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Swaziland

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.

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Pregnant and Breastfeeding Women

Year Issued:

2012

TB Screening Frequency for PLHIV:

Patients receiving any HIV care including ART should be continuously screened for TB using the standard screening tool, and if positive should be properly investigated to establish TB diagnosis.

Screening Recommendations during TB Treatment:

New sputum smear-positive pulmonary TB patients:

Follow up sputum smears should be performed at the end of the second and fifth months, and in the last month of treatment.

- If the sputum smear result is positive at the end of the second (2nd) month, a DST should be performed immediately, and treatment should be modified based on the results. A rapid DST method e.g the LPA should be used.
- The intensive phase should be extended by up to one (1) month while results of DST is being awaited for further treatment decisions.
- If the sputum smear result is still positive at the end of the fifth (5th) month, this constitutes treatment failure. The treatment should be discontinued, and the patient's sputum sample should be obtained for culture and drug susceptibility testing. A rapid DST method e.g the LPA should be used, and full DST requested immediately.

Previously treated pulmonary sputum smear-positive patients:

- Sputum smear examination is performed at the end of the initial phase of treatment (at the end of the third month), at the end of the fifth month; and at the end of treatment. If the patient is sputum smear-positive at the end of the third month, the initial phase of treatment with 4 drugs, a rapid DST method e.g the LPA should be used, and full DST should be requested immediately.
- Treatment should be modified based on the DST results. The intensive phase should be extended by up to one (1) month while results of DST is being awaited for further treatment decisions. Positive

smears at the end of the fifth (5th) month indicate failure of treatment and, the patient should have their sputum examined by culture and DST. Treatment should be guided by the results of DST.

New sputum smear-negative pulmonary TB patients:

Sputum smear-negative patients should be monitored clinically; body weight is a useful progress. Sputum smears should be checked at the end of the second month in case of the following possibilities:

- disease progress due to non-adherence to treatment, or
- an error at the time of initial diagnosis (i.e. a true smear-positive patient misdiagnosed as smear-negative) plus
- drug resistance. A patient initially diagnosed as sputum smear-negative and becoming positive at the second month should be investigated for MDR-TB using the rapid DST methods e.g LPA. A full conventional DST should also be requested.
- In case of any MDR result, the treatment is declared "failure" and the patient is referred to DR unit.

Case definition:

Persons with presumptive tuberculosis: Any person who presents with symptoms or signs suggestive of TB. The most common symptom of pulmonary TB is cough, which could be of any duration with any accompanying symptoms (fever, weight loss, night sweats, chest pain, malaise etc); or cough of 2 or more weeks duration even without other symptoms.

Bacteriologically confirmed tuberculosis: A patient with Mycobacterium tuberculosis complex identified from a clinical specimen, either by culture or by a WHO-approved new diagnostic (WRDs) methods (e.g the Xpert MTB/Rif, or molecular line probe assay). A definite case can also be defined as a pulmonary case with one or more initial sputum smear examinations positive for acid-fast bacilli (AFB).

Clinically diagnosed tuberculosis: A patient in without bacteriological confirmation of M. tuberculosis established, in whom a medical officer has made the diagnosis of TB, and has decided to treat the patient with a full course of TB treatment.

Note: Any person initiated on TB treatment on clinical grounds should be recorded as a clinically diagnosed case. Incomplete "trial" TB treatment should not be given as a method for diagnosis.

Diagnostic methods:

Detection of TB in health facilities should be an ongoing activity. Diagnosis of TB starts with identifying persons with presumptive TB through clinical symptoms and physical examination. Diagnosis of tuberculosis should include assessment for drug resistance to ensure timely initiation on the most appropriate treatment regimen. Sputum samples need to be collected for laboratory investigation. The initial diagnostic tests for all persons with presumptive tuberculosis should include

- i. a microscopy preferably using the iLED; or,
- ii. an Xpert MTB/Rif test.

The subsequent diagnostic tests which will include Line Probe Assay, Culture and DST to further confirm TB, MDR-TB diagnosis shall be applied based on the diagnostic algorithm.

Standard TB Treatment Protocols:

Pregnant Women:

The benefit of treating an active TB disease in a pregnant woman far outweighs the risks that the drugs may pose to both the mother and the foetus. Most TB drugs are safe for use in pregnant women with the exception of streptomycin which is ototoxic to the foetus and should therefore not be used in pregnancy.

Every woman of childbearing age diagnosed with TB should be asked of pregnancy status before starting TB treatment.

Breastfeeding Women:

A woman who is breastfeeding and has TB should receive a full course of TB treatment. Timely and properly applied chemotherapy is the best way to prevent transmission of tubercle bacilli to the baby. All the TB drugs are compatible with breastfeeding and a woman taking them can safely continue to breastfeed her baby. The mother and baby should stay together and the baby should continue to breastfeed in the normal way, but be given prophylactic isoniazid for at least six months (Isoniazid 10 mg/kg). BCG vaccination of the newborn should be postponed until the end of isoniazid prophylaxis. Pyridoxine supplementation is recommended for all pregnant or breastfeeding women taking isoniazid.

DOTS Recommendations:

Patients should have the option to come to the health facility for their daily DOT or they can take their treatment at home with a treatment supporter of their own choice (community-based DOTS).

The patient and the treatment supporter needs to keep records of daily intake of medications to ensure that treatment is taken as prescribed.

Children

Year Issued:

2012

Screening Recommendations during TB Treatment:

For children starting TB treatment, the first follow up is recommended at 2 weeks, 4 weeks and monthly thereafter. To assure a good outcome, on each visit the following should be monitored:

- Weight: It has to be checked each visit and documented in the TB card. An increase in the weight is one of the best indicators we have of successful treatment.
- Doses: They need to be adjusted every visit, according to the weight.
- Adherence: Good adherence is essential to assure good treatment outcomes. The HCW need to assess in each visit:
 - Who is the main caregiver.
 - Who is in charge of giving the tablets (DOT is highly encouraged).
 - What happens when the main caregiver is not at home.
 - If there is any other problem compromising the adherence.

Orphans are especially vulnerable, and they need special attention to assure good adherence. If adherence is compromised due to the social situation, we can consider long term hospital admissions while the social situation is solved together with the child welfare services.

Diagnostic methods:

The following actions are key to trace TB contacts in children.

- All children aged 0–4 years and children aged 5 years and above who are symptomatic, who have been in close contact with a smear-positive TB case, must be screened for TB.
- Effort should be made to detect the source case (usually an adult with sputum smear-positive pulmonary TB) and any other undiagnosed cases in the household when any child (aged less than 15 years) is diagnosed with TB.
- If a child presents with infectious TB, child contacts must be sought and screened, as for any smear-

positive source case. Children should be regarded as infectious if they have sputum smearpositive pulmonary TB or cavitory TB on CXR.

Chest X-ray in children is a useful tool to assist in the diagnosis. Lateral X-rays should be routinely done in children.

The tuberculin skin test (TST) is a tool for detection of latent TB infection (LTBI). The test involves intradermal injection of purified protein derivative (PPD), a crude mixture of mycobacterial antigens, which stimulates a delayed type hypersensitivity response and causes induration at the injection. However the TST detects only infection with MTB, not necessarily active disease.

Bacteriological confirmation of childhood TB: Diagnosis of TB in a child should be confirmed using whatever specimens and laboratory facilities are available. Bacteriological confirmation is especially important for children who have:

- presumptive drug-resistant TB
- HIV infection
- complicated or severe cases of disease
- an uncertain diagnosis.

DR-TB can also affect children, but due to the difficulty in obtaining samples, they are rarely diagnosed. It is crucial that we make all possible efforts to collect a specimen for Gene Xpert/culture and DST and refer the children for further assessment.

Standard TB Treatment Protocols:

A child should start TB treatment when there are TB symptoms not responding to adequate antibiotic therapy, even in the absence of a CXR. This is especially important in infants and young children, as symptoms are less specific and the mortality is higher.

Due to the high HIV prevalence and INH resistance, all children starting TB treatment need to receive a four-drug regimen (HRZE) during the initial phase, followed by a continuation phase of 2 drugs (RH) for a minimum period of 4 months.

All children starting TB treatment should be initiated on 2RHZE/4RH

Children with severe immune-suppression and severe forms of TB disease need to complete 9 months of treatment on 2RHZE/7RH

Children with TBM and osseous TB should complete 1 year of treatment on 2RHZE/10RH

DOTS Recommendations:

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Adults & Adolescents

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Previously treated pulmonary sputum smear-positive patients:

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- Treatment should be modified based on the DST results. The intensive phase should be extended by up to one (1) month while results of DST is being awaited for further treatment decisions. Positive smears at the end of the fifth (5th) month indicate failure of treatment and, the patient should have their sputum examined by culture and DST. Treatment should be guided by the results of DST.

New sputum smear-negative pulmonary TB patients:

Sputum smear-negative patients should be monitored clinically; body weight is a useful progress. Sputum smears should be checked at the end of the second month in case of the following possibilities:

- disease progress due to non-adherence to treatment, or
- an error at the time of initial diagnosis (i.e. a true smear-positive patient misdiagnosed as smear-negative) plus
- drug resistance.

A patient initially diagnosed as sputum smear-negative and becoming positive at the second month should be investigated for MDR-TB using the rapid DST methods e.g LPA. A full conventional DST should also be requested.

- In case of any MDR result, the treatment is declared "failure" and the patient is referred to DR unit.

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Diagnostic methods:

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- i. a microscopy preferably using the iLED; or,
- ii. an Xpert MTB/Rif test.

The subsequent diagnostic tests which will include Line Probe Assay, Culture and DST to further confirm TB, MDR-TB diagnosis shall be applied based on the diagnostic algorithm.

Standard TB Treatment Protocols:

1. New TB cases: All diagnosed cases with no history of prior treatment or received less than 1 month anti-TB treatment regardless of method of diagnosis; Intensive Phase (daily) 2HRZE/Continuation Phase (daily)4HR

2. Previously-treated TB cases: All cases with prior history of TB treatment lasting at least 1 month; Intensive Phase (daily) 3RHZE/ Continuation Phase (daily)5HRE

3. Treatment Failure: Evaluate for MDR

Standardised treatment regimens have been adopted for the first two groups of patients based on efficacy and feasibility, and the need to minimize prescription errors, reduce costs, enhance training of staff and improve drug estimation, purchasing, distribution and monitoring. All TB cases (New or previously treated) should have DST at or before initiation of TB treatment to determine the presence of resistance to any of the first line anti-TB drugs.

Note: Obtaining specimen for conventional DSST should not delay initiation of treatment and ALL relapse patient should be initiated on 2HREZ. Previously treated patients returning after failure should be referred for empirical MDR-TB treatment as DST results are awaited."

DOTS Recommendations:

Patients should have the option to come to the health facility for their daily DOT or they can take their treatment at home with a treatment supporter of their own choice (community-based DOTS).

The patient and the treatment supporter needs to keep records of daily intake of medications to ensure that treatment is taken as prescribed.

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