NPHCDA

MODULE 4: DIAGNOSIS AND MANAGEMENT OF TUBERCULOSIS AND INTRODUCTION TO NTBLCP

February 2024

OVERVIEW OF TUBERCULOSIS

Sessions	Components
4.1	Overview of NTBLCP
4.2	Identification of Presumptive TB case (Probable/Suspected)
4.3	Discussions on completing Clinic Register for Presumptive TB Cases
4.4	Classifying the TB Patient
4.5	Administering TB Treatment (Determining Appropriate Treatment for TB)
4.6	Monitoring of TB treatment
4.7	Case Holding and Management of Treatment Interruption
4.8	Management of TB Complications
4.9	Recording and Reporting in TB Control
4.10	Recording and Reporting in TB Control

Learning Objectives

The Federal Government of Nigeria established the National Tuberculosis Leprosy Control program (NTBLCP) in 1988 and formally launched it in 1991

At the end of this session, Participants will be able to;

1. To give a general overview of National Tuberculosis and Leprosy Control Program in Nigeria
2. To define Tuberculosis and the Causative organism
3. To know how Tuberculosis is transmitted

WHAT IS TB?

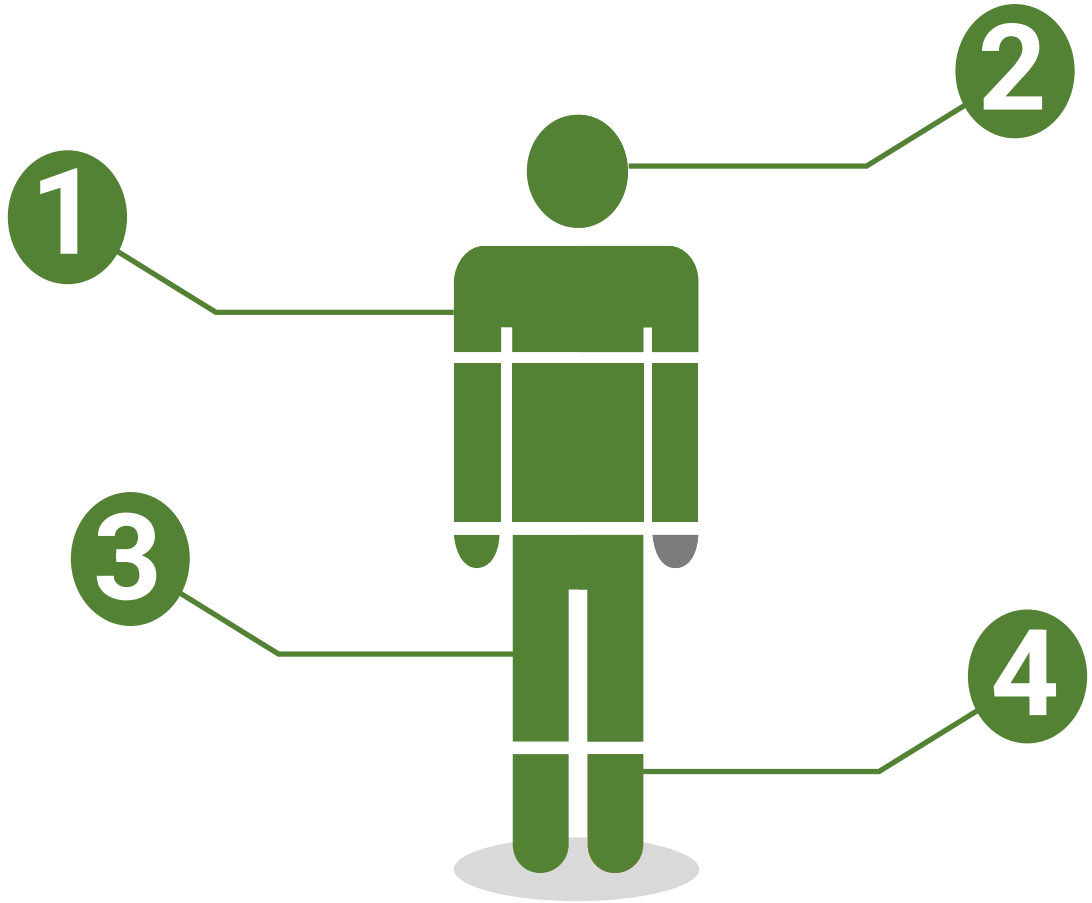
- Chronic, infectious bacterial disease caused by mycobacterium tuberculosis, that usually affects the lungs. (pulmonary TB)
- Can also affect any other part of the body (Extra Pulmonary TB)



TRANSMISSION

Spread from person to person through the air via droplet nuclei

Droplet nuclei can remain in air for hours



Droplets are produced when a person coughs, talks and sings

Transmission can occur when another person inhales these droplets

Key messages

1. Tuberculosis is a chronic infection bacteria infection that usually affects the lungs
2. It is spread trough droplets
3. It can also affect any other organ of the body (extrapulmonary)

OVERVIEW OF TUBERCULOSIS

Sessions	Components
4.1	Overview of NTBLCP
4.2	**Identification of Presumptive TB case (Probable/Suspected)**
4.3	Discussions on completing Clinic Register for Presumptive TB Cases
4.4	Classifying the TB Patient
4.5	Administering TB Treatment (Determining Appropriate Treatment for TB)
4.6	Monitoring of TB treatment
4.7	Case Holding and Management of Treatment Interruption
4.8	Management of TB Complications
4.9	Recording and Reporting in TB Control
4.10	Recording and Reporting in TB Control

Learning Objectives

At the end of this session, Participants will be able to;

1. Identify the signs and symptoms of PTB, EPTB and TB in children and take appropriate actions.
2. Take accurate and appropriate history and conduct physical examination from the presumptive TB case

INTRODUCTION

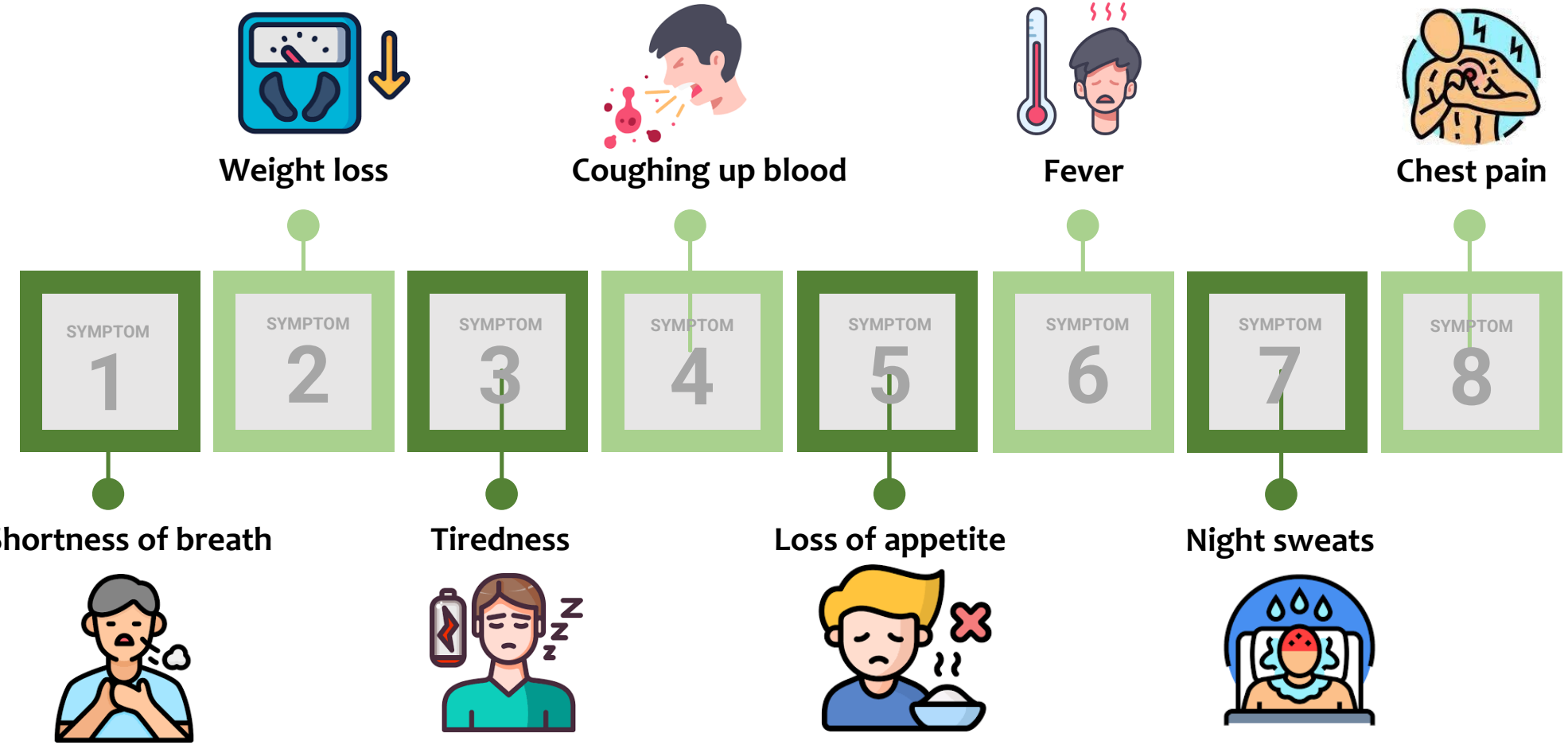
TB affects the lungs in 80% of cases, but it can affect any organ in the body.

TB of the lungs is called Pulmonary Tuberculosis (PTB), while that affecting other organs is called Extra pulmonary TB.



IDENTIFYING PRESUMPTIVE PULMONARY TUBERCULOSIS (PTB)

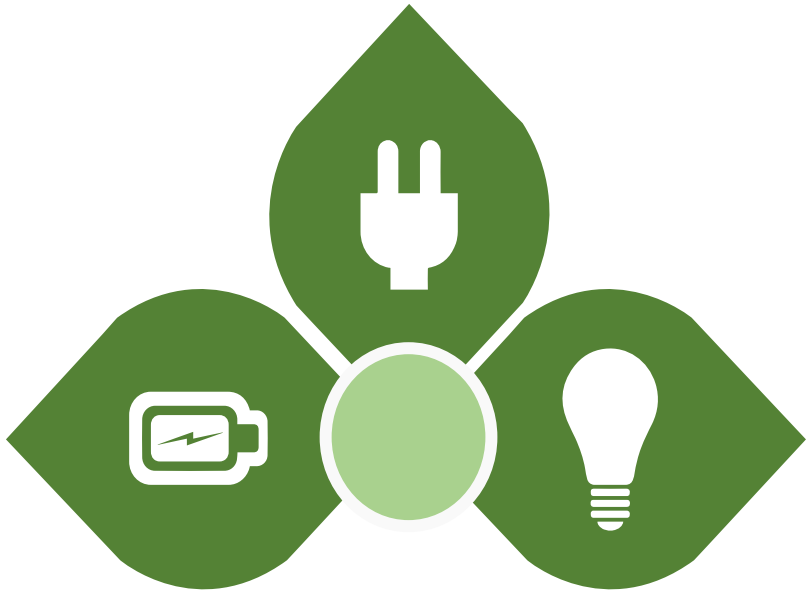
The commonest symptom of PTB is persistent cough lasting two weeks or more, which is usually accompanied by one or more of the following symptoms:



IDENTIFYING PRESUMPTIVE PULMONARY TUBERCULOSIS (PTB)

Any person coughing for 2 weeks or more, with or without the above symptoms should be suspected of PTB.

A person with extra pulmonary TB will show symptoms depending on the affected organ.



A person with extra pulmonary TB may also have the following general symptoms:

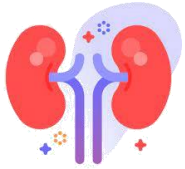
- Weight loss,
- Fever
- Night sweats

ORGAN AFFECTED AND SYMPTOMS



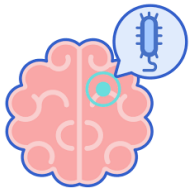
Back pain, swelling on spine

SPINE



Painful urination, blood in urine, frequent urination, lower back pain

KIDNEY AND URINARY TRACT



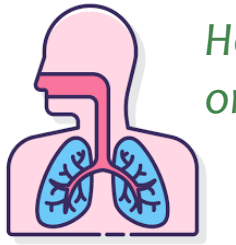
Headache, fever, neck stiffness, vomiting, irritability, convulsions

MENINGES OF THE BRAIN



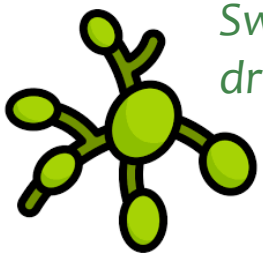
Long standing bone infection

BONE



Hoarseness of voice, pain on swallowing

UPPER RESPIRATORY TRACT



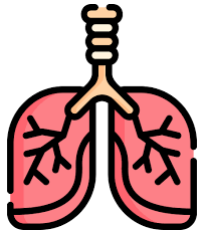
Swelling of the node, draining pus

LYMPH NODE



Painful joint swelling, usually affecting one joint

JOINT



Chest pain, difficulty in breathing, fever

PLEURAL MEMBRANE OF LUNGS



Longstanding ulcer despite antibiotic treatment, draining pus

SKIN

Taking accurate and appropriate history from Presumptive TB case

CHECK LIST FOR HISTORY TAKING AND PHYSICAL EXAMS OF TB PATIENT FOR GENERAL HEALTH CARE WORKERS.

HISTORY TAKING: General Approach

- Greet patient in a friendly relaxed way
- Introduce yourself
- Call patient by name
- Maintain confidentiality and respect patient's privacy
- Try to see things from patient point of view
- Understand patient underneath mental status (anxiety, irritation or depression)
- Always exhibit neutral position
- Listen carefully

Questioning: simple/clear/ avoid medical terms, open, leading interrupting, direct questions and summarizing.

Personal data of patient includes: Name, Address, Sex, Age(year of birth), Contact address, occupation, ethnicity, Marital status

PRESENTING COMPLAINT

- History of the presenting symptom(s) e.g time of onset, mode of progression (continuous or intermittent, nature, odour, colour etc
- History of past medical illness
- Drug history
- Family history
- Social history (occupation, living situation, marital status, social habits.



PHYSICAL EXAMINATION OF TB PATIENT

The examination must be systematic i.e start from head to toe, compare sides, start inspection, then palpation, percussion and auscultation (where necessary)

	Site	What to look for
1	Head	Hair texture in child
2	Neck	Cervical cold lymph node
3	Eyes	Paleness of the conjunctiva and yellowish of the of the sclera
4	Nose	Signs of breathlessness (flaring of alae nasi)
5	Feet	Wasting of inter-costal muscles, respiration rate and dullness on percussion Oedema

SUSPECTING TB IN CHILDREN

Diagnosis of TB in children is difficult because sputum cannot often be obtained from, especially younger children. Sputum samples are often negative. Stool sample is used for GeneXpert test

Diagnosis rests largely on the results of;

Clinical history





Family Contact History

X-ray Examination





Laboratory investigation

SYMPTOMS OF TB IN CHILDREN

- Low grade fever not responding to malaria treatment
- Night sweats
- Persistent cough for 2 weeks or more
- Loss of weight, loss of appetite
- Failure to thrive
- Lymph node swellings
- Joint or bone swellings
- Angle deformity of the spine
- Listlessness
- Neck stiffness, headache, vomiting (TB meningitis)

Any child suspected of having TB should be referred to a medical Officer for diagnosis.

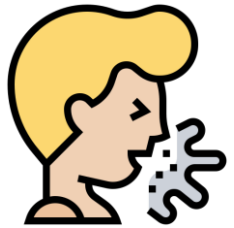
PTB PRESUMPTIVE CASE

The most important test to diagnose pulmonary TB is GeneXpert.



WHO Recommended Tools to Improve Diagnosis of Active and Drug Resistant Tuberculosis - Scientific Figure on ResearchGate. Available from: https://www.researchgate.net/figure/GeneXpert-MTB-RIF-Assay-Procedure-Ref-Boehme-et-al-NEJM-2010-62-Add-two-volumes-of_fig4_280775872 [accessed 29 Feb, 2024]

HOW TO COLLECT SPUTUM SAMPLE:

Ask patient to cough deeply (demonstration is necessary);	
The patient should spit the sputum carefully into the container to avoid contamination of the outside part;	
If the specimen is not suitable, e.g. saliva, then repeat deep cough to produce better sample	
The volume of the sputum should be about 3 to 5ml (equivalent to one tablespoonful	

AFTER SPUTUM COLLECTION

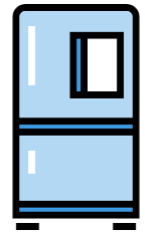
The container should be firmly closed using the lid;



Hands should be washed with soap and water;



Sputum specimens should to be stored preferably in a refrigerator or in a cool, dry and dark place e.g. a cupboard;



The specimens for microscopy should be sent to the laboratory as soon as possible, not later than 24 hours after collection;



Sputum specimens for culture should be sent to the laboratory within 5 days



KEY MESSAGES

Detection of tuberculosis in a patient starts with clinical history

The examination of a suspected patient with tuberculosis starts from head to toe



Diagnosis of TB in children is difficult because sputum cannot often be obtained from, especially younger children (Sputum samples are often negative).

The most important test to diagnose pulmonary TB is GeneXpert.

OVERVIEW OF TUBERCULOSIS

Sessions	Components
4.1	Overview of NTBLCP
4.2	Identification of Presumptive TB case (Probable/Suspected)
4.3	**Discussions on completing Clinic Register for Presumptive TB Cases**
4.4	Classifying the TB Patient
4.5	Administering TB Treatment (Determining Appropriate Treatment for TB)
4.6	Monitoring of TB treatment
4.7	Case Holding and Management of Treatment Interruption
4.8	Management of TB Complications
4.9	Recording and Reporting in TB Control
4.10	Recording and Reporting in TB Control

NATIONAL TUBERCULOSIS AND LEPROSY CONTROL PROGRAMME

(NTBLCP/TB 01)

PRESUMPTIVE TB REGISTER (DRUG-SUSCEPTIBLE AND DRUG-RESISTANT TUBERCULOSIS)

Name of State: _____ **Name of LGA:** _____ **Name of Site:** _____ **Clinic Code:** _____ **Month:** _____ **Year:** _____

S/N	Date of Registration	Hospital/ Clinic No	Full Name	Age (Yrs)	Sex (M/F)	Full Address	Specimen Identification Number	Type of presumptive TB		Is client a health worker? (Y/N)	Who referred the client?[2] (Source of referral)	Site of Disease (Tick one option)		Specimen processing period		
								DS-TB (Tick)	DR-TB (Enter code[1])					Write dates for Xpert MTB/RIF in cell above and AFB microscopy below		
												Pulmonary (Lungs)	Extra-Pulmonary (EPTB)	Date of Specimen Collection[3]	Date specimen was sent to Laboratory	Date Result released

[1]Write the type of presumptive DR-TB

a = Previously treated

b = Contacts of DR-TB patients

c = Failure to convert at the end of 2nd month of treatment

[2]Write this codes to indicate source of referral

ART: ART Facility; **CV:** Community Volunteer; **CP:** Community Pharmacist; **CI:** Community Informants

OPD: Out patient Department; **TBPs:** TB patient; **CTW:** Community TB worker; **O:** Other forms of referral

DOTS: DOTS Facility; **PMV:** Patent Medicine Vendor; **PPM:** PPM Scheme 1 or 2

[3]Write the date the first specimen was collected

Clinic Presumptive PTB case Register (Used for both DS-TB & DR-TB) – Left side

NATIONAL TUBERCULOSIS AND LEPROSY CONTROL PROGRAMME
(NTBLCP/TB 01)
PRESUMPTIVE TB REGISTER (DRUG-SUSCEPTIBLE AND DRUG-RESISTANT TUBERCULOSIS)

Name of State: _____ **Name of LGA:** _____ **Name of Site:** _____ **Clinic Code:** _____ **Month:** _____ **Year:** _____

Result of Bacteriological Tests											Chest x-ray		Clinically Diagnosed (Y/N)	HIV Activities (Tick only one option)					Outcome of investigations (Tick as appropriate)			Started TB treatment?	Remarks
Xpert/MTB/RIF Result (Tick only one option)					AFB Result	Other tests (e.g TB-Lamp, LF-LAM, etc)								Previously known HIV status		Previoulsy unknown HIV status							
MTB Not Detected	MTB Detected			Error or incomplete/ invalid result												Tested for HIV						If yes, write LGA TB Reg No. above and date below. If no, indicate the code4	
	RIF Resistance not Detected	RIF Resistance Detected	RIF Resistance Indeterminate		Enter result as it is in the request form	Type of test	Positive	Negative	Indeterminate	Suggestive	Not Suggestive			Positive	Negative	Positive	Negative	Not Tested	DSTB	DRTB	Not TB		

[4] If a TB patient and not on treatment write reason
1: Pre-treatment loss to follow-up
2: Dead before treatment initiation
3: Transferred to another facility for treatment enrolment

Clinic Presumptive PTB case Register (Used for both DS-TB & DR-TB)– Right side

NATIONAL TUBERCULOSIS AND LEPROSY CONTROL PROGRAMME
Specimen Examination Request Form

NTBLCP/TB 02A **Specimen Identification No:** _____

Date: _____

Name of patient: _____

Sex: M ☐ F ☐ **Age:** _____

Patients address: _____

Tel no: _____ **LGA/TB No.:** _____

Type of Presumptive TB (Tick one only): **DS-TB** ☐ **DR-TB** ☐

Site of Disease (Tick one only): **Pulmonary TB (PTB)** ☐ **Extra-Pulmonary TB EPTB)** ☐

Is the patient a health care worker? **Yes** ☐ **No** ☐

Tick HIV Status: Positive ☐ Negative ☐ Unknown ☐ ***HIV test request;*** ***Yes*** ☐ ***No*** ☐

Tick reason for examination: Diagnosis ☐ Follow-up ☐ ***Indicate month of follow-up:*** _____

Tick the type of Test requested: Xpert/MTB/RIF ☐ Smear for AFB ☐ TB LAMP ☐ TB LAM ☐ Quantiferon/TST ☐

1st line LPA ☐ 2nd line LPA ☐ Culture ☐ Phenotypic 1st line DST ☐ Phenotypic 2nd line DST ☐

Others specify: _____

Type of specimen: _____ **Number sent to laboratory:** _____ **Date of collection of 1st & 2nd samples:** _____

Name of person requesting examination: _____ **Signature:** _____

E-mail: _____ **Phone No.:** _____

Name of Health facility: _____ **State:** _____

NTBLCP TB 02A Specimen Examination Request Form

Discussions on completing Clinic Register for Presumptive TB cases and sputum request form

1. Explain how to use the flow chart for management of Presumptive Case to make a diagnostic decision.

2. Define a TB case

3. Educate TB patients about the disease.

INTRODUCTION



The diagnosis of tuberculosis rests mainly on the identification of the tubercle bacilli by GeneXpert



The result of sputum can either be negative or positive

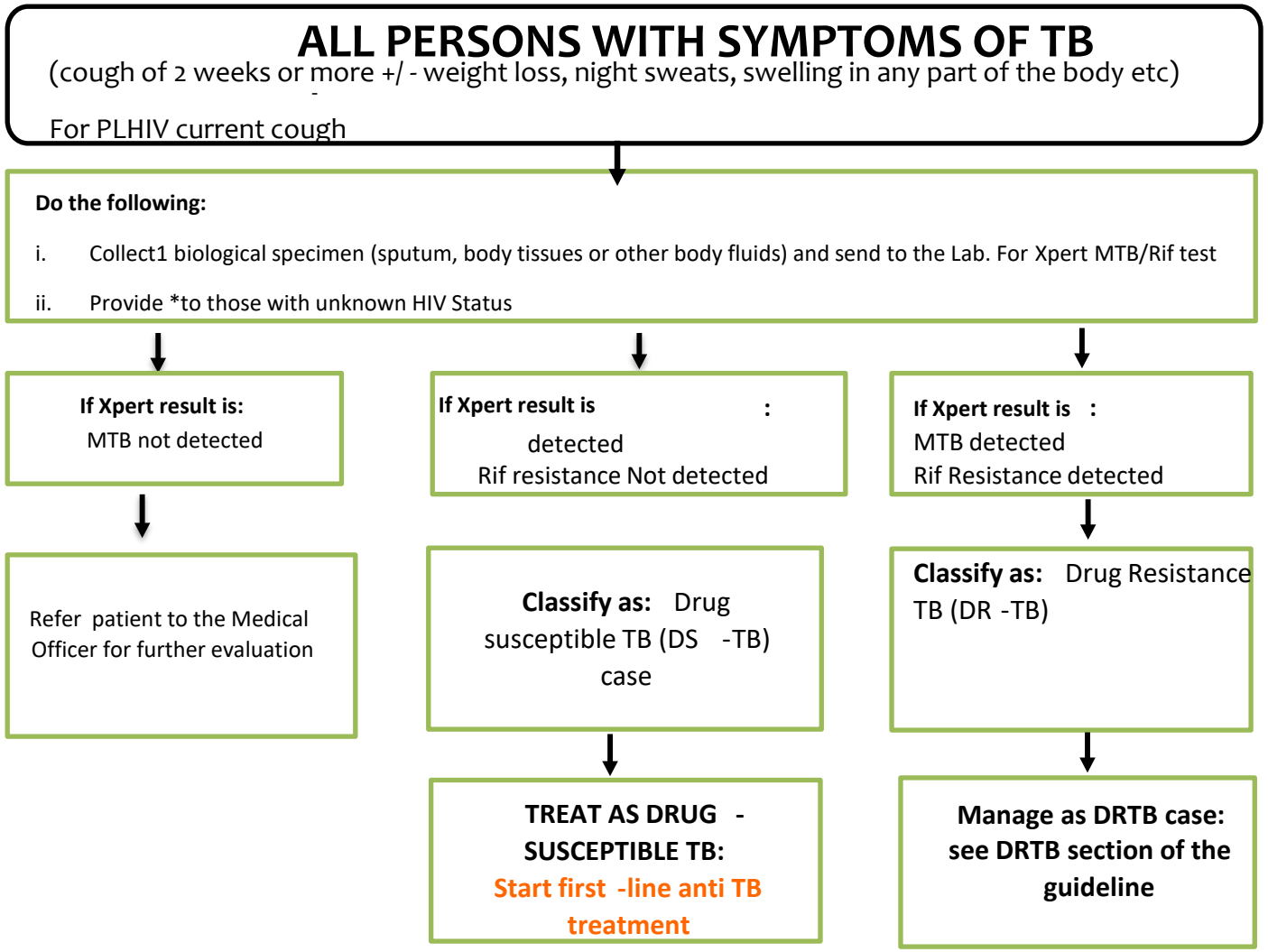


The diagnosis of extra-pulmonary TB can only be made by a medical officer or consultant

Interpretation of GeneXpert Results

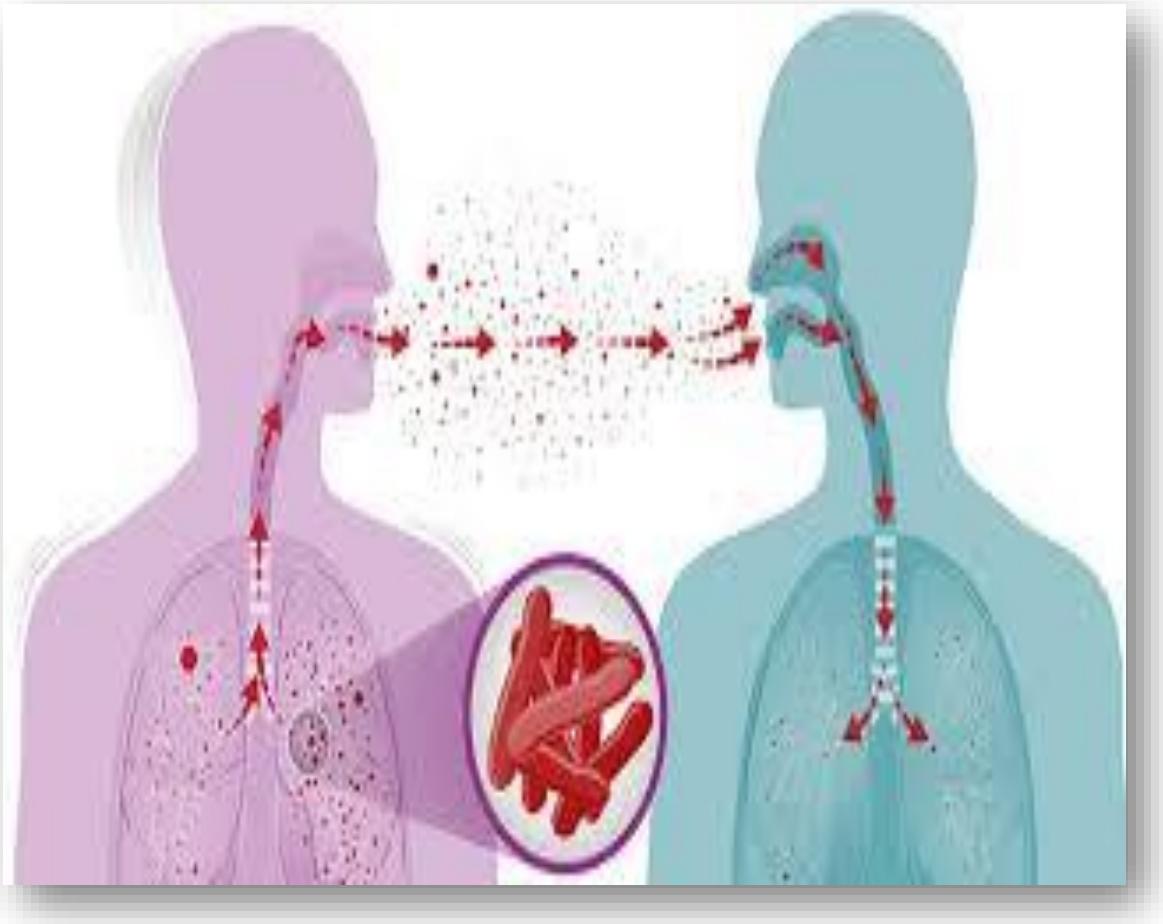
Result	Interpretation	Action
MTB (Mycobacterium tuberculosis) not detected	Negative result for TB	Evaluate further
MTB detected & Rifampicin (RIF) resistance not detected	Positive result for TB with no resistance to Rifampicin	Treat for drug susceptible TB
MTB detected & Rifampicin resistance detected	Positive result for TB with resistance to Rifampicin	Treat for drug resistant TB
MTB detected & Rifampicin resistance indeterminate	Positive result for TB with inconclusive result on Rifampicin	Obtain another sample and repeat the test
Invalid result	Result not valid	Obtain another sample and repeat the test
Error	Error occurred in the sample processing	Obtain another sample and repeat the test
No result	Insufficient information for the machine to generate result	Obtain another sample and repeat the test

Flow chart on the management of Presumptive TB case



WHO IS A CASE TB

A TB case is a person who has been diagnosed to have TB disease. It could be classified as either bacteriologically diagnosed or clinically diagnosed TB case.



ROLE PLAY

Counselling session for a patient with Tuberculosis



Guidelines and procedures for educating TB Patients and their family at time of diagnosis

Greet and establish proper relationship with the patient and their family (Inform patient/family about:)

The disease is curable provided the correct drugs are taken for 8months without break

The nature and how the nature of the treatment will be at (DOTA) Hospital/clinic/home

The number and type of drugs to take

He need to bring symptomatic contacts for screening & children < 6 yrs
The sputum result and the type of disease diagnosed



The sputum result and the type of disease diagnosed

The need to bring symtomatic contacts for screening and children less than 6years

The cause of TB and how it is transmitted

The patient is no longer infectious if he takes his drugs regularly

Guidelines and procedures for educating TB Patients and their family at time of diagnosis CONTD

Greet and establish proper relationship with the patient and their family (Inform patient/family about:)

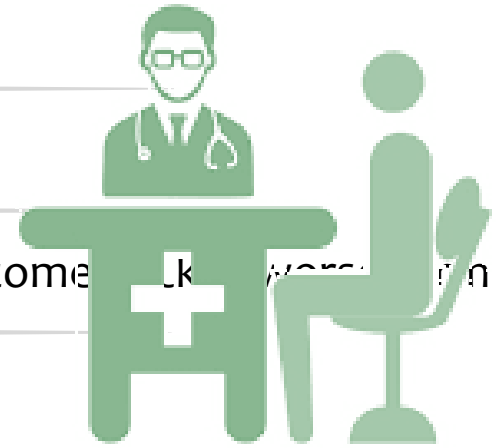
Signs and symptoms of possible side effects of drugs and what to do(skin rash, poor vision, discolouration of urine

Obtain feed back from patient at the end of the health talk

Patient recall facts

Identify possible problems and deal with them appropriately

sputum will disappear but he must continue to take drugs as directed, if not the disease will come [illegible]



How to collect drugs on work free days and incessable times

Important of family support to ensure compliance of the patient

sputum examination will be conducted at the end of months 2,5 and 6 to know the effect of the drugs taken. if it shows symtoms of the germ, treatment may change

Key messages

1. Counselling tuberculosis patients on DOTS and need for compliance is very important.

2. TB case is a person who has been diagnosed to have TB disease. It could be classified as either bacteriologically diagnosed or clinically diagnosed TB case.

OVERVIEW OF TUBERCULOSIS

Sessions	Components
4.1	Overview of NTBLCP
4.2	Identification of Presumptive TB case (Probable/Suspected)
4.3	Discussions on completing Clinic Register for Presumptive TB Cases
4.4	**Classifying the TB Patient**
4.5	Administering TB Treatment (Determining Appropriate Treatment for TB)
4.6	Monitoring of TB treatment
4.7	Case Holding and Management of Treatment Interruption
4.8	Management of TB Complications
4.9	Recording and Reporting in TB Control
4.10	Recording and Reporting in TB Control

Learning Objectives

At the end of this session, Participants will be able to;

1. Describe criteria for TB patients classification
2. Classify a TB patient appropriately
3. Fill in the relevant portion of the TB treatment card

CRITERIA FOR CLASSIFICATION



Anatomical site of disease



Bacteriological results (including drug resistance)

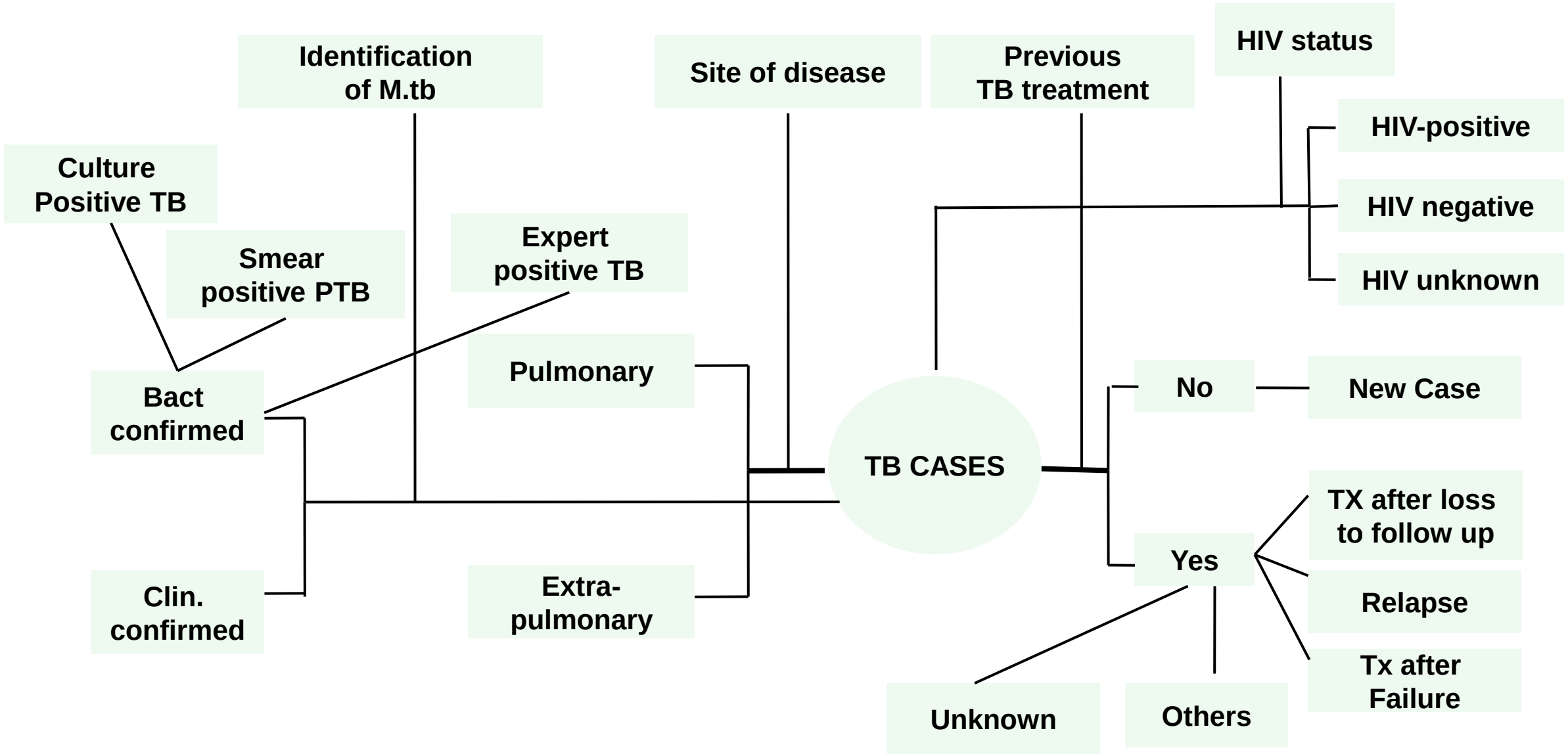


History of previous treatment



HIV status

DETERMINANTS OF CASE DEFINITIONS OF TB



SPUTUM RESULTS

Enter sputum results in the appropriate sections of the TB treatment/appointment cards bearing the patient's full name, sex, Age, Address, Diagnosis, date of collection, date sputum result was released, AFB result and the LGA TB registration number

Enter type/category of patient in the appropriate sections of the TB treatment /appointment cards



OVERVIEW OF TUBERCULOSIS

Sessions	Components
4.1	Overview of NTBLCP
4.2	Identification of Presumptive TB case (Probable/Suspected)
4.3	Discussions on completing Clinic Register for Presumptive TB Cases
4.4	Classifying the TB Patient
4.5	**Administering TB Treatment (Determining Appropriate Treatment for TB)**
4.6	Monitoring of TB treatment
4.7	Case Holding and Management of Treatment Interruption
4.8	Management of TB Complications
4.9	Recording and Reporting in TB Control
4.10	Recording and Reporting in TB Control

Learning Objectives

At the end of this session, Participants will be able to;

1. Explain the aims and strategies of TB treatment
2. Identify the drugs used for treating TB
3. Explain the regimens and criteria used in TB treatment
4. Fill in the relevant portion of the TB treatment card
5. importance of adherence and the consequences of poor adherence
6. Describe procedure for engagement of treatment supporter
7. Administer INH prophylaxis for children

AIMS OF TB TREATMENT



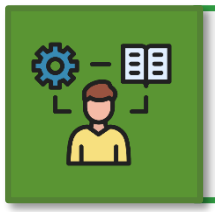
To cure the patient of TB and prevent death from active disease or its complications



To prevent transmission of TB to others



To prevent emergence of Multi Drug Resistant-TB and other forms of drug resistant-TB



To prevent relapse

STRATEGY FOR ADMINISTERING TB TREATMENT

Direct Observation of Treatment

1. Direct observation of drug intake (DOT) by health worker or treatment supporter at least in the intensive phase

2. Standardized treatment regimens

3. Standardized treatment regimens

IMPORTANCE OF DOT

Direct observation of treatment is the process of observing the patient swallow anti TB drugs

Monitors possible problems during treatment

Provides opportunities for continuous health education

Ensures that the patient is cured

Avoids TB complication

Limit spread of TB germs

Avoid the growth of stubborn TB germs



DRUGS USED IN TB TREATMENT

Drugs	Picture
Rifampicin (R)	
Isoniazid (H)	
Ethambutol (E)	
Pyrazinamide (Z)	

TYPES OF TREATMENT REGIMENS

Regimen 1 Adult: (2RHZE /4RH)

Regimen 1 Adult: (2RHZE /4RH)

Regimen 2 Adult: (2RHZE/10RH)

Regimen 2 Children: (2RHZ+E/10RH

PHASES OF TB TREATMENT

Phases of treatment

Intensive Phase

- Daily supervised treatment
- In adults and children:
- Regimen 1 : first 2months
- Regimen 2: first 2 months

Continuation Phase

- Daily supervised treatment
- In adults and children
- Regimen 1: last four months
- Regimen 2: last10 months

CRITERIA FOR ASSIGNING TREATMENT

Age

History of previous anti-TB exposure

Other medical conditions like **pregnancy, HIV status, and other contra indications**

Pre-treatment weight

DRUG REGIMEN

Type of TB Disease	Recommended Regimen		Length of treatment
	Intensive Phase	Continuation Phase	
PTB and all forms of EPTB except TB meningitis & Osteo-articular TB (spine, joints) in adults	2 RHZE	4 RH	6 months
TB meningitis and Osteo-articular TB (spine, joints) in adults	2 RHZE	10 RH	12 months
PTB and all forms of EPTB except TB meningitis & Osteo-articular TB (spine, joints) in children	2 RHZ+E	4 RH	6 months
TB meningitis and Osteo-articular TB (spine, joints) in children	2 RHZ+E	10 RH	12 months

ADULTS- Regimen 1 for susceptible PTB/EPTB cases: 2RHZE /4RH

Regimen	Pre-treatment weight			
	19-37 kg	38-54 kg	55-70 kg	> 70 kg
Intensive phase (2 months): *Combined tablet of RHZE (150mg+75mg+400mg+ 275mg)*	2	3	4	5
Continuation phase (4 months): *Combined tablet of RH* (150mg + 75mg)	2	3	4	5

Regimen 1 for susceptible PTB/EPTB cases: 2RHZ+E/4RH

Drug	Dosage (mg/kg)	Range (mg/kg)	Maximum dose (mg/day)
Isoniazid (H)	10	7 – 15	300
Rifampicin (R)	15	10 – 20	600
Pyrazinamide (Z)	35	30 – 40	2000
Ethambutol (E)	20	15 – 25	1200

Children: Regimen 1 for susceptible PTB/EPTB cases*: 2RHZ+E/4RH

Daily Regimen	Weight			
	< 5 kg	5 - 9 kg	>9 - 13 kg	>13 - 18 kg
Intensive phase (2 months) ▪ *Combined tablets of RHZ (60 mg+30 mg+150 mg)* ▪ *Ethambutol tablet (100mg)*	1	2	3	4
Continuation phase:(4 months) *Combined tablets of RH (60 mg + 60 mg)*	1	2	3	4

ADULTS: Regimen 2 for adults with TB meningitis and Osteo-articular TB: 2RHZE/10RH

Regimen	Pre-treatment weight			
	19-37 kg	38-54 kg	55-70 kg	> 70 kg
Intensive phase (2 months): ▪ *Combined tablet of RHZE (150mg+75mg+400mg+275mg)*	2	3	4	5
Continuation phase (10 months): ▪ *Combined tablet of RH (150mg + 75mg)*	2	3	4	5

CHILDREN: Regimen 2 for children with TB meningitis and Osteo-articular TB: 2RHZ+E/10RH

Daily Regimen	Weight			
	< 5 kg	5 - 9 kg	>9 - 13 kg	>13 - 18 kg
Intensive phase (2 months) ▪ *Combined tablets of RHZ (60 mg+30 mg+150 mg)* ▪ *Ethambutol tablet (100mg)*	1	2	3	4
Continuation phase: (10 months) ▪ *Combined tablets of RH (60 mg + 60 mg)*	1	2	3	4

TUBERCULOSIS TREATMENT CARDS

- A ‘TB treatment card’ and a ‘TB appointment card’ should be filled for every diagnosed patient according to the NTBLCP guidelines
- For smear negative and extra-pulmonary patients the Medical Officer’s report should be attached to the treatment card.
- It is very important for the hospital or health unit where the patient is receiving treatment to maintain a Tuberculosis Treatment Card for every patient started on treatment

Treatment Card helps us make sure that the patients;

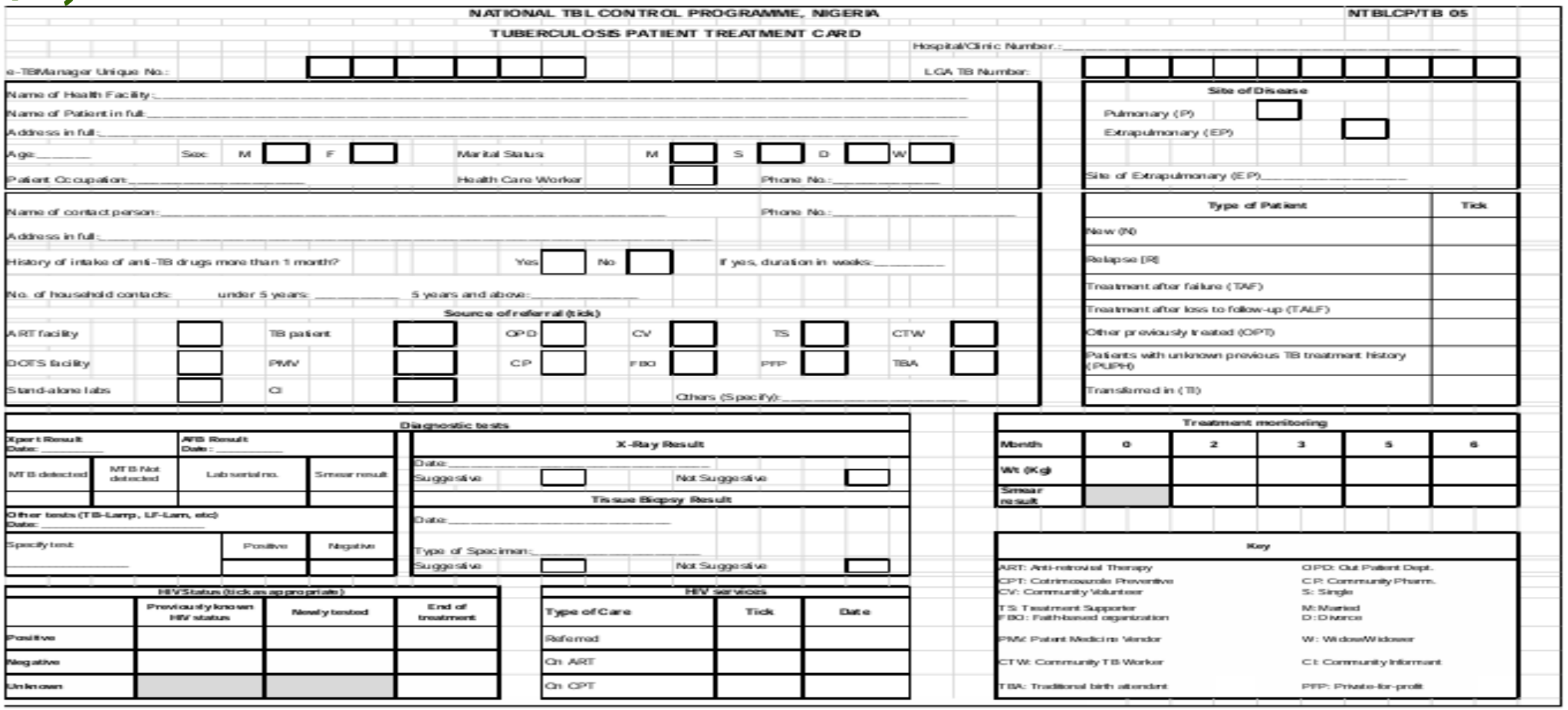
Were correctly classified as either pulmonary or extra-pulmonary tuberculosis

Were correctly classified as either New, Relapse, Transferred-in, Failures, Return after default or others

Were prescribed the correct regimen and dosages



SNAPSHOT OF THE TUBERCULOSIS PATIENT TREATMENT CARD (1/2)



NATIONAL TBL CONTROL PROGRAMME, NIGERIA — NTBLCP/TB 05

TUBERCULOSIS PATIENT TREATMENT CARD

Hospital/Clinic Number:

e-TBManager Unique No.: | LGA TB Number:

Name of Health Facility:

Name of Patient in full:

Address in full:

Age: Sex: M F Marital Status: M S D W

Patient Occupation: Health Care Worker Phone No.:

Site of Disease

Pulmonary (P)

Extrapulmonary (EP)

Site of Extrapulmonary (EP):

Name of contact person: Phone No.:

Address in full:

History of intake of anti-TB drugs more than 1 month? Yes No If yes, duration in weeks:

No. of household contacts: under 5 years: 5 years and above:

Source of referral (tick)

ART facility		TB patient		OPD		CV		TS		CTW	
DOTS facility		PMV		CP		FBO		PFP		TBA	
Stand-alone labs		CI							

Others (Specify):

Type of Patient	Tick
New (N)	
Relapse (R)	
Treatment after failure (TAF)	
Treatment after loss to follow-up (TALF)	
Other previously treated (OPT)	
Patients with unknown previous TB treatment history (PUPH)	
Transferred in (TI)	

Diagnostic tests

Xpert Result Date:		AFB Result Date:	
MTB detected	MTB Not detected	Lab serial no.	Smear result

Other tests (TB-Lamp, LF-Lam, etc) Date:

Specify test:	Positive	Negative

X-Ray Result

Date:

Suggestive Not Suggestive

Tissue Biopsy Result

Date:

Type of Specimen:

Suggestive Not Suggestive

Treatment monitoring

Month	0	2	3	5	6
Wt (Kg)					
Smear result					

HIV Status (tick as appropriate)

	Previously known HIV status	Newly tested	End of treatment
Positive			
Negative			
Unknown			

HIV services

Type of Care	Tick	Date
Referred		
On ART		
On CPT		

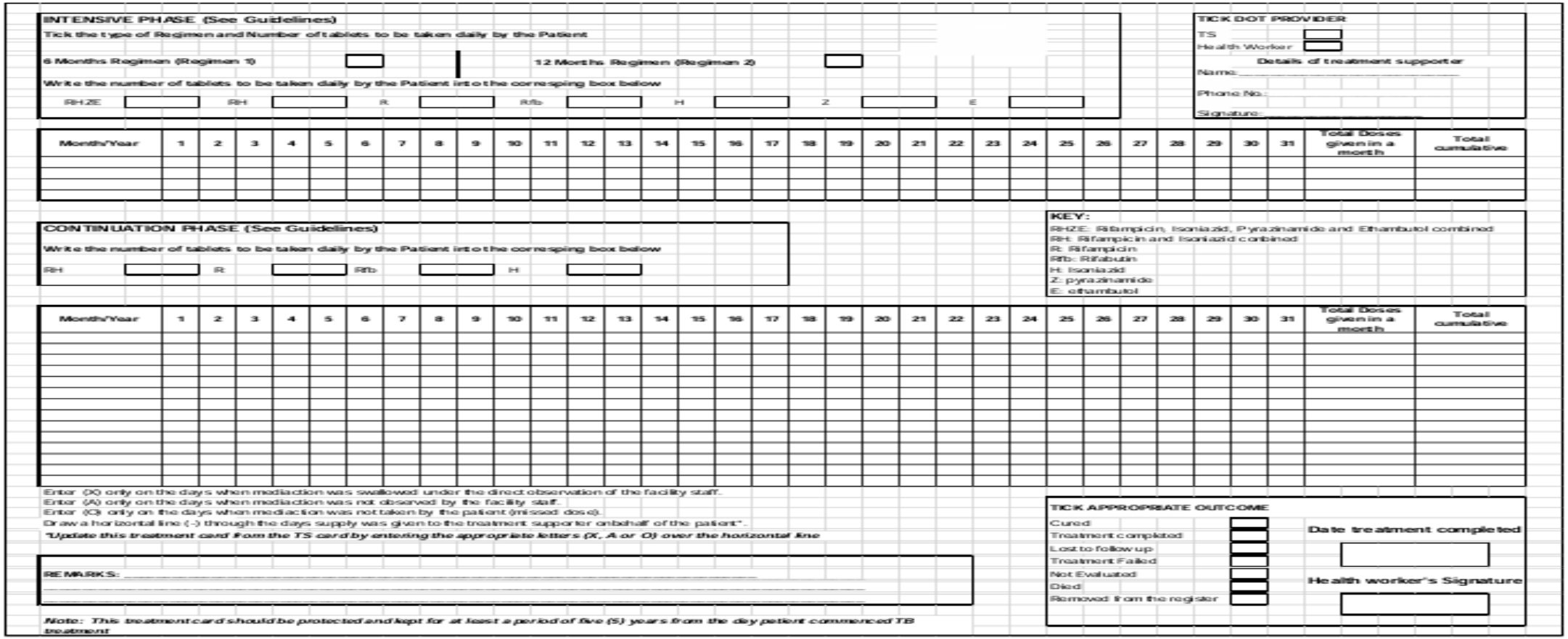
Key

ART: Anti-retroviral Therapy
CPT: Cotrimoxazole Preventive
CV: Community Volunteer
TS: Treatment Supporter
FBO: Faith-based organization
PMV: Patent Medicine Vendor
CTW: Community TB Worker
TBA: Traditional birth attendant
OPD: Out Patient Dept.
CP: Community Pharm.
S: Single
M: Married
D: Divorce
W: Widow/Widower
CI: Community Informant
PFP: Private-for-profit

TB Patient Treatment card – Front

- These cards will serve as the medical record to document and track important information related to the diagnosis, treatment, and management of patients with tuberculosis
- They will be used by healthcare providers involved in the diagnosis and treatment of tuberculosis patients at the health facilities

SNAPSHOT OF THE TUBERCULOSIS PATIENT TREATMENT CARD (2/2)



INTENSIVE PHASE (See Guidelines)

Tick the type of Regimen and Number of tablets to be taken daily by the Patient

6 Months Regimen (Regimen 1) ☐ | 12 Months Regimen (Regimen 2) ☐

Write the number of tablets to be taken daily by the Patient into the corresping box below

RHZE ☐ RH ☐ R ☐ Rfb ☐ H ☐ Z ☐ E ☐

TICK DOT PROVIDER

TS ☐

Health Worker ☐

Details of treatment supporter

Name:

Phone No.:

Signature:

Month/Year	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	Total Doses given in a month	Total cumulative

CONTINUATION PHASE (See Guidelines)

Write the number of tablets to be taken daily by the Patient into the corresping box below

RH ☐ R ☐ Rfb ☐ H ☐

KEY:

RHZE: Rifampicin, Isoniazid, Pyrazinamide and Ethambutol combined

RH: Rifampicin and Isoniazid combined

R: Rifampicin

Rfb: Rifabutin

H: Isoniazid

Z: pyrazinamide

E: ethambutol

Month/Year	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	Total Doses given in a month	Total cumulative

Enter (X) only on the days when medication was swallowed under the direct observation of the facility staff.

Enter (A) only on the days when medication was not observed by the facility staff.

Enter (O) only on the days when medication was not taken by the patient (missed dose).

Draw a horizontal line (-) through the days supply was given to the treatment supporter on behalf of the patient*.

*Update this treatment card from the TS card by entering the appropriate letters (X, A or O) over the horizontal line

TICK APPROPRIATE OUTCOME

Cured ☐

Treatment completed ☐

Lost to follow up ☐

Treatment Failed ☐

Not Evaluated ☐

Died ☐

Removed from the register ☐

Date treatment completed ☐

Health worker's Signature ☐

REMARKS: _____

Note: This treatment card should be protected and kept for at least a period of five (5) years from the day patient commenced TB treatment

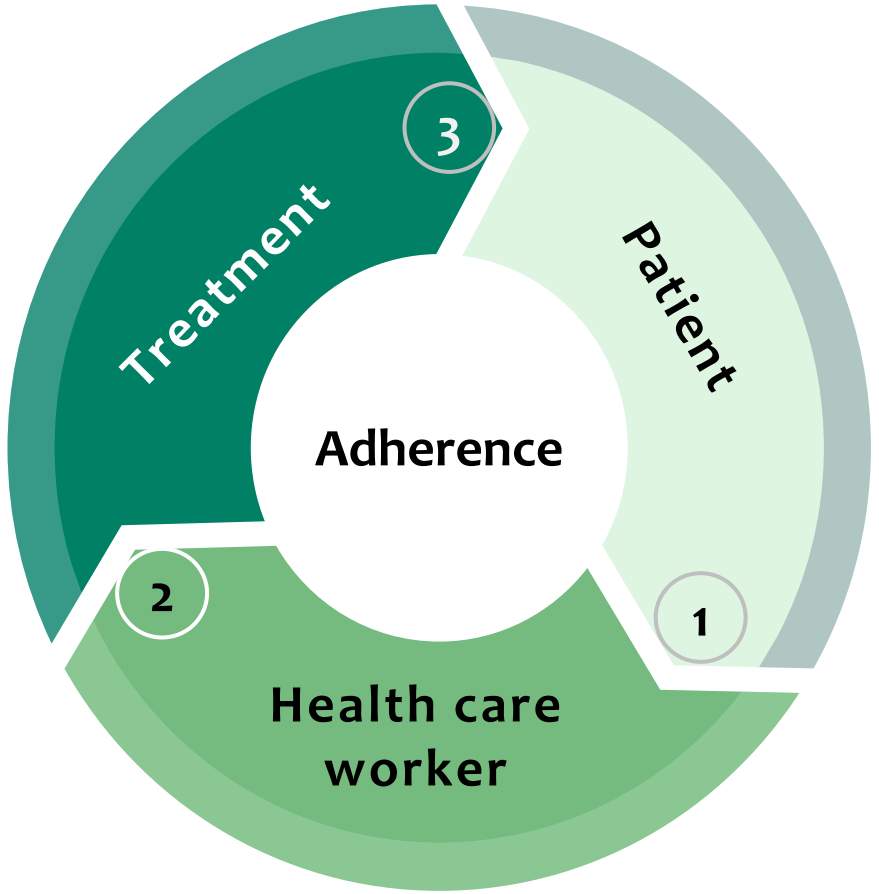
TB Patient Treatment card – Back

- These cards will serve as the medical record to document and track important information related to the diagnosis, treatment, and management of patients with tuberculosis
- They will be used by healthcare providers involved in the diagnosis and treatment of tuberculosis patients at the health facilities

Adherence involves partnership between the patient, health care worker and treatment

Definition

Adherence is the term used to describe the patient's behavior of taking drugs correctly – the right drugs, in the right dose, with the right, frequency, and at the right time



There are five major importance of adhering to tuberculosis treatment



ADHERENCE

1. Reduces the risk of developing resistance to the drug (s)
2. Enhances curability
3. Improves social stability of a TB patient
4. It builds the patient confidence in getting treatment
5. It builds a strong and trusting patient - provider relationship

Brainstorming

Discuss with the participants on factors affecting poor adherence using their experience
Discuss interventions

MANAGEMENT OF CONTACTS OF TUBERCULOSIS PATIENTS

When **patient** is diagnosed a **smear positive,** he/she is requested to bring the following persons to **the Health facility to screen for TB**

All adult contacts that are coughing for two (2) weeks or more

Patient testing positive

All children of the household below 6 years (including children born while on treatment)



Hospital

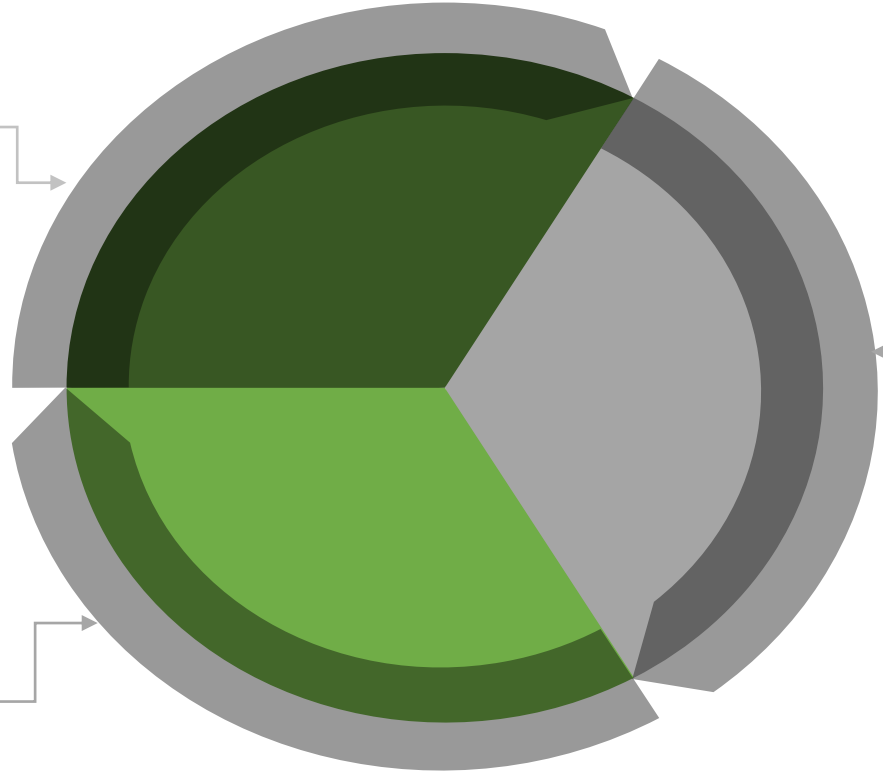
N:B: Record should be kept of these contact persons in an exercise book

Contact Investigation

Contact investigation is important for detection of active TB as well as providing preventive therapy for latent TB

This can be achieved by investigating the following;

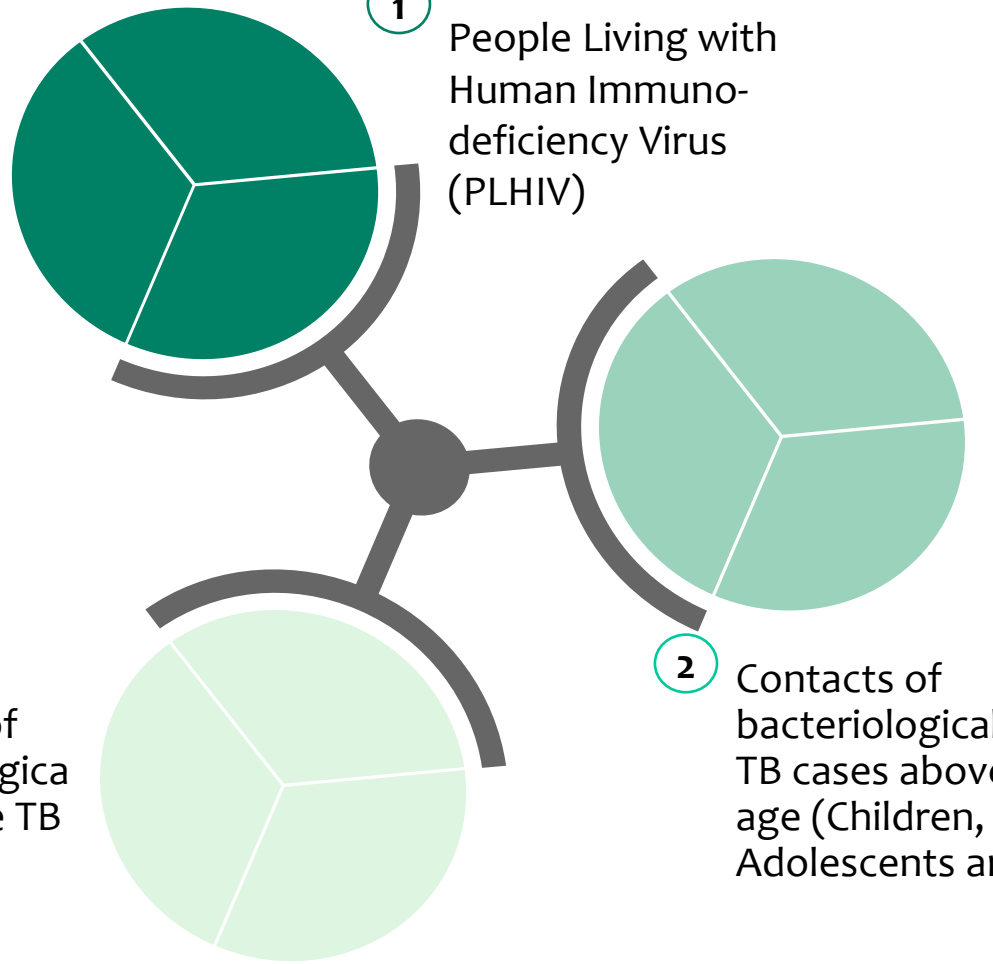
History of contact with a person with bacteriologically positive pulmonary TB is a very important component in the diagnosis of TB



Investigation of all household contacts of diagnosed child TB cases **(reverse contact tracing)**

All child contacts in the household of bacteriologically confirmed index TB cases should be screened for TB.

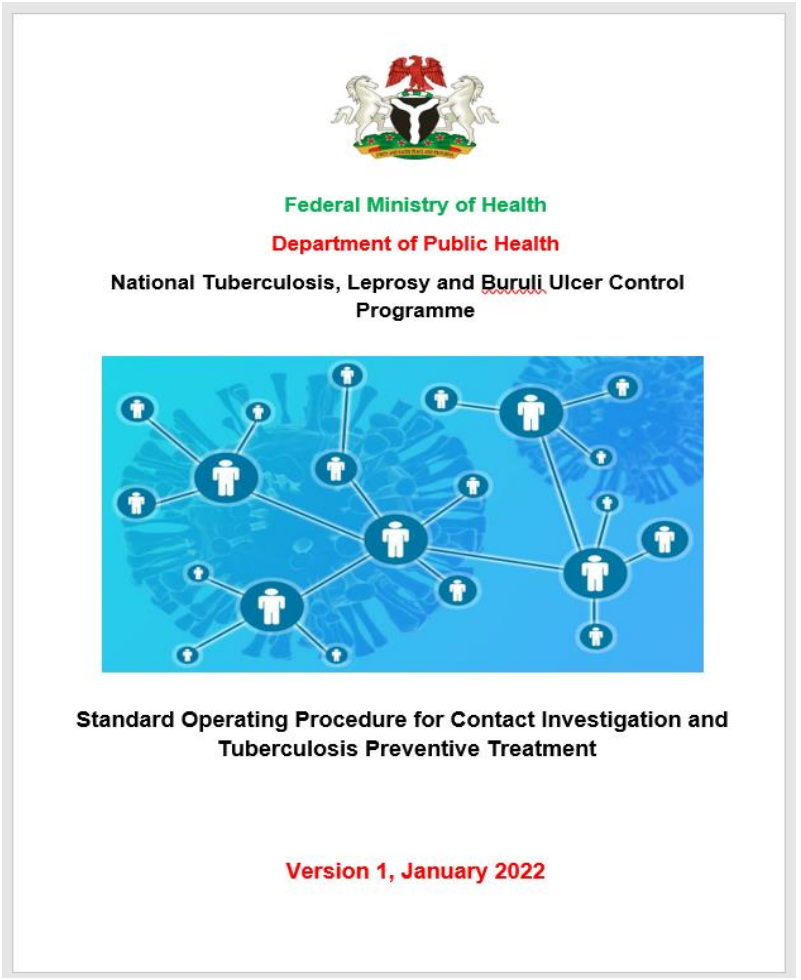
There are three main priority groups for tuberculosis patient treatment



1. People Living with Human Immuno-deficiency Virus (PLHIV)

2. Contacts of bacteriologically positive TB cases above 5 years of age (Children, Adolescents and Adults).

3. Under-5 contacts of bacteriologically positive TB cases



Priority Groups and Regimens

I. For six (6) months (6H)

Daily isoniazid (INH)

II. For three (3) months (3HP)

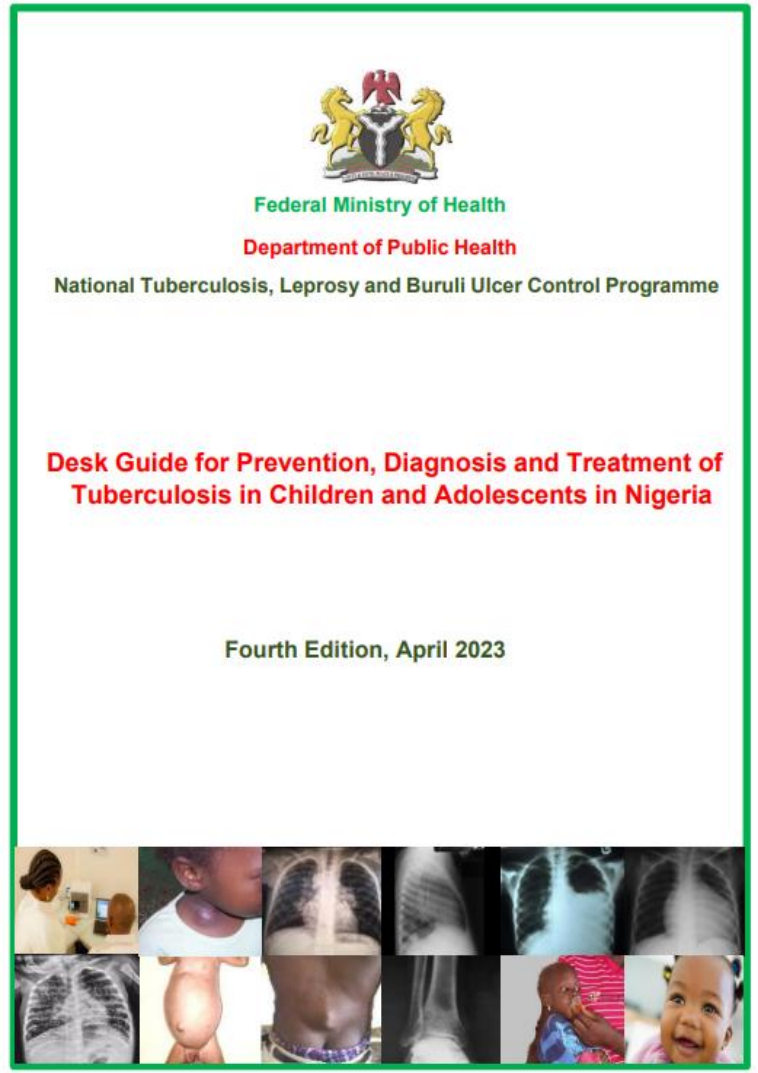
Weekly INH and Rifapentine

III. For three (3) months (3HR)

Daily INH and Rifampicin

IV. For 1 month (1HP)

Daily INH and Rifapentine



Key Considerations in TPT Administration

PLHIV should receive TPT at ART initiation after ruling out active TB

- Repeat course of TPT is no longer recommended in PLHIV
- Ensure kitting of the medicines for entire treatment duration at the onset
- Weigh client monthly and adjust medicine dosage as necessary
- Align TPT appointment date with other clinic visits

Line-listing and screening all household contacts of index TB cases

- Evaluate presumptive TB cases
- Offer TB treatment for clients with active TB
- Offer TPT for TB infection in eligible clients if no contraditctions

Monitoring of Tuberculosis Patient Treatment



- Discontinue TPT
- Assess for active TB
- Refer to medical officer/specialist if not sure of diagnosis
- If on ART, assess for adherence to ART/ART failure

Contradictions to TPT

General contradictions	▪ Active Tuberculosis ▪ Active liver disease (check for jaundice, abdominal pain, nausea and vomiting) ▪ Known or reported alcohol addiction (heavy alcohol consumption) ▪ Allergy to any of the TPT medicines
Contradictions to Rifapentine plus INH	▪ PLHIV on protease inhibitors (Pis) NNRTIs and TAF ▪ Pregnant women
Contradictions to Rifapentine plus INH	▪ PLHIV on protease inhibitors and NNRTIs (except EFV)

KEY MESSAGES

1. Adherence is very important in Tuberculosis treatment as it reduces the risk of drug resistance
2. PLHIV should receive TPT at ART initiation after ruling active TB
3. Ensure kitting of the medicine for entire treatment duration at the moment
4. Weigh client monthly and adjust medicine dosage as necessary
5. Align TPT appointment date with other clinic visits

OVERVIEW OF TUBERCULOSIS

Sessions	Components
4.1	Overview of NTBLCP
4.2	Identification of Presumptive TB case (Probable/Suspected)
4.3	Discussions on completing Clinic Register for Presumptive TB Cases
4.4	Classifying the TB Patient
4.5	Administering TB Treatment (Determining Appropriate Treatment for TB)
4.6	**Monitoring of TB treatment**
4.7	Case Holding and Management of Treatment Interruption
4.8	Management of TB Complications
4.9	Recording and Reporting in TB Control
4.10	Recording and Reporting in TB Control

Learning Objectives

At the end of this session, Participants will be able to;

1. Discuss how and when to monitor TB treatment
2. Record drug intake/collection in the TB treatment and appointment card during treatment
3. Record follow up sputum examination results and act appropriately
4. Define treatment interruption and take appropriate action

IMPORTANCE OF MONITORING



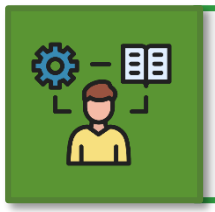
To cure the patient of TB and prevent death from active disease or its complications



To prevent transmission of TB to others



To prevent emergence of Multi Drug Resistant-TB and other forms of drug resistant-TB



To prevent relapse

IMPORTANCE OF MONITORING

Monitoring progress of a tuberculosis patient while on treatment is an essential part of the case management.

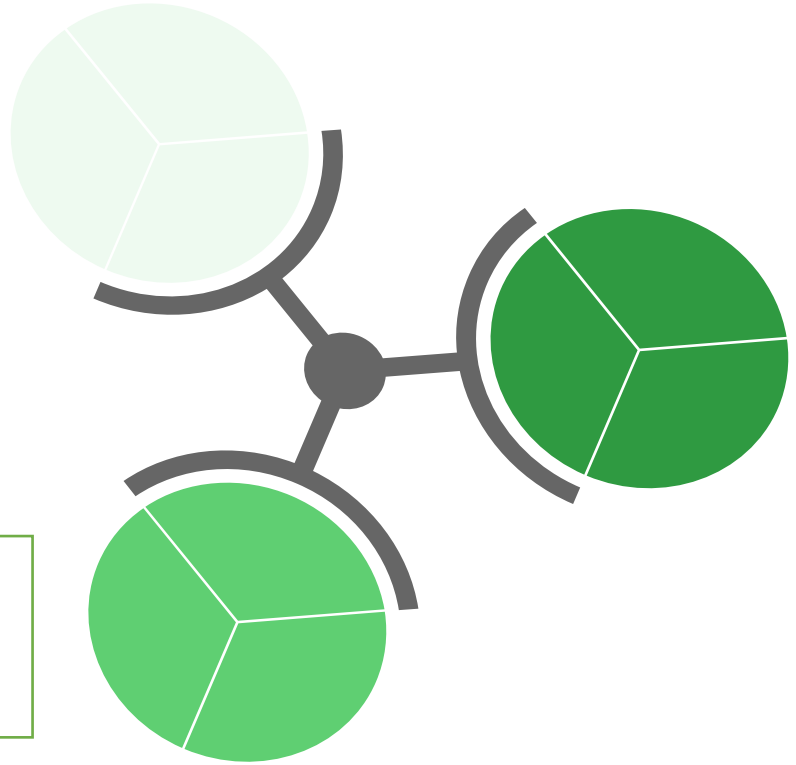
This is to ascertain the effectiveness of treatment in killing M. Tuberculosis as well as assessing improvement in the patient's clinical state



METHODS OF MONITORING

Monitoring is done through the following methods;

Clinical assessment: This involves regular clinical assessment including weight assessment



Drug intake: This is done through assessment of patient's records for regularity

AFB microscopy: It involves looking for AFB in sputum at specified intervals

CLINICAL ASSESSMENT

Most TB patients will start to show signs of improvement after 2 to 4 weeks of anti-TB treatment. However few patients may not improve and would show the below signs and symptoms

No symptom resolution, or symptoms are getting worse, Continuous weight loss



FOLLOW UP USING DRUG INTAKE

Follow up

Phase 1

- Ensure that patient drug records are regularly updated to avoid treatment interruption and to allow for proper follow up

Phase 2

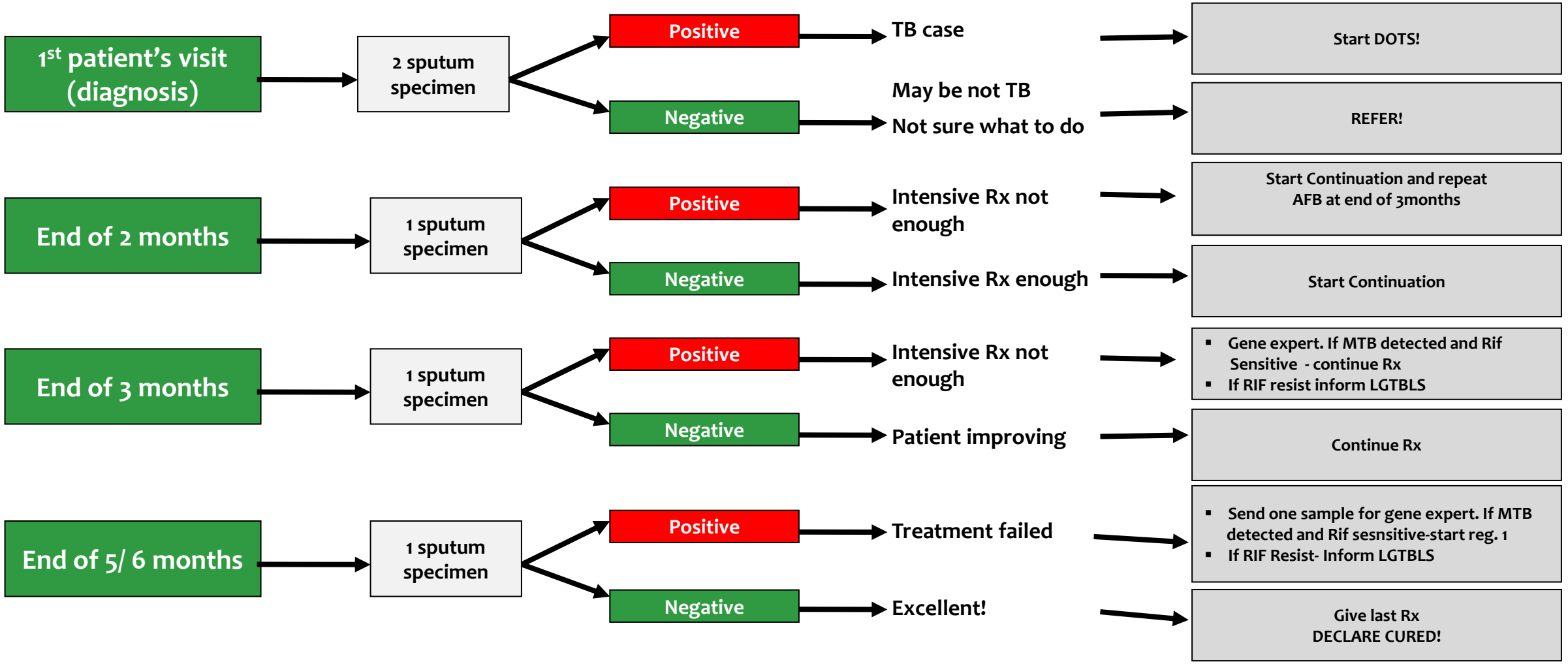
- Ensure that patient treatment card is updated during each patient visit.
- Indicate on the treatment card whether DOT was observed or whether patient missed their drugs while at home

Key messages

1. All sputum samples are to be collected one week prior to the end of the month specified above

2. If a patient can no longer produce sputum, but produces saliva instead, the laboratory should examine these materials for AFB

TREATMENT PROCESS



OVERVIEW OF TUBERCULOSIS

Sessions	Components
4.1	Overview of NTBLCP
4.2	Identification of Presumptive TB case (Probable/Suspected)
4.3	Discussions on completing Clinic Register for Presumptive TB Cases
4.4	Classifying the TB Patient
4.5	Administering TB Treatment (Determining Appropriate Treatment for TB)
4.6	Monitoring of TB treatment
4.7	**Case Holding and Management of Treatment Interruption**
4.8	Management of TB Complications
4.9	Recording and Reporting in TB Control
4.10	Recording and Reporting in TB Control

Learning Objectives

At the end of this session, Participants will be able to;

1. Case Holding
2. Management of treatment interruption

CASE HOLDING AND MANAGEMENT OF TREATMENT INTERRUPTION (1/2)

Case holding and management	▪ Health Workers should do all that is humanly possible to ensure that patients complete treatment in the required time ▪ Adherence to treatment of every patient is absolutely essential in order to cure the patient and prevent Multiple Drug Resistant TB (MDR TB)
Treatment interruption	▪ Any TB patient who has not come to receive his/her treatment for two consecutive days either in the intensive or continuation phase should be regarded as having interrupted treatment and therefore be trackeded
Interruption for 1 – 2 months	▪ Trace patient ▪ Find out the cause of interruption ▪ Counsel on the essence or importance of adhering to treatment ▪ Solve the cause of interruption where possible ▪ Continue treatment and prolong it to compensate for missed doses ▪ Do 2 sputum smears ▪ Continue treatment while you wait for results

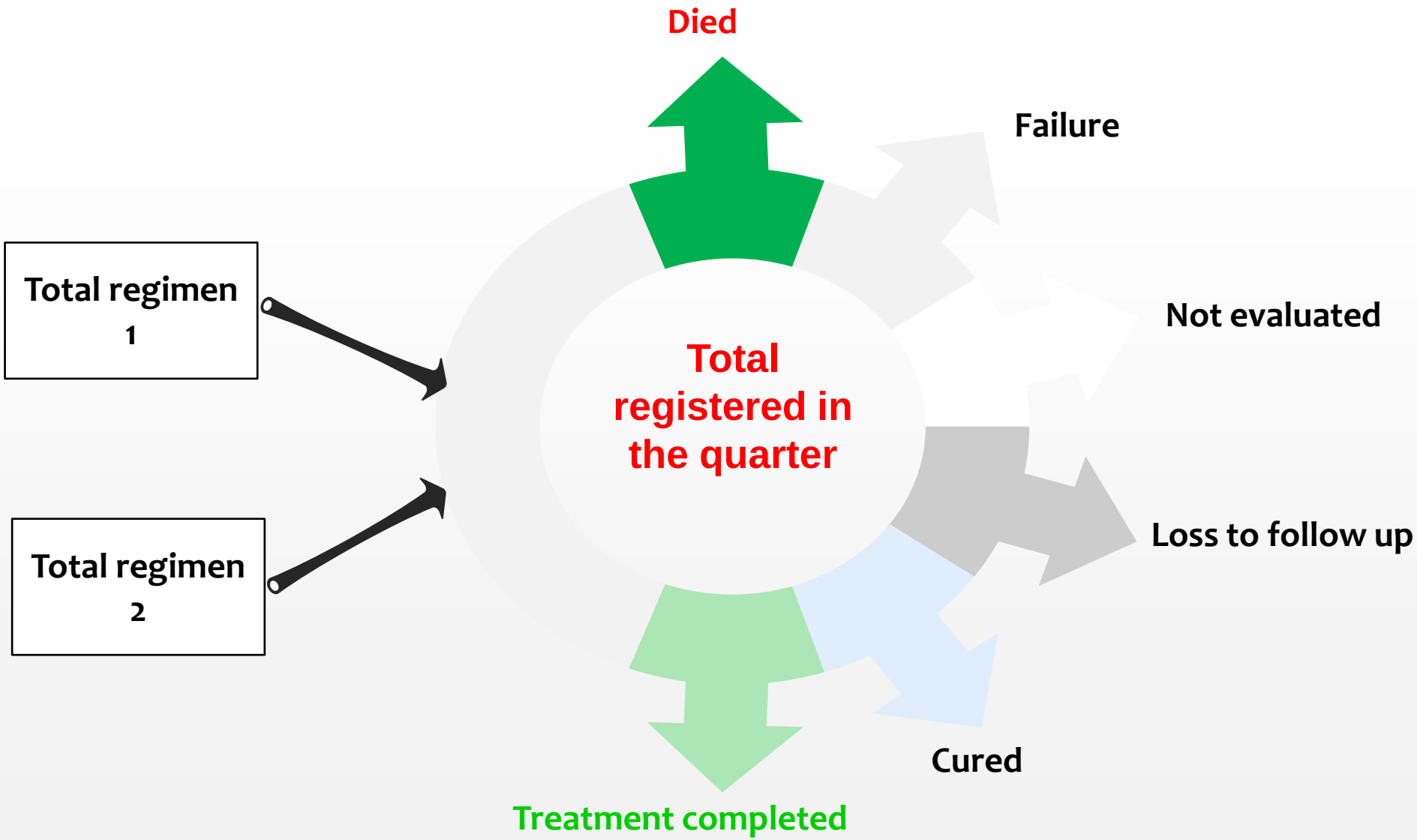
CASE HOLDING AND MANAGEMENT OF TREATMENT INTERRUPTION (2/2)

Interruption for more than 2 months	▪ Trace patient ▪ Find out the cause of interruption ▪ Counsel on the essence or importance of adhering to treatment ▪ Solve the cause of interruption where possible ▪ Continue treatment and prolong it to compensate for missed doses ▪ Do 2 sputum smears ▪ No treatment while you wait for results

SOP on management of patients who interrupt treatment

Length of interruption	Do a smear?	Result of smear	Length of treatment	Action to be taken
< 1 month	No	No	*N/A*	▪ Continue Rx and prolong to compensate for missed doses
1-2 months	Yes (2 samples)	Negative or EPTB	*N/A*	▪ Continue Rx and prolong to compensate for missed doses
		If 1 or more positive	< 5 months	▪ Continue Rx and prolong to compensate for missed doses
			>5 months	▪ Collect and send sample for GeneXpert MTB/RIF ▪ Treat patient according to GeneXpert MTB/RIF result.
2 or more months	Yes (2 samples)	Negative or EPTB	*N/A*	▪ Clinical decision on individual basis whether to restart or continue treatment, or no further treatment
		If 1 or more positive	*N/A*	▪ Collect and send sample for GeneXpert MTB/RIF ▪ Treat patient according to GeneXpert MTB/RIF result.

TREATMENT OUTCOME



Key messages

1. Case holding and management of treatment interruption affects treatment outcome

2. Use of SOP for management of patients who defaults is very important

OVERVIEW OF TUBERCULOSIS

Sessions	Components
4.1	Overview of NTBLCP
4.2	Identification of Presumptive TB case (Probable/Suspected)
4.3	Discussions on completing Clinic Register for Presumptive TB Cases
4.4	Classifying the TB Patient
4.5	Administering TB Treatment (Determining Appropriate Treatment for TB)
4.6	Monitoring of TB treatment
4.7	Case Holding and Management of Treatment Interruption
4.8	**Management of TB Complications**
4.9	Recording and Reporting in TB Control
4.10	Recording and Reporting in TB Control

Learning Objectives

At the end of this session, Participants will be able to;

1. Recognize the signs and symptoms of TB complication
2. Recognize the common side effects of anti TB drugs and when to stop treatment
3. Take appropriate action for TB complication and common side effect of drugs

COMPLICATIONS OF TUBERCULOSIS AND ACTIONS TO TAKE

Coughing Blood (Haemoptysis)	▪ Reassure the patient ▪ Record the volume of blood ▪ Refer to the nearest hospital urgently, if frequent or the amount is plenty ▪ If facilities are available, determine the blood group
Spontaneous Pneumothorax (sudden shortness of breath)	▪ Refer urgently
Pleural Effusion	▪ Refer urgently
Corpumonale	▪ Refer urgently
Destructive lung disease (Breathlessness on effort despite anti-tuberculosis treatment)	▪ Refer urgently

Symptom-based approach to managing major side effects of R, H, Z and E

Side effects	Drug(s) probably responsible	Management
Skin rash with or without itching	H,R,Z	Stop anti-TB drugs and refer to the Medical Officer
Jaundice (other causes excluded), hepatitis	H,Z,R	Stop anti-TB drugs and refer to the Medical Officer
Visual impairment (other causes excluded)	E	Stop ethambutol and refer to the Medical Officer
Shock, purpura, acute renal failure	R	Stop rifampicin and refer to the Medical Officer

Major side effects: Stop responsible drug(s) and refer to clinician urgently

Symptom-based approach to managing minor side effects of R, H, Z and E

Side effects	Drug(s) probably responsible	Management
Anorexia, nausea, abdominal pain	Z,R,H	Give drugs with small meals or just before bedtime;
Joint pains	Z	Advise patient to swallow pills slowly with small sips of water; If symptoms persist or worsen, refer to hospital
Burning/numbness in the hands/ feet	H	Non-steroidal anti- inflammatory (e.g. Ibrufen) or paracetamol
Orange/red urine	R	Pyridoxine 50 -100mg daily
Drowsiness	H	Reassure, counsel patients before starting treatment, encourage increase fluid intake.
Flu syndrome (fever, chills, malaise, headaches, bone pains)	**Intermittent dosing of Rifampicin**	Change intermittent to daily rifampicin administration (Intermittent doing is not use in Nigeria)

Minor side effects: Continue anti-TB drugs, check doses

Key messages

1. Refer all patients with complication to Medical officer

OVERVIEW OF TUBERCULOSIS

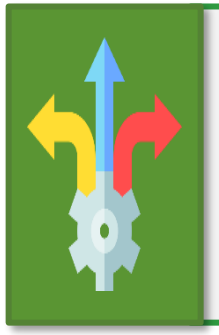
Sessions	Components
4.1	Overview of NTBLCP
4.2	Identification of Presumptive TB case (Probable/Suspected)
4.3	Discussions on completing Clinic Register for Presumptive TB Cases
4.4	Classifying the TB Patient
4.5	Administering TB Treatment (Determining Appropriate Treatment for TB)
4.6	Monitoring of TB treatment
4.7	Case Holding and Management of Treatment Interruption
4.8	Management of TB Complications
4.9	**Recording and Reporting in TB Control**
4.10	Recording and Reporting in TB Control

Learning Objectives

At the end of this session, Participants will be able to;

1. Develop a good and systematic recording and reporting format
2. Be acquainted with using the TB recording forms

INTRODUCTION



It is essential for the successful control of tuberculosis that there must be good and systematic recording and reporting



The following recording forms must be completely filled by facility health care workers

CORE PACKAGE FOR R & R AT FACILITY LEVEL (1/2)

	Register and Forms	Content and Purpose
1	Tuberculosis clinic sputum register	▪ This register is placed at the clinic and filled when suspects or their sputa are sent to the laboratory for diagnosis or follow up examination
2	Sputum Examination Request/Report Form (TB 05)	▪ Request for AFB microscopy to laboratory with report of results to requesting unit
3	Laboratory sputum results despatch register	▪ N/A
4	Culture & Susceptibility Test Request/Report Form (TB 06)	▪ Request for TB culture/susceptibility to laboratory with report of results to requesting unit
5	TB Laboratory Register (TB 04)	▪ Record of each AFB microscopy examination at laboratory
6	Treatment Card (TB 01)	▪ Individual record of diagnosis, treatment and follow-up of each TB patient for proper case management at treatment unit

CORE PACKAGE FOR R & R AT FACILITY LEVEL (1/2)

	Register and Forms	Content and Purpose
1	Appointment Card (TB 02)	▪ Personal record of diagnosis, treatment and follow-up for information to the TB patient especially when undergoing DOT under a treatment supporter in the community
2	TB facility register	▪ Record of diagnosis, treatment and follow-up of each TB patient in the district or equivalent catchment area
3	Child INH prophylaxis card	▪ Personal record of child and appointment information for follow up
4	Child INH prophylaxis register	▪ N/A
5	Defaulter tracing form	▪ Completed by health worker charged with tracing patients who interrupted or defaulted from treatment
6	Referral/Transfer Form (TB 09)	▪ Form to refer/transfer TB patient to other unit

HIV/AIDS INFORMATION ON TB REPORTING FORMS/REGISTERS

Additional information that will have to be captured in TB recording and reporting forms:

- Offered HIV test
- Counselled and tested
- Test result positive/negative
- Given cotrimoxazole
- Referred for HIV care and support
- Given ART during or at end of ART treatment



HIV/AIDS INFORMATION ON TB REPORTING FORMS/REGISTER

Response



Main Issue:

Confidentiality of HIV test results in the TB register

1. The TB register already contains confidential patient information which should be treated with the same level of confidentiality as HIV results

2. The solution is not to hide HIV results but rather to improve the confidentiality of the TB/ register

TREATMENT OUTCOME

Within the NTBLCP the outcome of all smear-positive cases (both on cat. 1 and Cat. 2.) are evaluated in the quarterly "Tuberculosis Cohort Report"

The LGTBLS has to ensure that S/he obtains the outcome of every patient, including those that were referred to another health facility if possible

Cured

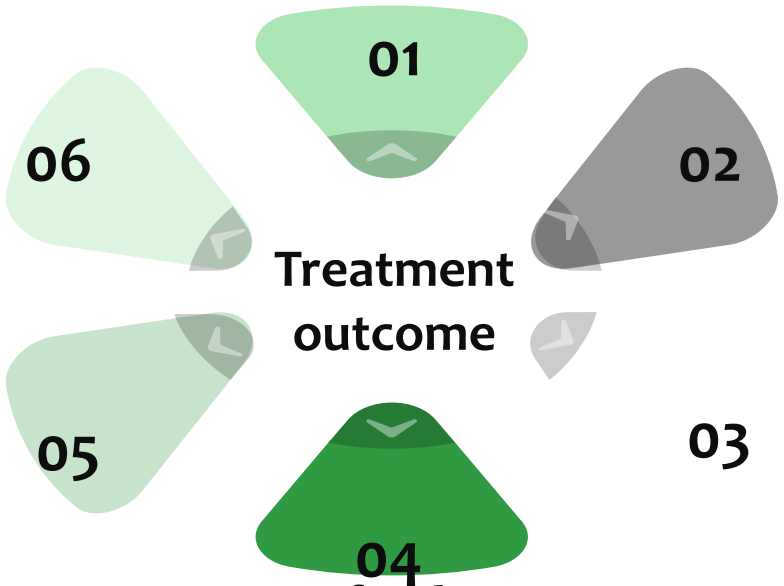
A patient who was smear-positive at diagnosis, who completed 8 months of treatment and who is smear-negative at the end of 7th month of treatment and at least one previous occasion

Treatment completed

- Patients who were smear-positive at diagnosis and who completed treatment but in whom smear examination results are not available at the end of treatment.
- All smear-negative and extra-pulmonary patients who completed treatment

Treatment failure

Any patient who remains or becomes smear positive again at the end of fifth month or later during chemotherapy



Died

\Any patient who dies for any reason during the course of his/her chemotherapy

Transferred out

A patient who has been transferred to another treatment center in another State and whose treatment result is not known. Note: 'transferred out' is not allowed within the same state; rather the patient can be referred to another LGA and his treatment outcome obtained during the quarterly supervisors meeting

Defaulter

Any patient who has interrupted for 8 consecutive weeks or more after the date of the last attendance during the course of treatment.

Key messages

1. Record keeping is very important in Tuberculosis management

2. Treatment outcomes are **Died, Defaulter and Transferred out**

OVERVIEW OF TUBERCULOSIS

Sessions	Components
4.1	Overview of NTBLCP
4.2	Identification of Presumptive TB case (Probable/Suspected)
4.3	Discussions on completing Clinic Register for Presumptive TB Cases
4.4	Classifying the TB Patient
4.5	Administering TB Treatment (Determining Appropriate Treatment for TB)
4.6	Monitoring of TB treatment
4.7	Case Holding and Management of Treatment Interruption
4.8	Management of TB Complications
4.9	Recording and Reporting in TB Control
4.10	**Recording and Reporting in TB Control**

Learning Objectives

At the end of this session, Participants will be able to;

1. Explain the interaction between TB and HIV in simple terms
2. Describe the intervention/services accessible to TB and HIV patients
3. Use the flow chat for TB/HIV collaborative services

INTRODUCTION

We cannot win the battle against AIDS if we do not also fight TB.

TB is too often a death sentence for people with AIDS. “

Nelson Mandela



BASIC INFORMATION ON HIV:

01

HIV can be transmitted through:

- Unprotected sexual intercourse
- Transfusion with infected blood and blood products
- Use of unsterilized sharps

02

HIV transmission can be prevented through:

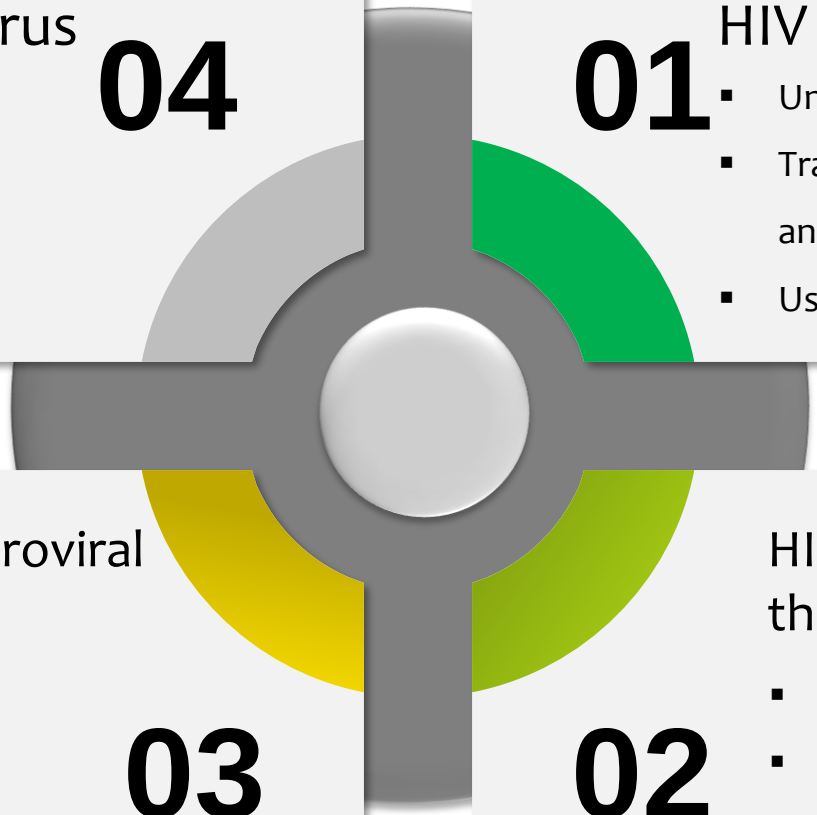
- A- Abstinence
- B- Being faithful
- C- Condom

03

HIV can be managed with anti retroviral drugs

04

HIV is caused by a virus



INTERACTION BETWEEN HIV AND TB

01 Infection with HIV leads to progressive destruction of the body's immune system. Therefore persons who are infected with HIV are more prone to TB disease either through activation of latent TB infection or progression of new TB infection to disease

02 Most HIV patients with TB often present with atypical TB symptoms and are particularly associated with an increased number of smear-negative PTB and EPTB cases.

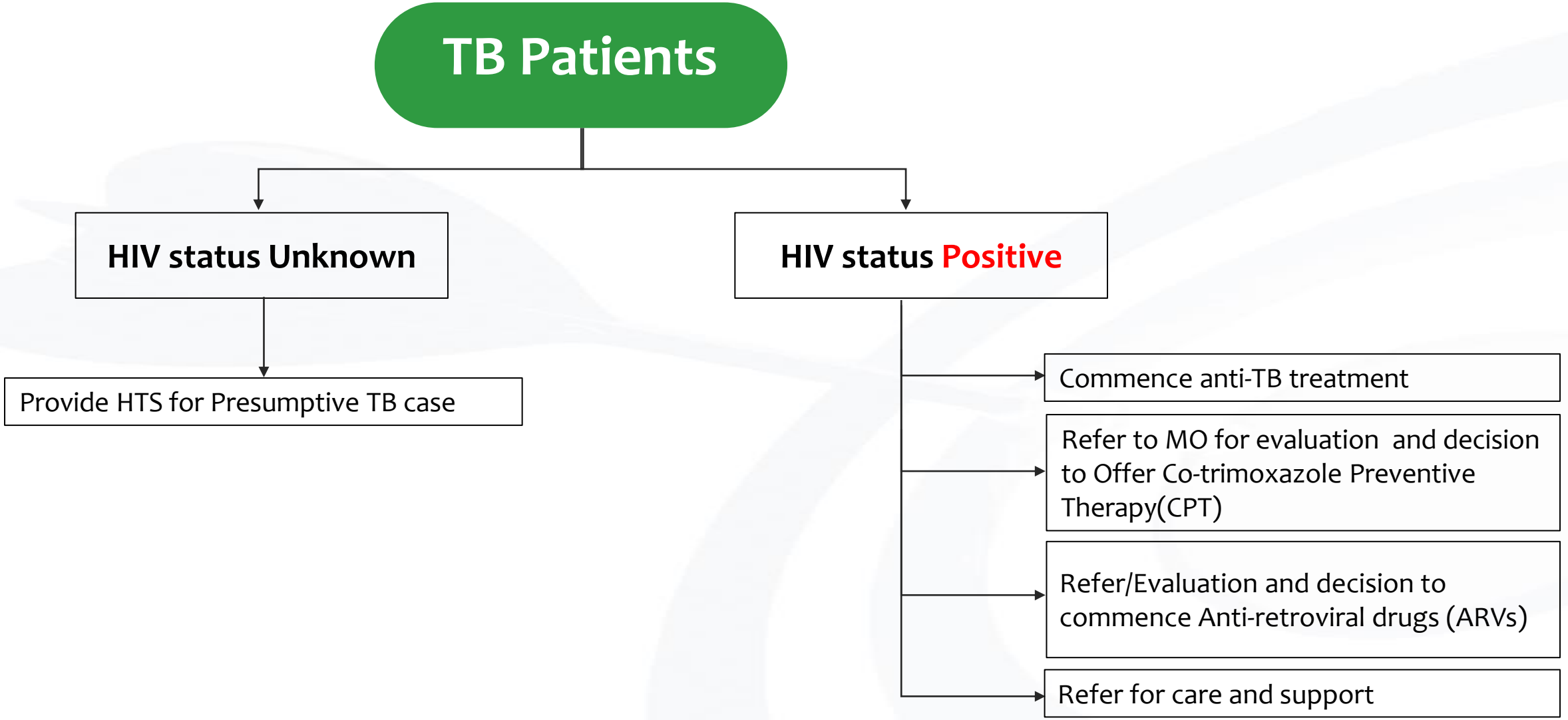
03 When HIV-positive patients develop PTB, the number of bacilli present in the sputum is fewer than in HIV-negative patients. This makes diagnosis by conventional sputum microscopy difficult among this group of patients

04 Most HIV patients with TB often present with atypical TB symptoms and are particularly associated with an increased number of smear-negative PTB and EPTB cases

05 When HIV-positive patients develop PTB, the number of bacilli present in the sputum is fewer than in HIV-negative patients. This makes diagnosis by conventional sputum microscopy difficult among this group of patients

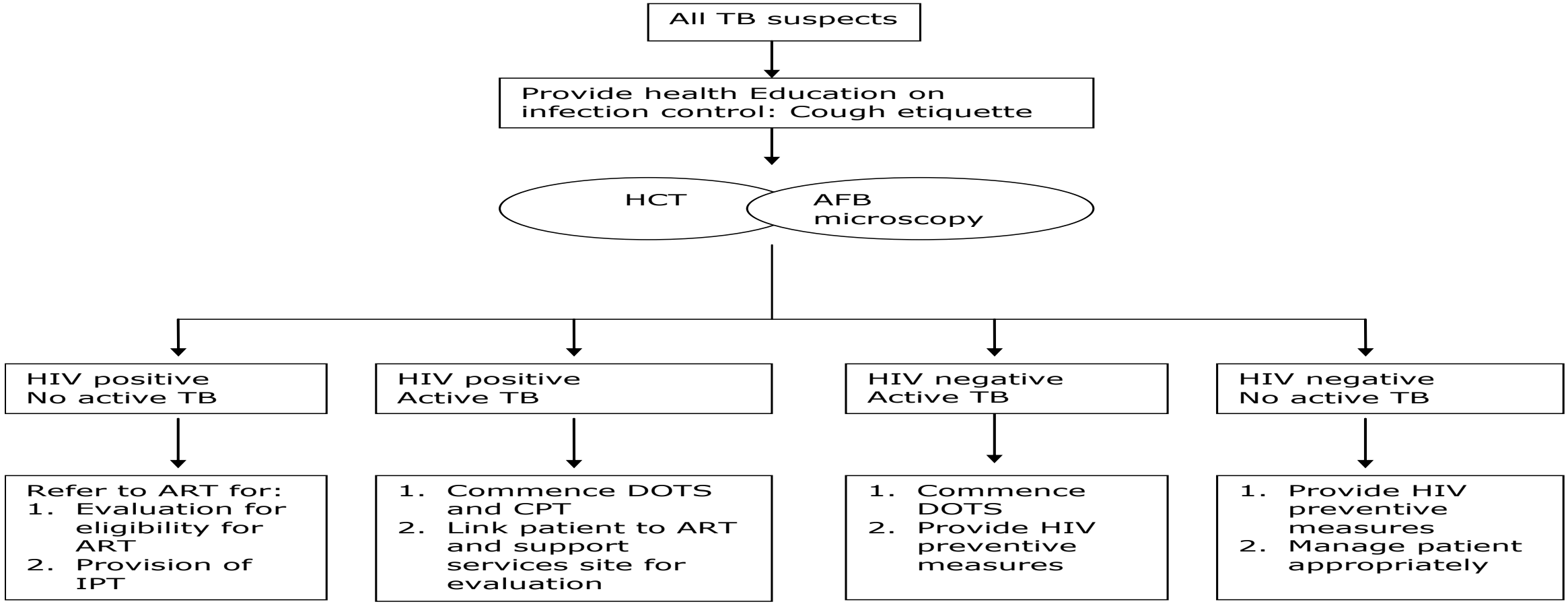
06 Furthermore, studies have shown that up to 17% of new TB cases are acquired from smear-negative cases; therefore it is important to identify and treat smear-negative cases early in order to break the cycle of TB transmission in the community and health facilities

SERVICES FOR CONFIRMED TB CASE:

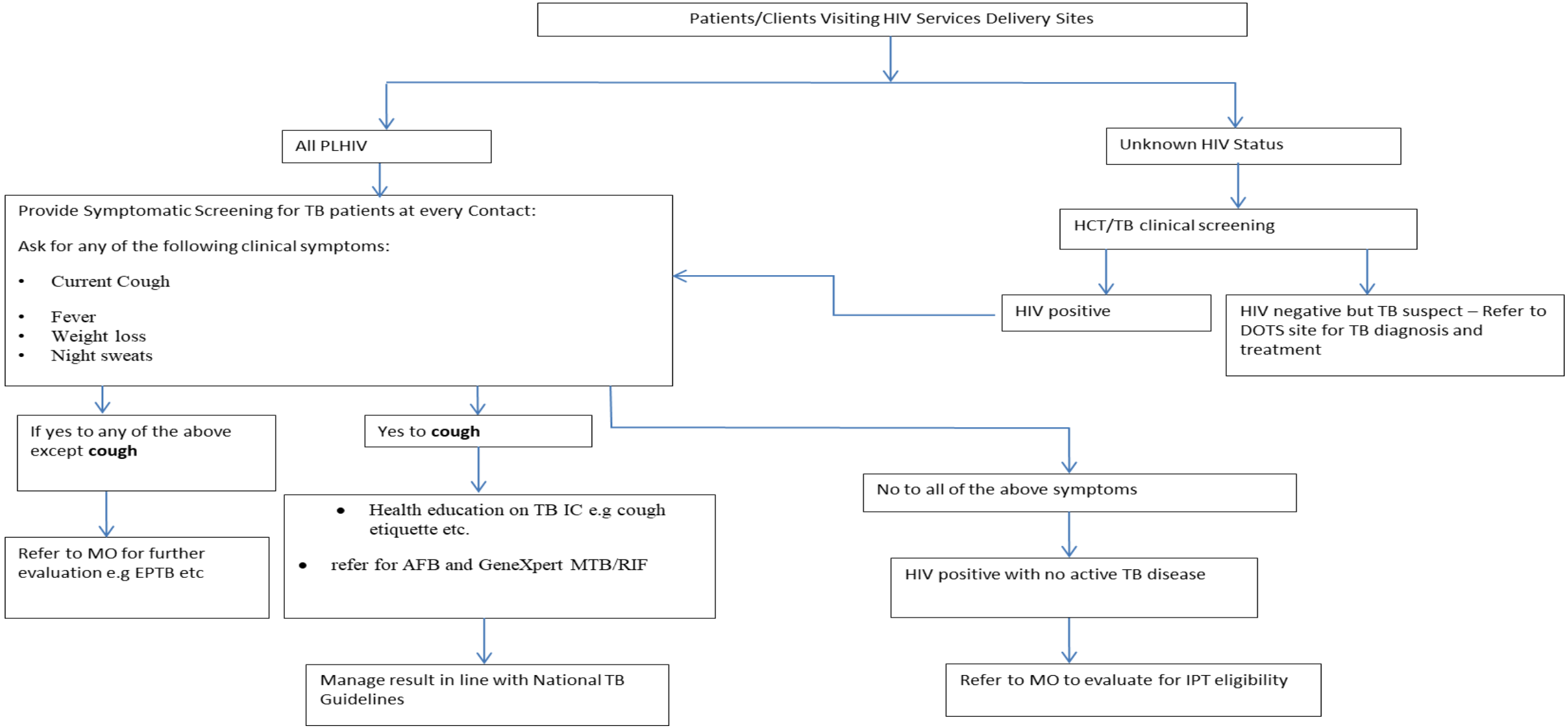


SERVICES FOR CONFIRMED TB CASE:

Use the chart below as a guide:



SERVICES FOR CONFIRMED TB CASE:



INTRODUCTION

"The world has made defeating AIDS a top priority. This is a blessing. But TB remains ignored. Today we are calling on the world to recognize that we can't fight AIDS unless we do much more to fight TB as well"

Nelson Mandela

Bangkok, 2004




Thank
you