HIV-negative patients.

- **It is more difficult to diagnose TB in TB-HIV-infected patients:**

  TB patients who do not have HIV infection usually get TB of the lungs that can be detected by a laboratory test called a sputum smear examination. This laboratory test is not as sensitive when used for TB patients with HIV infection, especially when the patient is very immunosuppressed. Pulmonary TB that does not show a positive result when a sputum smear is examined under a microscope is called "smear-negative pulmonary TB" and is more common in HIV- infected TB patients.

  Furthermore, TB patients with HIV infection are more likely to have TB in other parts of their bodies, like the brain, bones, lymph nodes or abdomen. This is called extra-pulmonary TB, and the sputum smear will be negative in these cases since the TB is not in the lungs.

  Therefore, in generalized HIV infection settings, it is very important to know the patient's HIV serostatus if you suspect TB. If the patient is HIV-positive, you need to continue to suspect TB even if the sputum smear is negative.

- **HIV infection requires care and treatment, and life-saving therapy for HIV is becoming increasingly accessible to patients:**

  HIV is a serious condition that cannot be managed unless the diagnosis is known. Many patients with HIV infection present with active TB, meaning that clinics providing care for TB patients are a good place to identify people infected with HIV.

  ARV therapy is an important treatment for HIV and it is being increasingly accessible. By diagnosing HIV and ensuring that patients receive HIV services, one can help PLHIV live longer and healthy.

  It is also important to help patients understand how to protect themselves against other infections and how to prevent transmitting the HIV virus to their sexual partner(s) and children.

- **HIV-infected TB patients need treatment for HIV:**

  In HIV-infected patients, TB is an important opportunistic infection. TB can be an indicator for the extent of immunosuppression and the need for antiretroviral therapy. HIV-infected TB patients who are immunosuppressed may not respond as well to TB treatment as TB patients without immunosuppression. Mortality rates are higher for HIV-infected TB patients than for TB patients who do not have HIV infection, particularly in the first month of TB diagnosis.

  Extra-pulmonary TB in HIV-infected patients is WHO stage IV disease and ART is indicated for these patients. Pulmonary TB is WHO stage III disease and ART is indicated if a CD4 count is not available. If a CD4 count is possible,

ART is indicated depending on what the count is.

3.2 Recommending HIV test to TB patients and those suspected of having TB

In countries with a generalized HIV epidemic, testing and counselling for HIV is important in the clinical assessment of many sick people who have a medical condition such as TB, or medical symptoms such as cough, fever, or unexplained significant weight loss. All of these might indicate a possibility of underlying HIV disease.

In terms of recommending HIV testing and counselling to TB patients, you can use the provider-initiated testing and counselling scripts that you learned before taking this course[2]. An HIV test should be recommended and the patient given a short pre-test education session. This can be done one-on-one or in a group of patients, for example, in the patient waiting area.

You can use the following script as a guide: The following script can guide you in recommending an HIV test to TB patients and those suspected of having TB.

Say: *"There is a very important issue that we need to discuss today. People with TB are also very likely to have HIV infection. In fact, HIV infection is the reason many people develop TB in the first place. This is because people with HIV are not able to fight off diseases as well as persons who are not infected.*

If you have both TB and HIV, it can be serious and sometimes life-threatening without proper diagnosis and treatment. Treatment for HIV is becoming more available and can help you feel better and live longer.

Also, if we know you have HIV infection, we can treat your TB disease better.

HIV is a virus or a germ that destroys the part of your body needed to defend a person from illness. The HIV test will determine whether you have been infected with the HIV virus. It is a simple blood test that will allow us to make a clearer diagnosis. Following the test, we will be providing counselling services to talk more in-depth about HIV/AIDS.

If your test result is positive, we will provide you with information and services to manage your disease. This may include antiretroviral drugs and other medicines. In addition, we will support you by providing information on how you can avoid passing HIV on to other people and why it is important for you to tell family and others that you have HIV.

If your test is negative, we will focus on ensuring you have access to services and supplies to help you remain negative.

For these reasons, we recommend that all our TB patients be tested for HIV. Unless you wish to decline, you will be tested for HIV today."

[2] One-day IMAI course (*Provider-initiated HIV testing and counselling: brief provider intervention*) which follows the Acute Care/OI course or the 3-day diagnostic testing and counselling course from CDC.

HIV testing and counselling should be **voluntary** and based on **informed consent.** Every effort should also be made to ensure **confidentiality.** Patients have the right to decline HIV testing and counselling. If a patient is not comfortable with being tested for HIV, you should refer him or her to an ART Aid or other counsellor. If this staff is not available in your facility, then refer the patient to a nearby VCT centre. If the patient declines the test, recommend it again when they make subsequent visits to the health facility. Often patients might need to discuss certain issues before deciding to take an HIV test.

Please remember that with all **provider-initiated** HIV testing and counselling, it is important to respect the 3 Cs - **C**onfidentiality, informed **C**onsent, and **C**ounselling. These are the three core guiding principles for recommending HIV testing and counselling:

- **Confidentiality:** Protecting the confidentiality of the patient who receives HIV testing and counselling is very important. Maintaining confidentiality requires that staff members be knowledgeable and vigilant. Below are some practical tips to help protect the confidentiality of a patient who receives rapid HIV testing and counselling:
  - Discuss HIV testing and counselling when the patient is alone and feels safe to answer honestly. Family members, friends, etc may not know the sexual, reproductive or HIV testing and counselling history of your patient, and this information should not be disclosed to them without the patient's consent.
  - Ask the patient whom they would like to be present when the results of the HIV test are provided. Confidentiality should be maintained when giving results.
  - Develop and implement procedures to ensure shared confidentiality regarding how an HIV test result is received in the outpatient/TB clinic, whether in the chart or register. This requires a careful recording system and awareness and sensitivity by care providers. The system should both maintain confidentiality and ensure that results are communicated promptly to clinical staff responsible for providing care to the patient.

- **Informed consent** requires that the patient receives clear and accurate information about HIV testing and counselling and that the health-care worker providing the information respects the individual's right to decide whether or not to be tested.

- **Providing post-test counselling:** Post-test counselling is essential because the patients will need to be supported when and after they find out the result. If the result is positive the patient will need to be provided both with TB and HIV services; and after completion of TB treatment, the patient should continue receiving ongoing HIV services. If the result is negative, the patient will need to be counselled on how to remain negative.

Providing pre-test information during an outpatient visit:

You can provide pre-test information for a group, couple, or an individual. The group session is the recommended model for providing pre-test information to outpatient clients, particularly where the client-to-provider ratio is high. Group information sessions are efficient, optimize human resources and allow for group interaction. At a minimum, the pre-test session should contain the following:

- Reason for recommending HIV testing and counselling for TB patients and those suspected of having TB,
- The clinical and preventive benefits of HIV testing and counselling
- Available services for both TB and HIV prevention, care and treatment whether the patient tests HIV-positive or negative
- Respect for the confidentiality of all personal information, which is not to be shared with anyone other than health workers directly involved in providing care to the patient
- The patient's right to decline HIV testing and counselling, and the assurance that declining the test will not affect access to all other services that do not require knowledge of their HIV status
- Assurance that the patient will have health-care worker support if they decide to disclose their HIV test result to their partner and that encouragement will be given to their partner to have an HIV test.

The health-care provider should also give the patient an opportunity to ask questions or to express their concern. It is important to discuss the patient's concerns, including those related to HIV status, disclosure and testing of partners.

Exercise: Short answers.

1. List the three principles that govern provider-initiated testing and counselling for TB patients and those suspected of having TB

_____

_____

2. List three benefits of HIV testing and counselling for TB patients

_____

_____

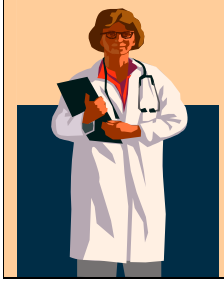
3. List two ways that you can protect the confidentiality of an HIV test result in a TB clinic

_____

_____

We will now go back to the case of John (go to the beginning of the chapter).

As a group, discuss your first steps in managing John. Later on, you will discuss it with all participants.



Skill station: 2 hours

Recommending HIV testing and counselling to TB patients and those suspected of having TB.

Welcome to the skill station. The skill station is organized to help you practise the lessons you have learned in the classroom. During this session, you will be divided into small groups of 2-3 and you will move from one Expert Patient Trainer (EPT) to the next.

Today's skill station is designed to further enhance your ability to:

1) Recommend an HIV test to TB patients and those suspected of having TB
2) Provide pre-test information and recommend an HIV test in an individual consultation
3) Provide post-test counselling

There are several role-play scenarios that you will practise with the EPTs to help you improve your skills. In these role plays, you will play the role of the health worker and an EPT will play the role of the patient. At the end of the role-play, the EPT will give you feedback on a one-to-one basis. You should use the skill stations to put what you have learned into practise.

This is not a test. It is an exercise to help you improve your skill, and it should be fun! The feedback is meant to be non-judgmental and should be taken in a positive manner.

Your facilitator will orient and guide you through the process.

Chapter 4: How to DIAGNOSE TB IN HIV-INFECTED PATIENTS

Learning objectives

At the end of this session you should be able to:

- Assess an HIV-infected patient for TB and understand how this differs from screening for TB in HIV-negative patients.
- Classify and treat "cough" or "difficult breathing"
- Provide empirical treatment for severely ill patients with cough and/or difficult breathing when referral to a hospital is not possible.
- Respond correctly to sputum smear results in HIV-negative and HIV-positive patients.

How would you manage these situations? (At the end of this chapter, we will discuss each case).

The nurse tells John that he needs a sputum test for TB, and explains how he should produce the samples. Then she recommends an HIV test to John, and explains what it is. John does not want to have an HIV test, so the nurse asks him to talk to the ART Aid in the clinic before he goes home. When he comes for his sputum results, he tells the nurse that he wants an HIV test.

Julia is 20 years old and was diagnosed with HIV one year ago. She is receiving treatment in the Chronic HIV Care clinic and the nurse knows her very well. Julia is at WHO HIV stage 2 and is taking cotrimoxazole prophylaxis, but not ART. Today she has come for her regular appointment and when the nurse asks her, she says that she has had bouts of fever and is sweating a great deal at night in her bed. But she does not have cough. The nurse tells her to submit three sputum samples for examination.

Richard is a 40-year-old businessman. He was started on ART, but did not take the drugs consistently and they stopped working. He then had to start taking second-line ART, which meant taking many more tablets each day. He took them very regularly and has not had any problems for many months. However, recently he has had cough that has not gone away. The nurse tells him to submit three sputum samples to the laboratory.

4.1 Symptoms of TB

Any of the symptoms in the box below could be caused by TB:

1. Cough for more than 2 weeks
    a. ask about cough
    b. observe (listen) for cough
2. Persistent fever
3. Unexplained weight loss
4. Severe under-nutrition
5. Enlarged lymph nodes (more than 2 cm)
6. Night sweats
7. Haemoptysis (coughing up blood)
8. Fatigue (gets tired easily)

Worldwide, pulmonary TB is the most common type of TB disease, so it is very important to ask about cough. TB patients can also present with fever and weight loss alone, without cough. Extra-pulmonary TB (TB of the brain, bones, lymph nodes, etc.) is more common in HIV-positive patients than in HIV-negative TB patients. Extra-pulmonary TB can present with only symptoms of weight loss and fever or enlarged lymph nodes. Therefore, it is not enough to consider only cough when screening HIV-infected patients for TB. We always need to suspect TB in HIV-infected patients with fever or weight loss, even in the absence of any other symptoms**.**

In all patients (HIV-positive or negative), if you suspect TB you should always send sputum samples for smear microscopy. That means if an HIV-infected patient has symptoms of TB disease-like fever or weight loss, you should still send sputum samples for an Acid Fast Bacillus (AFB) smear, even if the patient does not have much cough. Instruct the patient very carefully on how to collect the specimens (follow national TB programme guidelines).

4.2 Classify the patient with cough or difficult breathing

The most common symptom of TB is cough. This is covered by the “cough or difficult breathing” pages in IMAI *Acute Care* printed on the following pages. (The IMAI *Acute Care* guideline module also explains how to classify and treat patients with fever, weight loss, or suspicious lymph nodes).

One of the questions you should ask the patient is if he/she has been tested for HIV in the past and if so what the test result was. If the patient does not know his/her HIV status, or significant time has passed after a negative result, you should recommend an HIV test. Many of the treatments depend on knowing ones HIV status, so doing a rapid HIV test is very important at the beginning of the clinical assessment.

In all patients ask: Do you have cough or difficult breathing?

IF YES, ASK:	LOOK AND LISTEN
• For how long? • Are you having chest pain? • If yes, is it new? Severe? Describe it. • Have you had night sweats? • Do you smoke? • Are you on treatment for a chronic lung or heart problem or TB? (Determine if the patient has been diagnosed as having asthma, emphysema or chronic bronchitis (COPD), heart failure or TB). • If not, have you had previous episodes of cough or difficult breathing? - If recurrent: - Do these episodes of cough or difficult breathing wake you up at night or in the early morning? - Do these episodes occur with exercise? • Are you HIV-positive or do you think you might be?	• Is the patient lethargic? • Count the breaths in one minute—repeat if elevated. • Look and listen for wheezing. • Determine if the patient is uncomfortable lying down. • Measure temperature. If the patient is not able to walk unaided or appears ill, also: • Count the pulse. • Measure the blood pressure (BP).

AGE	FAST BREATHING IS:	VERY FAST BREATHING IS:
5-12 years	30 breaths per minute or more	40 breaths per minute
13 years or more	20 breaths per minute or more	30 breaths per minute or more

Use this classification table for all patients with cough or difficult breathing:

SIGNS:	CLASSIFY:	TREATMENTS:
If patient exhibits one or more of the following signs: ▪ Very fast breathing or ▪ High fever 39℃ or above or ▪ Pulse 120 or more or ▪ Is not able to walk unaided	**SEVERE PNEUMONIA OR VERY SEVERE DISEASE**	• Position. • Give oxygen. • Give first dose of Intramuscular (IM) antibiotics • If wheezing is present, treat • If there is severe chest pain in patient 50 years or older, use *Quick Check.* • Refer urgently to hospital. • If referral is not possible and patient is HIV-positive, see following page. Consider HIV-related illness. • If patient is on ARV therapy, this could be a serious drug reaction, See *Chronic HIV Care* guideline module.
Two of the following signs: ▪ Fast breathing ▪ Fever ▪ Night sweats ▪ Chest pain	**PNEUMONIA**	▪ Give appropriate oral antibiotic Exception: if patient is in send/third trimester pregnancy, HIV clinical stage 4, or low CD4 count, treat as SEVERE PNEUMONIA. ▪ If wheezing is present, treat. ▪ If patient is smoking, counsel to stop. ▪ If patient is on ARV therapy, this could be a serious drug reaction; consult/refer. ▪ If cough > 2 weeks or patient is HIV-positive, send sputums for microscopy examination. • Advise patient when to return immediately. • Follow up in 2 days.
▪ Cough or difficult breathing for more than 2 weeks ▪ Recurrent episodes of cough or difficult breathing which: - Wake patient at night or in the early morning **or** - Occur with exercise.	**CHRONIC LUNG PROBLEM**	▪ Send sputums for microscopy (record in register). ▪ If sputums were sent recently, check register for result. See TB diagnosis based on smear examination (p. 9) ▪ If patient is smoking, counsel to stop. ▪ If patient is wheezing, treat. ▪ Advise patient when to return immediately.
• Insufficient signs for the above classifications	**NO PNEUMONIA COUGH/COLD OR BRONCHITIS**	Advise patient on symptom control. ▪ If patient is smoking, counsel to stop. ▪ If patient is wheezing, treat. ▪ Advise patient when to return immediately.

Any patient with signs of SEVERE PNEUMONIA or VERY SEVERE DISEASE should be referred to a hospital immediately after he or she has been given the pre-referral treatments listed in the treatments column.

4.3 What to do in HIV-positive patients with SEVERE PNEUMONIA or VERY SEVERE DISEASE if referral is not possible

If it is not possible to refer the severely ill HIV-positive patient to the hospital immediately, treat with empirical therapy as described below.

HIV-positive patients are more likely to be very ill when they present with possible TB disease. If they have signs of severe illness, they should also receive IM antibiotics for bacterial infection.

Empirical treatment for bacterial pneumonia: The IM antibiotics are often penicillin and gentimicin. Continue these for 3-5 days. If the patient has improved, switch to an oral antibiotic.

In addition, you should also think about empirical treatment for *Pneumocystis* pneumonia (PCP). PCP is a fungus that causes pneumonia only in immunosuppressed patients, e.g. HIV-positive patients. This is a very severe infection and patients can easily die from it. It is almost impossible to differentiate between bacterial pneumonia and *Pneumocystis* pneumonia. Therefore, if an HIV-positive patient has signs of very fast breathing or is unable to walk, treat him or her with cotrimoxazole immediately.

If the patient has not improved after 3-5 days, consider him or her as a TB patient and start anti-TB therapy. In most cases, this will be Category I treatment. Do not stop treatment for bacterial pneumonia or PCP.

Even if the patient is better, it is important to have the patient come back frequently. HIV-positive patients can have TB and bacterial pneumonia at the same time. The patient may feel a little better after a few days of IM antibiotics, but then feel worse after some time.

This empirical treatment of SEVERE PNEUMONIA And VERY SEVERE DISEASE are summarized in the box below

What to do in the case of HIV-positive patients with SEVERE PNEUMONIA or VERY SEVERE DISEASE when referral is not possible:

- Send sputum samples for microscopy examination if possible.
- Treat empirically for bacterial pneumonia with IM antibiotics.
- If patient has very fast breathing or is unable to walk unaided, treat empirically for *Pneumocystis* pneumonia (PCP).
    - Give cotrimoxazole 2 double-strength (160 mg/800 mg) or 4single-strength (80 mg/160 mg) tablets three times a day for 21 days (15 mg/kg of Trimethoprim (TMP).
    - Give oxygen if available. Give prednisone (1mg/kg) until there is clinical improvement and then gradually lower the dose.
- Continue all antibiotics and assess the patient daily. Consult and discuss the case with a medical officer if possible (via phone, etc.) and continue to try to refer.
- Check the patient with pneumonia using the “Look and Listen” part of the assessment.
- Ask the patient and use their record, to determine:
    - Is their breathing slower?
    - Is there less fever?
    - Is the pleuritic chest pain less?
    - How long has the patient been coughing?
- After 3-5 days, if the breathing rate and fever are the same or worse, start a standardized, first-line TB treatment regimen, or refer the patient to the district hospital. Do not start an incomplete regimen. Once TB treatment is started, it should be completed.
- If breathing is slower or there is less fever, switch to a first-line oral antibiotic and complete a 7 day course. If PCP treatment is started, continue cotrimoxazole for three weeks.

Exercise: Case study.

The health worker is about to close the clinic when a family arrives with Mugisha who is a very ill 34-year-old, very thin patient. Mugisha can only walk with assistance from two people. He is coughing frequently; and has been doing so for 2 months. He has some pain on the right side of the chest when coughing. He sweats at night. He does not smoke and his HIV status is not known. He has never had TB or been told that he has a heart or lung problem. This is the first time that he has difficulty breathing and such a bad cough.

On LOOK AND LISTEN, he is alert. He is breathing at 25 per minute and his pulse is 130 per minute. On a repeat count, he is breathing at 28 per minute. You cannot hear any wheezing and he is able to lie flat. Your BP cuff is not working. His temperature is 38^0C.

1. **How would you classify the cough or difficult breathing? Would you recommend referral?**

2. You have HIV rapid test kits and know how to use them. How should you approach HIV testing and counselling with this patient? (Circle one):

a. The patient is too sick for HIV testing and counselling. It is better to wait until he is stronger physically in case the result is positive.

b. Recommend HIV testing and counselling on the spot. It is important for your decision on how to management the patient. Give pre-test information and make sure someone stays in the clinic to help with post-test counselling.

c. After you have seen him for his clinical problem suggest that he go to the nearby VCT centre.

Mugisha's family cannot take him to hospital and no other solution can be found. His HIV test is positive. He is very anxious that he will die.

3. ***What would you do today to treat Mugisha? List all.***

After three full days of treatment, Mugisha's breathing rate is 32 and his temperature remains at 38^0C. There is still no way to get him to hospital and the family is even more reluctant because they think he is going to die. You try to call the medical officer at the hospital, but cannot find him.

4. What would you do to treat Mugisha today?

4.4 Respond to TB sputum results

TB diagnosis based on sputum smear microscopy (2 or 3 sputum samples)

If → Then

Sputum smear result	**Patient has**
Two (or three) samples are positive	**Sputum smear-positive** pulmonary TB **(has infectious pulmonary TB)**
Only one sample is positive in an HIV-negative patient	Diagnosis is **uncertain**. Send three more sputums for smear microscopy. If sputum smears are negative, refer the patient to the district doctor/medical officer for further assessment.
 Only one sample is positive in an HIV-positive patient or in a patient with strong clinical evidence of HIV infection	**Sputum smear-positive** pulmonary TB (has infectious pulmonary TB)
All samples are negative (the patient is HIV negative)	The patient may or may not have pulmonary tuberculosis disease: • If the patient is no longer coughing and has no other general complaints, no further investigation or treatment is needed. • If the patient is still coughing and/or has other general complaints (but is not seriously ill) refer to a doctor/medical officer if they are available, or treat with a non-specific broad spectrum antibiotic such as cotrimoxazole or amoxicillin. • If, after treatment with antibiotics, cough persists and the patient is not severely ill, repeat the examination of the three sputum smears. If sputum is negative, refer the patient to a doctor/medical officer.
All samples are negative and the patient is HIV-positive	Refer the patient to a doctor or medical officer for evaluation.

A. When one sputum smear is positive

HIV-positive patients are more likely than HIV-negative patients to have smear-negative pulmonary TB or extra-pulmonary TB. This is why rows 2 and 3 (see the above table) are different depending on whether or not the patient is HIV-positive. If the patient is HIV-positive, one positive sputum smear is enough to start TB treatment immediately—it is not necessary to wait for more sputum samples, obtain a chest x-ray, or refer to a doctor/medical officer.

If the patient is HIV-negative, send more sputums for smear microscopy. Sometimes the number of TB bacilli is very low in the sputum and it is difficult for the laboratory to detect the presence of TB bacilli. This could be because the patient has mild disease or advanced immunosuppression, or because the patient did not cough deeply and produce a good sample.

B. When all sputum smears are negative

If the patient is HIV-negative but still coughing and/or sick, you can try a non-specific antibiotic such as cotrimoxazole or erythromycin. Then, if the patient is still having symptoms, you can check the sputum again for TB.

However, if the patient is HIV-positive, it is good to have a medical officer or doctor evaluate them. It is important to know that with HIV, more than half of the patients with pulmonary TB will not have a positive sputum test! This is called "smear-negative pulmonary TB". A negative sputum result for TB in an HIV-positive patient does not exclude TB, but requires further evaluation.

Important note: Health workers should have a “low threshold” for referring an HIV-positive patient for TB diagnosis when the patient is ill. Do not wait for sputum results—in the few days that it takes to get sputum results the patient could die or deteriorate.

Exercise: Classify and treat

You are in the clinic providing acute care for adults and see the patients listed below. Use the "cough or difficult breathing" pages to decide the classification for each patient and list the treatments needed.

Symptoms and signs	**Classify**	**Treat**
A 35-year-old man with cough and chest pain for one week. Rapid HIV test is positive.		
A 23-year-old woman with cough and yellow sputum for one month. Respiratory rate 15/min; no fever. Rapid HIV test positive.		
A 50-year-old man with cough, fever and chills for one week. Temperature 39.5℃, respiratory rate 40/min. Rapid HIV test positive.		
A 40-year-old woman with dry cough for one month; now with severe headache. She is lying in the waiting room and does not want to get up. She cannot walk without help. Respiratory rate 15/min. Rapid HIV test is positive.		
A 24-year-old man with dry cough for three weeks. He has some pain in his chest when he takes a deep breath. When he came last time you sent sputum samples for smear microscopy and they were all negative. Respiratory rate is 25/min. He is HIV-positive.		
A 30-year-old woman, known to be HIV-positive. She is currently being treated for cryptococcal meningitis, and has not started ART. She has been having night sweats for the past week, and now complains of cough and right-side chest pain. Her respiratory rate is 18/min and her temperature is normal.		

Exercise 5-3: Case studies

Select the correct treatment category for three patients. Refer to the *TB care with TB-HIV Co-management* guideline module while doing the exercises. This will assist you in learning how to refer use of the guideline module to others and also become comfortable using it.

Read the information given and review the results on the patient's *Request for Sputum Examination* form.

1. Janu comes to your clinic with one-month history of cough, fever, and weight loss. He was tested for HIV a year ago before his wedding. He is HIV-positive, but is not receiving any form of HIV care and does not know about HIV care services. Janu has never been treated for TB in the past. You sent samples to sputum smear microscopy and today Janu came back with the form below from the laboratory.

a) What is the TB disease site? Pulmonary ❑ Extra-pulmonary ❑

b) What type of patient is he? New ❑ Transfer in ❑ Treatment after default ❑ Relapse ❑ Treatment after failure ❑ Other ❑

c) What category of treatment is needed?

d) In which WHO HIV clinical stage is Janu?

2. Mamush comes to the clinic because he has fever, weight loss, and occasional cough. He was at the clinic two weeks ago and was given amoxicillin. Today he is back because the fever and cough did not go away. Mamush has never been tested for HIV or TB in the past. You sent him to the laboratory for sputum smear microscopy and rapid HIV test. He is HIV-positive and below is his sputum test result as reported by the laboratory.

a) What is the TB disease site? Pulmonary ❑ Extra-pulmonary ❑

b) What type of patient is he? New ❑ Transfer in ❑ Treatment after default ❑ Relapse ❑ Treatment after failure ❑ Other ❑

c) What category of TB treatment is needed?

d) In which WHO HIV clinical stage is Mamush?

3. Raj comes to your clinic because he has had cough with bloodstained sputum, fever and weight loss for the past month. Raj is HIV-positive and enrolled in a chronic HIV care clinic. He has regular follow-up there, but he is not receiving any treatment. He has never been treated for TB in the past. Below is his sputum test result from the laboratory.

a) What is the TB disease site? Pulmonary ❑ Extra-pulmonary ❑

b) What type of patient is he? New ❑ Transfer in ❑ Treatment after default ❑ Relapse ❑ Treatment after failure ❑ Other ❑

c) What category of TB treatment is needed?

d) In which WHO HIV clinical stage is Raj?

Exercise: short answers

Sputum results and serostatus	**TB diagnosis or what should be done to reach a diagnosis**
2 sputum samples positive. Patient's HIV status is unknown.	
1 sputum sample is positive, and 1 is negative. Patient is HIV-positive	
All samples are negative. Patient responds to a non-specific antibiotic. Patient is HIV-negative.	
All samples are negative. Patient is HIV-positive.	
All samples are negative. Patient is unable to walk and is HIV-positive.	

Turn back to page 13. We will discuss the next steps in managing the cases of John, Julia and Richards.

Chapter 5: WHAT TO DO WHEN AN HIV-INFECTED PATIENT DEVELOPS TB

Learning objectives

At the end of this session you should be able to:

- Specify the site and type of TB disease based on laboratory results
- Determine whether a TB patient can begin TB treatment immediately, or must be referred for evaluation and a TB Treatment Plan from the district clinician
- Determine TB treatment category
- Open a TB Treatment Card

Could you manage these situations? (At the end of this chapter, we will discuss each case).

	Two of John's sputum smears are positive, so the nurse starts him immediately on TB treatment (Category I). She explains about TB treatment and how he should take DOT.
	All of Julia's sputum smears are negative, but the nurse is still worried, so she sends Julia to get a chest x-ray and to see the doctor at the hospital. The doctor sees a cavity on the chest x-ray and starts TB treatment (Category I).
	One of the three sputum samples that Richard left at the laboratory is positive for AFB. The nurse tells Richard that he has TB and that he should see the doctor (who is trained in ART) before starting TB treatment.

HIV-positive patients who develop TB can be divided into two groups depending on their need for immediate referral to the medical officer/doctor:

1) Patients who can be started on TB treatment immediately, at primary health facility level; and
2) Patients who need to be referred to a medical officer/doctor for further evaluation

The TB treatment of each of these two groups of patients is very similar and must be started ***as soon as possible***. In the first group of patients, TB treatment can and should be started immediately by any health worker, at any health facility level. In the second group of patient, you should not start TB treatment before consulting a doctor or medical officer preferably the same one who has been seeing the patient for chronic HIV care.

5.1 Patients who can be started on TB treatment immediately by any health worker

If an HIV-positive patient who is not on ART develops TB disease, you need to do the following in order to decide if you can start TB treatment immediately.

a. Determine the TB disease site:

There are two possible classifications by anatomical site of TB disease:

- **Pulmonary**—TB disease affecting the lungs which can be divided into two categories:
  - Sputum smear-positive
  - Sputum smear-negative
- **Extra-pulmonary**—TB disease affecting organs other than the lungs (such as the lymph nodes, bones and joints, genitourinary tract, meninges, pleura, or intestines).

The table below explains how cases are classified. The most common types of patients diagnosed at first-level health facilities are indicated in the first row at the top of the table. This is because the most common diagnostic test available at primary facilities for TB is sputum smear microscopy.

However, it is important to understand how other groups of TB patients are diagnosed (see the table). Patients may be diagnosed with other types of TB by a doctor/medical officer, and then sent back to you for TB treatment. So it is important to talk to the patient, review medical records, and understand what kind of TB disease the patient has.

Case classification	Diagnosed by	Definition used for diagnosis
sputum smear-positive Pulmonary TB, (PTB+)	Health worker or clinician	Two or more initial sputum smear examinations positive for Acid Fast Bacilli (AFB)
	Clinician	One sputum smear examination positive for AFB, And Radiographic abnormalities consistent with active pulmonary TB as determined by Doctor/medical officer OR One sputum smear examination positive for AFB, and Sputum culture positive for *M. tuberculosis*;
	Clinician	HIV- positive or strong clinical evidence of HIV infection, and One sputum smear examination positive for AFB
Smear-negative Pulmonary TB (PTB–)	Clinician	Sputum smear examination negative for AFB, **and** Sputum culture positive for *M. Tuberculosis* **OR** HIV positive and Sputum smear examination negative for AFB, and Radiographic abnormalities suggestive of pulmonary TB **OR** Strong clinical evidence of HIV infection, and Decision by a clinician to treat with full course of anti-TB treatment
Extra-pulmonary TB (EPTB)	Clinician	One specimen from an extrapulmonary site culture positive for M. Tuberculosis or smear –positive for AFB, **OR** HIV-positive and Histological or strong clinical evidence consistent with active extrapulmonary TB **OR** Strong clinical evidence of HIV infection **and** A decision by a clinician to treat with a full course of anti-TB treatment
Any patient in whom both pulmonary and extrapulmonary TB are diagnosed should be classified as having pulmonary TB.		
NOTE: HIV-positive patients with extrapulmonary TB, other than lymphadenopathy, are WHO HIV clinical stage 4, while those with pulmonary TB in the absence of stage 4 condition are in WHO clinical stage 3.		

Any patient diagnosed with both pulmonary and extra-pulmonary TB should be classified as having pulmonary TB.

◆ **Determine the type of patient:**

Ask:

- *Have you ever been treated for tuberculosis?*
- *Have you ever taken injections for more than 1- 2 weeks? Why?*

  If a patient has taken injections for more than 1 or 2 weeks, it is likely that the drug was streptomycin.

- *Have you ever taken a medicine that turned your urine orange-red?*

  If the patient has taken a medicine that turned the urine orange/red, it is likely to be rifampicin.

If you think a patient is hiding past treatment for TB, explain that new patients do not receive better drugs than patients being re-treated. Clarify to the patient that in order to be cured, patients in re-treatment need a stronger regimen than new patients.

From the patient's answers, determine his or her type using the table in Section B.2 of the *TB Care with TB-HIV Co-management* guideline module.

◆ **Decide on the treatment category:**

Using the disease site and the type of patient, you can then use the following table: (from *TB Care with TB-HIV Co-management* guideline module) to select the appropriate TB treatment category.

<table>
<tr><th>Disease site</th><th>Laboratory results</th><th colspan="2">Type of patient</th><th>Recommended treatment category</th></tr>
<tr><td rowspan="6">Pulmonary</td><td rowspan="5">Sputum smear-positive [a]</td><td colspan="2">New</td><td>CAT I</td></tr>
<tr><td rowspan="4">Previously treated</td><td>Relapse</td><td>CAT II</td></tr>
<tr><td>Treatment after failure</td><td>CAT II</td></tr>
<tr><td>Treatment after default</td><td>Usually CAT II</td></tr>
<tr><td>Chronic or MDR-TB</td><td>CAT IV</td></tr>
<tr><td>Sputum smear-negative [b]</td><td colspan="2">→</td><td>CAT I or III [c]</td></tr>
<tr><td>Extra-pulmonary [b]</td><td colspan="3">→</td><td>CAT I or III [c]</td></tr>
</table>

[a] If only one sputum sample is positive, the patient must be referred to a clinician for diagnosis.
[b] Pulmonary sputum smear-negative cases and extra-pulmonary cases may rarely be previously treated (treatment after failure, relapse, treatment after default, chronic). Diagnosis should be based on bacteriological and pathological evidence.
[c] As recommended by WHO, Category III treatment may be the same regimen as for Category I. Each country will decide whether Category I and III are different drug regimens or not. If they are different, the selection of a regimen for a particular patient will depend on the severity of disease.

In the table, either a health worker or a clinician can select the treatment category for the cases in the unshaded boxes. A clinician diagnoses and prescribes treatment for cases in the shaded boxes.

Most TB patients will be Category I. It is very important to immediately start Category I treatment as soon as possible. Patients with HIV can succumb to TB very rapidly if they are not started on treatment, timely.

If the patient is in the “relapse” or “treatment after failure” category, you should start treatment Category II. HIV-positive patients with TB have a higher risk of relapse and treatment failure. In some countries, they may be more likely to acquire drug-resistant TB. Depending on national guidelines and availability of drugs, it may be advisable to send a pre-treatment sputum sample for drug susceptibility testing. In the case of an HIV-positive patient with relapse, or one that fails Category I treatment, start Category II treatment and refer the patient to the district doctor/medical officer for evaluation as soon as possible, (i.e. after starting Category II treatment).

◆ **Fill out the TB Treatment Card and the HIV Care/ART Card:**

When TB treatment is started, you need to fill out a new TB Treatment Card. The TB Treatment Card is at the back of the TB-HIV Co-management module, and instructions for filling it out are contained in section C1.

Patients in HIV care will already have an HIV Care/ART Card. In the TB column of the card (and in the Pre ART or ART register), fill in the TB status and the BMU TB number from the new TB Treatment Card.

5.2 Patients who should be referred to a medical officer/doctor for evaluation or treatment plan

Any patient who has previously defaulted from TB treatment, suspected of smear-negative pulmonary TB or extra-pulmonary TB, treatment after default, or chronic or MDRTB, will need to be referred to a doctor or medical officer for diagnosis and a decision on treatment. This is true for all patients whether they are HIV-positive and negative.

If the patient is diagnosed of TB while already on ART, urgent consultation or referral to a trained doctor (preferably the one who started the ART) is needed to decide on TB-ART co-treatment plan. You should never stop the ART. Anti-TB drugs can interact with ARV drugs, therefore the doctor or medical officer need to decide whether it is necessary to adjust the treatment.

Patients who developed TB while on ART should be referred to a district doctor/medical officer for evaluation and TB-ART co-treatment plan!

Exercise: Read the case description and circle one of the classifications.

1. Your patient has been coughing for 3 weeks. All three of the sputum samples are positive. Your patient has:

    a. Smear-positive pulmonary TB

    b. Smear-negative pulmonary TB

    c. Extra-pulmonary TB

2. You ask a patient to submit three sputum samples to the laboratory for examination and an HIV test. The HIV test is positive, and one of the sputum samples is positive. Your patient has:

    a. Smear-positive pulmonary TB

    b. Smear-negative pulmonary TB

    c. Extra-pulmonary TB

3. You send a patient who is smear-negative to the hospital for a chest x-ray. When she comes back, she says that the doctor told her the chest x-ray indicates she has TB and should start TB treatment immediately. Your patient has:

    a. Smear-positive pulmonary TB

    b. Smear-negative pulmonary TB

    c. Extra-pulmonary TB

4. You send a patient to the hospital because of severe weight loss and fever. Several weeks later the patient was discharged and went home. Reading the hospital records, you see that the patient was diagnosed with "TB meningitis". Your patient has:

    a. Smear-positive pulmonary TB

    b. Smear-negative pulmonary TB

    c. Extra-pulmonary TB

Exercise: Read the case description below. Write down the patient's classifications (e.g. type of TB and HIV serostatus). Indicate whether the patient should be referred to a medical officer/doctor for evaluation and treatment plan, or whether you can initiate TB treatment at primary facilities, and specify TB treatment category.

Case	**Classifications**	**Refer or Initiate treatment? Treatment Category**
Patient is diagnosed with TB by chest x-ray. Sputum examination is negative. Has never received anti-TB treatment before and is HIV-positive.		
Patient is diagnosed with smear-positive pulmonary TB, and started TB treatment six months ago, but stopped after 2 months because he was feeling better. Patient is HIV-negative.		
Patient is diagnosed with TB meningitis. Has never received anti-TB treatment before. Patient is HIV-positive.		
Patient has 2 cm lymph node in the neck; needle aspiration is smear positive. Has never received anti-TB treatment before. Patient is HIV-negative.		
Patient is in 6th month of Category I treatment, and has smear-positive sputums. Patient is HIV-positive.		
Patient has smear-positive sputums. Treated last year for TB and has been fine since he finished. Patient is HIV-positive.		

Exercise

Turn back to page 23. We will discuss the next steps in managing John, Julia and Richard.

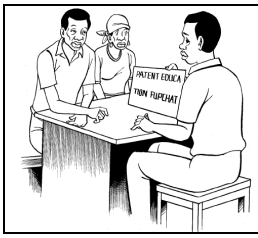
Chapter 6: WHAT TO DO WHEN A TB PATIENT IS FOUND TO BE HIV-POSITIVE

Learning objectives

At the end of this session participants should be able to:

- Provide chronic HIV care to TB-HIV patients
- Recommend cotrimoxazole to all TB-HIV patients

Could you manage this situation? (At the end of this chapter, we will discuss these cases).



The nurse tells John that he needs to continue treatment regularly at the Chronic HIV Care clinic, and he comes the next week for his first appointment. The ART Aid talks to John about bringing his child for care and treatment. His wife and one child are HIV-positive.

A TB patient who is found to be HIV-positive needs to be enrolled and receive chronic HIV care in the same way as all other HIV-positive patients. These steps were previously covered in *Chronic HIV Care with ART and Prevention*, and are in the sequence of care in section G of the *TB Care with TB-HIV Co-management* guideline module. The steps below review some of the most important aspects of chronic HIV care and offer specific tips about TB-HIV patients.

Step 2: Education and support

All TB-HIV patients need to receive basic education about HIV and what type of follow-up care and treatment is available at the facility. They also need to be introduced to the range of support services available at the facility and in the community to help them deal with issues such as disclosure. This is a good time to introduce the patient to an ART Aid or other counsellor.

Step 3: Clinical review, laboratory tests, clinical staging

A clinical review should be carried in the same way as it is for any HIV-positive patient. HIV-positive patients can have more than one opportunistic infection. Therefore, just because the patient has TB does not imply that he or she does not have other opportunistic infections.

Clinical staging is very important because this could affect many decisions about HIV services. Pulmonary TB is a sign of HIV clinical stage 3. TB lymphadenopathy is also stage 3. All other forms of extra-pulmonary TB are in clinical stage 4. So any HIV-positive patient with TB will be either WHO HIV clinical stage 3 or 4.
HIV-positive TB patients can also get other opportunistic infections while on TB treatment. Therefore, it is essential that all TB-HIV patients should receive

cotrimoxazole for prophylaxis. It is not necessary to wait for any laboratory tests before starting these patients on cotrimoxazole prophylaxis.

If available, a CD4 test should be sent for analysis. Haemoglobin should also be checked if the health worker is planning to use an AZT-based ARV regimen, or if the patient shows signs of clinical anaemia.

Step 8: ARV therapy

Use the country-adapted *IMAI Chronic HIV Care with ART and Prevention* guideline module to determine if the patient is eligible for ART. Most HIV-infected TB patients will need ART soon, either during TB treatment or soon after it is completed. For example, if the CD4 count is not available, generally all patients with TB (pulmonary or extra-pulmonary) are medically eligible for ART because they are all either WHO HIV clinical stage 3 or 4.

The decision on the timing of when to start ART is discussed in the next section. But if the patient is eligible for ART, you should start adherence preparation as soon as possible. This should cover what ART is for, the importance of taking it regularly and not missing doses, and arranging for someone to be a treatment supporter.

Step 10: Arrange—

Dispense TB and HIV medications:

- If the services are provided in separate clinics, coordinate drug dispensary between the TB and HIV services e.g. clarify which clinic will be dispensing cotrimoxazole for prophylaxis, including for patients who are not yet eligible for ART;

Schedule follow up visits:

If patient is receiving treatment for TB and HIV care in different clinics (i.e. TB and HIV care clinics):

- Coordinate the patient's visit to the TB and HIV clinics to be on the same date, if applicable;

Link with community services:

- Coordinate referral for community service and support for TB-HIV patients
- E.g. you might use same community supporter both for TB and HIV

Record data on TB Treatment Card and the HIV Care/ART Card:

In addition to a TB Treatment Card, every patient in chronic HIV care needs an HIV Care/ART Card. If this is the first visit and the patient is being enrolled today, you need to prepare a new one.

Detailed lessons on how to fill out the HIV Care/ART Card are in the IMAI Basic Clinical Course.

Step 11: Prevention by PLHIV

Remember that your patient needs information and counselling about the importance of preventing transmission of TB and HIV to others and how to achieve this.

TB spreads when an infected person coughs or sneezes, spraying TB germs into the air. Others may breathe in these germs and become infected. It is easy to pass germs to family members when they live close together. Anyone can get TB, though not everyone who is infected will become sick.

Inform patients to prevent TB from spreading by:

- Following regular treatment to become non-infectious and then get cured
- Covering their mouth and nose with tissues or a cloth when coughing or sneezing
- Opening windows and doors and using a fan to allow fresh air to flow through the home.

Changing behaviour — particularly behaviours related to safer sex practices and condom use —is not simple. But a health facility can be a very effective place to educate patients and reinforce behaviour-change messages on the first and all subsequent visits.

Another important thing to do is to encourage the patient to disclose and bring family members for HIV testing and counselling. Patients may assume that long-term sexual partners/spouses are already infected, when in fact they might not be. In addition, it is important to make sure other family members who are already infected are enrolled in chronic HIV care.

Make sure pregnant TB-HIV patients receive PMTCT interventions and that the newborn child is protected if he/she receives INH prophylaxis.

All these steps should take place while the patient is continuing to receive TB treatment.

Exercise: Fill in the TB disease site and the HIV clinical stage for each of these HIV-positive patients.

Known HIV-positive patient	TB disease site—for treatment purposes (pulmonary or extra-pulmonary TB)	HIV clinical stage
You have been following Mary who had herpes zoster and is in clinical stage 2. She has been coughing for 3 weeks and your clinical review shows no other clinical signs. 2 of 3 sputums came back positive from the laboratory.		
Ahmed has been in HIV care for 2 years, taking cotrimoxazole prophylaxis regularly; he was in clinical stage 2 during his last visit. He has been coughing for the last month; all sputums came back from the laboratory negative and you referred him to the district doctor. He comes back on TB treatment with the diagnosis "smear-negative TB." There were no other clinical signs or diagnoses from the doctor.		
John comes to the chronic HIV care clinic with a large 3 cm lymph node in his neck. You send him to the hospital where a needle aspirate showed TB.		
Kim comes to the OPD complaining of leg weakness and episodes of fever. You do an HIV test and it is positive. You send her to the hospital, and several weeks later she comes back on TB treatment with the diagnosis of "Pott's Disease".		
A patient comes to the OPD complaining of headaches and cough of 2 weeks. You send 2 sputums for smear microscopy and send the patient to the hospital where she is diagnosed with TB meningitis. Later you hear from the laboratory technician that both sputums were positive.		

Which of the above patients should be started on cotrimoxazole for prophylaxis? Why?

Exercise

Turn back to page 30. We will discuss the next steps in managing John.

Chapter 7: DOES YOUR TB-HIV PATIENT NEED ART?

Learning objectives

At the end of this session you should be able:

- Decide whether and when to refer a TB-HIV patient for a decision on ART (TB-ART co-treatment plan) after starting TB treatment

Could you manage these situations? (At the end of this chapter, we will discuss these cases).

	The nurse decides that John is HIV clinical stage 3. She decides he needs ART. He is feeling better and gaining weight on TB treatment, so she sends him to the ART Aide for education about ART and suggests that he go to a meeting of the PLHIV group that meets monthly at the health centre.
	Julia has returned to the health centre and is taking TB treatment. The nurse explains she has TB even though her sputum smears are negative. She also tells her that now she has TB she needs ART as well.

7.1 Reassess the HIV clinical stage of your patient:

During each visit you should reassess the HIV clinical stage of all patients. For patients who are not yet eligible for ART, it is important to do this because any new diagnosis may change the patient's HIV clinical stage, which may affect whether he or she fits the criteria for ART.

For example, a new diagnosis of TB might make a "Pre-ART" patient eligible for ART, even if they were not eligible before.

7.2 Decide whether and when to refer an HIV-positive patient who is on TB treatment for co-treatment with ART:

It is important to remember that the most important decision for any TB patient (HIV-positive or negative) is how to start TB treatment. As discussed in Section 4, you can and should start TB treatment for some TB-HIV patients immediately. Others (for example, patients on ART) need to be referred to a doctor or medical officer to start TB treatment, so it is important to make sure that referral happens as soon as possible.

Remember: Never delay TB treatment because you are worried about starting ART. Start TB treatment as soon as possible! ART is never an emergency.

The decision to give TB/ART co-treatment must be made by a TB-HIV trained doctor or medical officer. However, the health worker at the first-level health facility needs to decide whether and when to consult with or refer the patient to a doctor or medical officer at the district hospital.

Once you decide that a TB-HIV patient is medically eligible for ART, you need to refer them to a medical officer who will make the final decision to start ART co-treatment. A TB-HIV patient who requires ART is a complicated case and therefore needs the medical officer to prescribe the TB-ART co-treatment plan. Then it is up to you, at primary facility level, to follow this co-treatment plan.

However, you should not refer all your TB-HIV patients immediately to the doctor/medical officer. You need to make a decision on whether and when you will refer the patient for the TB-ART co-treatment plan. The decision on whether and when you will refer depends on:

- TB disease site (pulmonary or extra-pulmonary)
- Type of TB patient (new, relapse, etc.)
- WHO HIV clinical stage
- Presence of other important clinical conditions aside from TB disease
- CD4 result if available

Use the following decision tables to decide whether and when to refer.

If patient is not on ART and CD4 count is <u>not</u> available:

Patient's clinical status	How to manage
Smear-positive pulmonary TB only (no other signs of clinical stage 3 or 4) and patient is gaining weight on TB treatment.	Start TB treatment. Reassess after Initial phase of TB treatment to determine whether to start ART during TB treatment or after completing it.
Smear-negative pulmonary TB only (no other signs of clinical stage 3 or 4) and patient is gaining weight on TB treatment.	Start TB treatment. Reassess after initial phase of TB treatment to determine whether to start ART during TB treatment or after completing it.
Any pulmonary TB and patient has signs of clinical stage 4 or thrush, pyomyositis, recurrent pneumonia, persistent diarrhœa, new prolonged fever, or weight loss or no clinical improvement during TB treatment.	Start TB treatment. **Refer now** to district doctor/medical officer for ART co-treatment plan. ART needs to be started immediately.
Extra-pulmonary TB (generally diagnosed by district doctor/medical officer)	Start TB treatment. **Refer now** to district medical doctor or officer for TB-ART co-treatment plan. ART needs to be started immediately.

If patient is not on ART and CD4 count <u>is</u> available:

CD4	How to manage
If CD4 < 200/mm3	Start TB treatment. **Refer now** to health officer or doctor for ART co-treatment plan. This needs to be started as soon as the patient is able to tolerate treatment (between 2 weeks and 2 months).
If CD4 between 200-350/mm3	Start TB treatment. Refer to health officer or doctor for ART co-treatment after initial phase (unless other WHO clinical stage 3 or 4 conditions are present. In this case, refer the patient now).
If CD4 > 350/mm3	Start TB treatment. Defer ART until TB treatment is completed unless the patient is in WHO clinical stage 4.

There are two types of patients that can complete TB treatment before starting ART:

- CD4 count is available and is more than 350, and patient is not in HIV clinical stage 4
- If CD4 count is not available, the patient is not in clinical stage 4 or has no any other signs of clinical stage 3 and gains weight on TB treatment

A patient who <u>develops</u> signs (indications of clinical stage 4 or thrush, pyomyositis, recurrent pneumonia, persistent diarrhoea, new prolonged fever, weight loss) during TB treatment needs to be assessed by the district doctor/medical officer. These patients usually benefit from starting ART, while still on TB treatment.

7.3 Special adherence considerations for TB-HIV patients

Patients who start ART should be thoroughly briefed beforehand on the need to adhere to the treatment plan. A past history of non-adherence to TB treatment can mean that the patient may also have difficulties adhering to ART. It is important to explore possible barriers to adherence. It may be better to defer ART until these issues can be resolved.

7.4 Fill out the TB Treatment Card and the HIV Care/ART Card

The HIV Care/ART Card should be updated when the patient starts ART, as described in the IMAI *Basic Clinical Course*. In addition, the TB Treatment Card needs to be updated with the date ART is started, the regimen used and the unique ART number that is on the front of the HIV Care/ART Card. This will allow this record to be found in the file cabinet, the ART Register, or in the national database if one exists.

Exercise: Write the treatment plan for each of the following cases.

Assume that the CD4 count is not available in the following cases:

Case	Treatment Plan
A patient in HIV care who was in clinical stage 2 during his last visit and is on cotrimoxazole prophylaxis, develops cough and fever. His sputum smear is positive. He has not had previous TB or ART treatment and shows no other signs of clinical stage 3 or 4.	
The same patient as cited above comes back in two weeks and is feeling a little better.	
A patient comes to the clinic with cough and fever. Sputum smears are positive. He was previously treated for TB at your health centre last year. He also started on ART at that time, but stopped taking it. He has no other symptoms.	
A patient was diagnosed with pulmonary TB and HIV at the same time. She has oral thrush. She says she has persistent diarrhoea and has lost weight.	
A patient comes to the clinic saying he was diagnosed and treated for TB meningitis at the hospital for 2 months. He adds that he was discharged yesterday with instructions to continue TB treatment at the health centre. He has never had an HIV test in his life. You recommend one and it is positive.	

Assume that CD4 count is available in the following cases:

Case	Treatment Plan
An HIV-positive patient is currently in month 2 of Category I treatment and doing well. Her CD4 count is 75.	
A patient in HIV care is not on ART, but is in clinical stage 2 and has a CD4 count of 250. They are diagnosed with smear negative pulmonary TB and started on Category II.	
A patient in HIV care, but not on ART, has a CD4 count of 400 and is in clinical stage 1. They are currently in the first month of Category I treatment.	
A patient is diagnosed with lymph node TB and HIV at the same time and is currently on Category I treatment. He has oral thrush and persistent diarrhoea. His CD4 count is 300.	

Exercise: Case study.

Turn back to page 34. We will discuss the next steps in managing the cases of John and Julia.

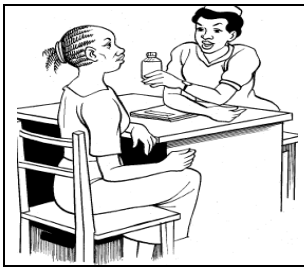
Chapter 8: HOW TO TREAT TB AND HIV

Learning objectives

At the end of this session you should be able to:

- Inform patients and their treatment supporters about issues relating to TB-HIV co-treatment
- Clinically monitor, fill out records, and provide support for patients on TB-ART co-treatment (prescribed and supervised by a medical officer)
- Ensure the transfer of the patient for continued chronic HIV care after he or she finishes TB treatment

Could you manage these situations? (At the end of this chapter, we will discuss these cases).

	John brings his family to the health centre on his follow-up visit at the Chronic HIV Care clinic. The nurse enrols the wife and the HIV-positive child in Chronic HIV Care. The nurse decides to give the HIV-negative child isoniazid prophylaxis.
	Julia is doing well on TB treatment. She is now in the fourth month of treatment and has gained two kg. Her sputum examinations have been negative. Over the past week, she has noticed a headache that seems to be getting a little worse.
	Richard is in the first few weeks of TB treatment. He comes to the clinic complaining of nausea and vomiting.

8.1 Educate the patient and treatment supporter about the TB-ART co-treatment plan

Patients taking both TB treatment and ART will need to take more medication than if they were on TB treatment alone, and they may experience more side-effects. Use the TB-HIV Patient Education Cards to teach patients about the dosages and schedules for their TB-ART co-treatment regimens.

Check that the patient understands both regimens and what medication to take each day.

Health workers, patients and treatment supporters all need to realize the importance of prompt TB treatment, cotrimoxazole prophylaxis, and appropriately timed ART, because there is a higher mortality in HIV-positive TB patients than in HIV-negative TB patients.

Check that the patient understands the phases of treatment. TB treatment regimens and some ARV regimens have phases in which the number of tablets can change. The most common TB-ART regimens are in Section B of *TB Care with TB-HIV Co-management*.

In terms of the signs and symptoms a community treatment supporter can look for in an HIV-positive TB patient; it is important to understand those that can be managed at home and others that indicate the patient should return back to a health facility for assessment or care. (These could be presented in a simplified table for treatment supporters).

Adherence support is very important for patients in co-treatment because they may encounter more problems than other patients (the burden of the number of tablets they must take, Directly Observed Therapy (DOT), possible confusion with regimens and schedules, changes in regimens, possible additional side-effects, illness, etc.).

There are ways to overcome adherence barriers, for example, encouraging the participation of peer support persons with TB-HIV. Other types of adherence support include transportation assistance, food supplements, additional education, etc.).

Patients with complex medical problems or difficult social situations (e.g. who live far from the health facility, have alcohol or drug problems or psychiatric problems, or are children with poor understanding of their disease) need more support. Your clinical team should have a list of available support services at the health facility and in the community which may be needed to help patients in difficult situations.

8.2 Support the patient throughout entire period of TB treatment

If the patient is taking TB treatment only, use the table in section G2.1 of the *TB care with TB/HIV co-management* guideline module to manage side effects. Keep in mind that not all new symptoms and signs are due to drug side effects. In HIV-positive patients on TB treatment, these can be due to new opportunistic infection. If you suspect a new opportunistic infection, manage it using the *Acute Care* module and refer the patient to or consult with a medical officer or district doctor. New clinical signs often mean that the patient has worsened and that urgent referral to the medical officer for ART is needed.

If the patient is on TB-ART co-treatment, use the table in section G2.2 of the *TB care with TB/HIV co-management* guideline module. The TB-ART side effects table has some differences from the ART-only side effect table in the *Chronic HIV Care with ARV Therapy and Prevention* guideline module, although much is the same. The table tells how to manage side effects specific to TB-ART co-treatment and when to refer to a higher level of care or consult a medical officer or district doctor.

As shown in Table G2.3, signs and symptoms in a TB-ART co-treatment patient could be due to side effects of drugs, immune reconstitution syndrome (IRIS), new opportunistic infections, or other common problems not related to TB or HIV.

8.3 Monitor TB treatment

The schedule for follow-up sputum examinations for a TB-HIV patient is the same as for HIV-negative patient. This is summarized in Section H of the *TB care with TB/HIV co-management* guideline module.

In general, you will collect sputum for a follow-up examination at the end of the initial phase, again at 5 months, and in the last week of treatment.

- For a **Category I** patient, do follow-up sputum examinations at the end of 2 months, 5 months, and 6 months of treatment.
- For a **Category II** patient, do follow-up sputum examinations at the end of 3 months, 5 months and 8 months.
- For a **Category III** (smear-negative pulmonary TB) patient, do a follow-up sputum examination at the end of 2 months.

"**At the end of**" is that you should collect sputum in the last week of that month of treatment. When a patient is due for follow-up sputum examination at the end of two months of treatment, you will collect sputum in the last week of the send month of treatment. Sputum must be collected several days before you need the results of the examination. Collect sputum early enough for the results of the examination to be available to you at the end of the specified month.

The schedule for later sputum examinations can vary somewhat from the above. Sometimes the initial phase of treatment must be extended by one month; this is recommended when the first follow-up sputum examination is still positive. Then the total duration of treatment is one month longer and the subsequent sputum examinations are pushed to one month later.

Appropriate action is spelled out in H1.4 of the *TB care with TB/HIV co-management* guideline module ("Based on sputum results, decide on appropriate action needed and implement the treatment decision").

Short exercise.

On the next two pages is the *TB Treatment Card* for Yacob Haile. Today is 20 July, 2007. Study his treatment card and answer the following questions.

1. What category of TB treatment is he taking? Why?

2. What is his HIV status?

3. Has he started on ART? Why do you think he has not started?

4. What drug is Yacob taking in addition to his TB treatment? What is the purpose of this drug?

5. When is this patient's next follow-up sputum smear examination due?
   At the end of the _____month of TB treatment

6. On approximately what date should the health worker collect sputum from this patient?

7. Ten days have passed and it is now 30 July. Yacob has come in for his TB treatment and also to learn about the sputum examination results. His sputum smear results, dated 26 July, 2007, lab number 1798, were negative. His weight today is 48 kg.

Find this information from Yacob's TB Treatment Card.

8. What is the implication of the negative smear results? How long must Yacob continue taking the anti-TB drugs?

9. When will Yacob have the next follow-up sputum smear? Why is it important for him to have another sputum smear examination?

10. What are the next steps for Yacob's HIV care?

Tuberculosis Treatment Card

BMU TB Register No. 1042

Name: Yacob Haile

Sex: ☑ M ☐ F Date of registration: 28 February 2007

Age: 23 Health facility: Lilitulu Health Center

Address: Station Square #6, Lilitulu

Name / address of community treatment supporter (if applicable)
Cecile Aweke, 82 Long Street, Lilitulu

Disease site (check one)

☑ Pulmonary ☐ Extrapulmonary, specify _____

Type of patient (check one)

☑ New ☐ Treatment after default
☐ Relapse ☐ Treatment after failure
☐ Transfer in ☐ Other, specify _____

I. INITIAL PHASE - prescribed regimen and dosages

CAT (I, II , III): I

Number of tablets per dose and dosage of S:

(RHZE)	S
3	

Cotrimoxazole	ARV	Other
1		

Referral by :

☐ Self-referral
☑ Community member
☐ Public facility
☐ Private facility/provider
☐ Other, specify

Sputum smear microscopy				Weight (kg)
Month	Date	Lab No.	Result	
0	24-2-07	359	+++	49
2	7-5-07	841	neg	50

TB/HIV		
	Date	Result*
HIV test	1-3-07	Pos
CPT start	10-3-07	
ART start		

** (Pos) Positive; (Neg) Negative; (I) Indeterminate; (ND) Not Done/unknown*

Tick appropriate box after the drugs have been administered

Daily supply: enter ✓. Periodic supply: enter X on day when drugs are collected and draw a horizontal line (——•) through the number of days supplied. Ø = drugs not taken

Day / Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Feb																												✓			
Mar	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	Ø	✓	✓	✓	✓		✓	✓	✓	Ø	✓	
Apr		✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	
May	✓	Ø	✓	✓	✓		✓	✓	✓																						

II. CONTINUATION PHASE

Number of tablets per dose	(RH)	(RHE)	Other
	3		

Daily supply: enter ✓ . Periodic supply, enter X on day when drugs are collected and draw a horizontal line (———•) through the number of days supplied. Ø = drugs not taken

Day / Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
May										✓		✓		✓		✓		✓			✓		✓		✓			✓		✓	
June	✓			✓		✓		✓			✓		✓		Ø			✓		✓		✓			✓		✓		✓		
July		✓		✓		✓			✓		✓		✓			✓		✓		✓											

X-ray (at start)
Date:
Results *(-), (+), ND*

HIV care	
Pre ART Register No.	L2-1174
CD4 result	400/mm3
ART eligibility *(Y/N/Unknown)*	N
Date eligibility assessed	19-3-07
ART Register No.	

Comments: _____

Treatment outcome
Date of decision ____
☐ Cure
☐ Treatment completed
☐ Died
☐ Treatment failure
☐ Default
☐ Transfer out

Name and address of contact person: Ribka Haile (sister), Station Square #6, Lilitula

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8.4 Monitor HIV disease and ART

An HIV-positive patient should continue to receive chronic HIV care during TB treatment. This could happen in the TB clinic if its staff is trained to provide HIV care. Otherwise, the patient should also have regular appointments in a separate HIV Care clinic (preferably at the same or a different facility).

8.5 Support continuation of HIV care after TB treatment is completed

HIV care will need to continue even when TB treatment is completed. Again, this will depend on how your facility is organized. If the patient has been attending two different clinics (the TB clinic and the HIV clinic), then they can simply stop attending the TB clinic once treatment is completed. If chronic HIV care is provided to patients at the TB clinic, the patient may continue to attend the TB clinic or be transferred to another HIV Care clinic (at the same or a different facility) when TB treatment has been completed.

Exercise: Role plays to practise patient preparation

Your trainer will put you into pairs to practise a role-play. One of you will be the patient and one of you the health worker. The patient has finished two weeks of Category I TB treatment and is now going to start the ART regimen: AZT-3TC-EFV.

Explain how the patient should take the tablets, the importance of adherence, and common side effects. Use the TB-ART Education Card in page 96 of *TB care with TB/HIV co-management* guideline module, or nationally-adapted ones provided by your trainer.

Practise for 10 minutes, and then switch roles.

Exercise: For each of the following side effects, fill out the possible cause, what do to and when to consult a medical officer or doctor.

Side effect	Possible cause	What do to	When to consult a medical officer or doctor
Headache			
Orange/red urine			
Burning sensation in feet			
Jaundice (yellow skin or eyes)			
Pallor: anaemia			
Difficulty with vision			

Exercise

Turn back to page 39. We will discuss the next steps in managing the cases of John, Julia and Mr Richards.

Chapter 9: SPECIAL CARE FOR NEWBORNS, PARTNERS AND OTHER HOUSEHOLD CONTACTS

Learning objectives

At the end of this session you should be able to:

- Determine eligibility for isoniazid preventive therapy (IPT) and BCG immunization for household contacts of TB patients

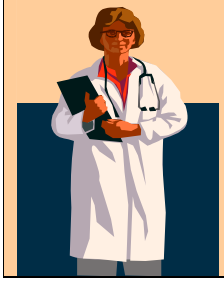
9.1 Give IPT and BCG immunization for household contacts of TB patients

BCG should be given to children less than two years of age who have been in close contact with a TB patient. Immunization with BCG can reduce the chance of a child developing TB by 50–80% if given before infection. BCG is not recommended to symptomatic HIV-positive children (Refer to your national guideline).

Depending on country guidelines, children and adult household contacts may also be given isoniazid prophylaxis. After excluding the possibility that they have active TB, those who are HIV-positive are also given isoniazid preventive therapy. Preventive therapy with isoniazid can reduce the chance of TB developing in children and in adults who are infected, but have not yet developed TB disease. However, this preventive therapy must not be given to any child or adult who has TB disease or may be suspected of having it.

9.2 HIV testing and counselling

HIV testing and counselling should be recommended to sexual partners and children of HIV-positive patients.



Skill station: 2 hours

Clinical review, HIV staging and recommending care and treatment in TB-HIV patients.

Welcome to the skill station. The skill station is organized to help you practise the lessons you have learned in the classroom. During this session, you will be divided into small groups of 2-3 and you will move from one Expert Patient Trainer (EPT) to the next.. Today's skill station is designed to further enhance your ability to:

1) Do clinical review in patients with TB-HIV
2) Recommend care and treatment in TB-HIV patients
3) Respond to new signs and symptoms in TB-HIV patients

There are several role-play scenarios that you will practise with the EPTs to help you improve your skills. In these role plays, you will play the role of the health worker and an EPT will play the role of the patient. At the end of the role-play, the EPT will give you feedback on a one-to-one basis. You should use the skill stations to put what you have learned into practise.

This is not a test. It is an exercise to help you improve your skill, and it should be fun! The feedback is meant to be non-judgmental and should be taken in a positive manner.

Your facilitator will orient and guide you through the process.