



Published on *AIDSFree* (<https://aidsfree.usaid.gov>)

[Home](#) > [Resources](#) > [AIDSFree Guidance Database](#) > [TB Guidance Database](#) >

---

## Malawi

The following provides a summary of specific guidelines from the country's national TB guidance strategy. Use the jump links in yellow to access details on case definitions, diagnostic methods, standard protocols, and DOTS recommendations. This summary can be downloaded or e-mailed to yourself or a colleague. The original country guidance document can also be found below the jump links for download.

**Patient Population** [Download summary page as PDF](#) [E-mail this page](#)

### Suggest Updates

- [Adults](#)
- [Children & Infants](#)

### Adults

### Year Issued:

2007

### TB Screening Frequency for PLHIV:

#### Active TB case finding in HIV testing and counselling clinics

Up to 10% of HIV-infected individuals have active tuberculosis when first seeking knowledge of their HIV status. Symptomatic screening detects most, but not all, active TB cases. TB culture and not chest X-rays seems to add substantially to sensitivity and specificity. Every opportunity should be taken to screen HIV-infected individuals for active TB, just as every patient with tuberculosis should be screened for HIV.

In settings where both infections (TB and HIV) are common and occur in the same individuals, the number of cases of TB increases due to the increased risk of development of active TB. In 2003, it was reported that tuberculosis incidence was 8.3 times higher in HIV-positive than HIV-negative African population. In Africa, HIV prevalence in tuberculosis is 38% while in Malawi, about 70% of TB patients are HIV-seropositive. The increased numbers of TB cases will lead to an increase in the transmission of TB micro organisms in the community. To reduce this excess transmission, it is imperative to rapidly identify and treat all infectious cases of TB.

### Screening Recommendations during TB Treatment:

All smear-positive patients must have follow-up sputum smear examination at 2 and 5 months.

### Case definition:

A tuberculosis 'case' is a patient who has been reliably diagnosed with TB.

Cases are classified into those with Pulmonary TB (either smear-positive or smear-negative) and those with Extrapulmonary TB. The patient with smear positive TB is very important in tuberculosis control because he/she is the main source of infection. Such persons need to be diagnosed as early as possible and treated effectively to cure them and prevent a further spread of the disease to other members of the community.

### Standardized TB Case Definition

Site of Disease: If a patient has both pulmonary and extrapulmonary disease, then he/she is classified as having pulmonary disease. If a patient has extra-pulmonary disease in several sites, then the site representing the most severe form of disease is the one used for the case definition. For example, a patient with lymphadenopathy and pericardial effusion would be defined as pericardial effusion.

## **Diagnostic methods:**

Diagnosis of pulmonary tuberculosis depends on the identification of the tubercle bacilli either by sputum smear microscopy or by culture.

Direct sputum smear examination should be done on all tuberculosis suspects, especially in patients having a cough lasting for more than three weeks. In high risk institutions where people are crowded together, for example prisons, patients coughing for more than one week should submit sputum specimens for smear microscopy.

Health institutions without microscopy facilities should, if possible, send sputum specimens or fixed slides rather than tuberculosis suspects to microscopy centres. A maximum of three sputum smears needed to be done on each tuberculosis suspect.

Chest X-ray findings suggestive of pulmonary tuberculosis in patients with smear-negative microscopy should always be supported by clinical findings and an experienced medical/clinical officer should decide on the actual diagnosis. Chest X-ray appearances alone do not always indicate pulmonary tuberculosis.

Collection of sputum specimens from TB suspects Whenever tuberculosis is suspected, three sputum specimens should be collected and sent for direct microscopy whenever, possible within a period of 7 days. These should be collected within 24 hours;

## **Standard TB Treatment Protocols:**

### **Treatment Regimens in New Adults with TB (Active)**

2RHZE/4RH

*Initial intensive phase:* In district and CHAM hospitals newly diagnosed TB patients are admitted for two weeks in hospital where they receive daily treatment. The remaining six weeks of the intensive phase is taken daily either in hospital or in the community according to the patient's DOT option. The DOT options are either hospital, Health centre, guardian or community member supervision. In central hospitals, patients are started on ambulatory treatment depending on the condition of the patient from the first day, but treatment is on daily basis just like the district hospitals.

*Continuation phase:* Patients take supervised drugs which they collect from the nearest health facilities every fortnight.

### **Treatment Regimens for Patients Previously Treated for TB**

(for Relapse, Return after default, Treatment failure and Recurrent Tuberculosis.)

2SRHZE/1RHZE/5RHE

This regimen consists of two months of daily streptomycin, rifampicin, isoniazid, pyrazinamide and ethambutol given under supervision, one month of daily rifampicin, isoniazid, pyrazinamide and ethambutol given under supervision followed by five months of daily rifampicin, isoniazid and ethambutol given under supervision.

NB:-

Sputum positive cases that have previously taken anti-tuberculosis drugs for one month or more must be suspected of discharging tubercle bacilli resistant to one or more anti-TB drugs. These patients must submit sputum specimens for drug sensitivity testing before starting the re-treatment regimen.

Two-Month Sputum Smear Examination:

When 8 weeks of initial phase of treatment are completed, two activities take place:

First, all patients are changed to the continuation phase of treatment, i.e. daily RH.

Second, patients with smear-positive PTB submit two sputum specimens for microscopy. Guardian-based patients will be given a sputum container when given their last 2 weeks supply of drugs. The patient must return to the health centre at the end of the initial phase with a filled sputum container and must give a second on the spot sputum at this visit.

- If the 2-months sputum results are negative the patient stays on continuation phase (Daily RH).
- If the 2-months sputum results are positive, the patient is contacted and re-admitted to hospital. The patient stays on continuation phase and if a week has passed the patient submits another sputum sample.

If the second 2-months sputum is negative, the patient stays on continuation phase and gets discharged home.

- If the result is positive, the patient is changed to daily RHZE. This is continued with the patient admitted in hospital.
- Repeat sputum smears are checked at weekly intervals.
- If the sputum result becomes negative the patient is discharged to continuation phase.
- If the sputum result is still positive, the patient continues on daily RHZE for a total of 4 weeks at which point the patient is changed to daily RH. At this point, take sputum for culture and sensitivity in two universal containers and discharge the patient.
- Remember to check sputum at 5 months: if still positive collect another sputum sample for culture and sensitivity and the patient started on re-treatment as a treatment failure."

## **DOTS Recommendations:**

Directly observed treatment is one element of the DOTS strategy, i.e. the WHO recommended policy package for TB control. Direct observation of treatment means that a supervisor watches the patient swallowing the tablets. This ensures that the TB patient takes the right drugs, in the right doses, at the right intervals.

Supervisors are usually health workers, but in the context of decentralisation of care in Malawi, supervisors may also be guardians or community members.

## **Children & Infants**

## **Year Issued:**

2007

## **TB Screening Frequency for PLHIV:**

Diagnosis of pulmonary tuberculosis depends on the identification of the tubercle bacilli either by sputum smear microscopy or by culture. Direct sputum smear examination should be done on all tuberculosis suspects, especially in patients having a cough lasting for more than three weeks. In high risk institutions where people are crowded together, for example prisons, patients coughing for more than one week should submit sputum specimens for smear microscopy.

Health institutions without microscopy facilities should, if possible, send sputum specimens or fixed slides rather than tuberculosis suspects to microscopy centres. A maximum of three sputum smears needed to be done on each tuberculosis suspect.

Chest X-ray findings suggestive of pulmonary tuberculosis in patients with smear-negative microscopy should always be supported by clinical findings and an experienced medical/clinical officer should decide on the actual diagnosis. Chest X-ray appearances alone do not always indicate pulmonary tuberculosis. One area in which X-ray and clinical information are of even greater importance is the diagnosis of pulmonary tuberculosis in children.

## **Screening Recommendations during TB Treatment:**

Children below 5 years:

All children should be screened. Screening depends on facilities, but ideally children should be assessed clinically, receive a tuberculin test and undergo a chest x-ray. If there is no evidence of active TB, the child should receive isoniazid preventive therapy (5 mg/kg daily for 6 months). If the child is diagnosed with TB, the child should be registered and treated for TB according to the NTP guidelines.

## **Diagnostic methods:**

Recommended approach to diagnose TB in children includes:

1. Careful history including history of TB contact and symptoms consistent with TB
2. Clinical examination including growth assessment
3. Tuberculin skin test
4. Sputum microscopy when possible (especially in older children)
5. HIV test

Important risk factors for TB infection in children are close contact with a recently diagnosed sputum smear-positive case and for TB disease are young age of under 5 years, HIV infection and severe malnutrition.

The presence of 3 or more of the following should strongly suggest a diagnosis of TB:

- chronic symptoms suggestive of TB e.g. cough, weight loss, fatigue, fever
- physical signs highly suggestive of TB
- positive tuberculin skin test
- chest X-ray suggestive of TB

## **Standard TB Treatment Protocols:**

Treatment Regimens in New Children & Infants with TB

2RHZE/4RH

Initial intensive phase: In district and CHAM hospitals newly diagnosed TB patients are admitted for two weeks in hospital where they receive daily treatment. The remaining six weeks of the intensive phase is taken daily either in hospital or in the community according to the patient's DOT option. The DOT options are either hospital, Health centre, guardian or community member supervision. In central hospitals, patients are started on ambulatory treatment depending on the condition of the patient from the first day, but treatment is on daily basis just like the district hospitals.

Continuation phase: Patients take supervised drugs which they collect from the nearest health facilities every fortnight.

## Treatment Regimens for Patients Previously Treated for TB (for Relapse, Return after default, Treatment failure and Recurrent Tuberculosis.)

### 2SRHZE/1RHZE/5RHE

This regimen consists of two months of daily streptomycin, rifampicin, isoniazid, pyrazinamide and ethambutol given under supervision, one month of daily rifampicin, isoniazid, pyrazinamide and ethambutol given under supervision followed by five months of daily rifampicin, isoniazid and ethambutol given under supervision.

#### NB:-

Sputum positive cases that have previously taken anti-tuberculosis drugs for one month or more must be suspected of discharging tubercle bacilli resistant to one or more anti-TB drugs. These patients must submit sputum specimens for drug sensitivity testing before starting the re-treatment regimen.

#### Two-Month Sputum Smear Examination:

When 8 weeks of initial phase of treatment are completed, two activities take place:

First, all patients are changed to the continuation phase of treatment, i.e. daily RH.

Second, patients with smear-positive PTB submit two sputum specimens for microscopy. Guardian-based patients will be given a sputum container when given their last 2 weeks supply of drugs. The patient must return to the health centre at the end of the initial phase with a filled sputum container and must give a second on the spot sputum at this visit.

- If the 2-months sputum results are negative the patient stays on continuation phase (Daily RH).
- If the 2-months sputum results are positive, the patient is contacted and re-admitted to hospital. The patient stays on continuation phase and if a week has passed the patient submits another sputum sample.

If the second 2-months sputum is negative, the patient stays on continuation phase and gets discharged home.

- If the result is positive, the patient is changed to daily RHZE. This is continued with the patient admitted in hospital.
- Repeat sputum smears are checked at weekly intervals.
- If the sputum result becomes negative the patient is discharged to continuation phase.
- If the sputum result is still positive, the patient continues on daily RHZE for a total of 4 weeks at which point the patient is changed to daily RH. At this point, take sputum for culture and sensitivity in two universal containers and discharge the patient.
- Remember to check sputum at 5 months: if still positive collect another sputum sample for culture and sensitivity and the patient started on re-treatment as a treatment failure.

-----

## Management of Household Contacts of Smear-Positive TB Cases in Children & Infants

### Children aged 5 years and over:

If symptoms are present they should be investigated for tuberculosis and treated if tuberculosis is present. However, the NTP is advocating for active case finding for all household members.

### Children below 5 years:

All children should be screened. Screening depends on facilities, but ideally children should be assessed clinically, receive a tuberculin test and undergo a chest x-ray. If there is no evidence of active TB, the child

should receive isoniazid preventive therapy (5 mg / kg daily for 6 months). If the child is diagnosed with TB, the child should be registered and treated for TB according to the NTP guidelines.

Note: Children who are household contacts of smear-positive TB cases should be assessed even if tuberculin test and chest x-ray are not available. If the child is well and less than 5 years, he receives isoniazid preventive therapy. If a child contact of any age has symptoms suggestive of TB, he or she must be referred for further assessment.

## **Alternatives:**

BCG Vaccination is an intradermal injection to a population which is considered to be essentially non-infected (children) to protect them from developing Tuberculosis. BCG is given as early as possible in life preferably at birth.

Dosage:

For children under one year of age, 0.05ml is the accepted dosage. Children aged one year or more are injected with 0.1ml.

---

**Source URL:** <https://aidsfree.usaid.gov/resources/guidance-data/tb/malawi>