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Namibia

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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Adults

Year Issued:

2011

TB Screening Frequency for PLHIV:

All HIV infected persons should be screened for TB at every opportunity. Intensified case-finding needs to be established in all HIV counselling and testing (HCT) centres, hospitals, prisons and other congregate settings where both TB and HIV are common.

Screening Recommendations during TB Treatment:

For follow-up of all new patients, one sputum-smear examination should be performed at:

- 6 weeks of treatment and
- after 5 months of treatment (if smear was positive at the beginning)

If follow up sputum is positive at 6 weeks or if patient is not improving clinically, then

- the patient needs to be reassessed by the doctor
- In patients who are smear positive at 6 weeks, extend the initial phase by 1 month and repeat sputum-smear examination at 10 weeks (2 1/2 months) of treatment

If sputum is still smear positive at 3 months (10 week results) then:

- send one sputum sample for rapid DST
- review the results of rapid DST
- change to continuation phase of treatment if appropriate

If sputum is smear negative at 3 months (10 weeks results):

- change to the continuation phase of treatment

If sputum is smear positive after 5 months of treatment:

- send one sputum for rapid DST +/- follow-up C/DST

- register patient as —treatment failure||
- establish if this is true medicine failure (i.e. patient was on strict DOT and still failed) in which case inform the CCRC with a view to starting 2nd line treatment or
- if failure is due to patient not taking medicines, the CCRC may be consulted and the retreatment regimen with first line medicines considered

For Retreatment: Before TB treatment is started, collect one additional sputum sample and send it for DST

Perform one sputum-smear examination at:

- 10 weeks of treatment,
- 5 months of treatment, and
- 7 months of treatment

If sputum-smear is positive at the 3 month visit (10 week results):

- Follow up on, and review baseline DST results (if not already done so)
 - if results show pan-susceptible TB, are indeterminate or are unavailable, then collect sample for a rapid DST (and C/ DST if indicated)
- Review the results of rapid DST
- Change to continuation phase, if appropriate

If sputum-smear is positive at the 6 month visit (5 month results):

- Send sputum for testing/DST*
- Register patient as —treatment failure||
- Refer to CCRC with a view to start the standard regimen for DR TB patients

If sputum-smear positive at the 8 month-visit (7 month results):

- Send sputum for testing/DST*
- Register patient as —treatment failure||
- Refer to CCRC with a view to start the standard regimen for DR TB patients

Case definition:

The TB case definitions below are based on the level of certainty of the diagnosis and on whether or not laboratory confirmation is available.

- Tuberculosis suspect: Any person who presents with symptoms or signs suggestive of TB. The most common symptom of pulmonary TB is a productive cough for 2 weeks or more, which may be accompanied by other respiratory symptoms (shortness of breath, chest pains, haemoptysis) and/or constitutional symptoms (loss of appetite, weight loss, fever, night sweats, and fatigue).
- Case of tuberculosis: A definite case of TB (defined below) or one in which a healthcare worker (clinician or other medical practitioner) has diagnosed TB and has decided to treat with a full course of TB treatment. Note. Any person given treatment for TB should be recorded as a case. Incomplete —trial|| of TB treatment should not be given as a method for diagnosis.
- Definite case of tuberculosis: A patient with Mycobacterium tuberculosis complex identified from a clinical specimen, either by culture or by a newer method such as rapid molecular tests with line probe assay; a pulmonary case with one or more initial sputum smear examinations positive for acid-fast bacilli (AFB) is also considered to be a —definite|| case.

Pulmonary tuberculosis (PTB) refers to a case of TB involving the lung parenchyma.

Miliary TB is classified as pulmonary TB because there are lesions in the lungs. Tuberculous intrathoracic

lymphadenopathy (mediastinal and/or hilar) or tuberculous pleural effusion, without radiographic abnormalities in the lung parenchyma, constitutes a case of extrapulmonary TB. A patient with both pulmonary and extrapulmonary TB should be classified as a case of pulmonary TB.

Smear positive pulmonary TB refers to a case where one or more sputum smear specimens at the start of treatment are positive for AFB.

Smear-negative PTB cases should either:

- A. Have sputum that is smear-negative but culture-positive for M. Tuberculosis, or
- B. Have at least two sputum specimens at the start of treatment are negative for AFB and the following diagnostic criteria:
 - decision by a clinician to treat with a full course of anti-TB therapy; and
 - radiographic abnormalities consistent with pulmonary tuberculosis,
 - in a patient with proven or likely HIV infection, or
 - failure to respond to a course broad spectrum antibiotics (excluding anti-TB medicines, fluoroquinolones and aminoglycosides)

Diagnostic methods:

Sputum Smear Examination: The most specific and reliable evidence for the presence of TB disease is a positive sputum culture. Culture is expensive and the mycobacterium may take up to 6 weeks to grow and therefore should be used according to the algorithm in Figure 4-1. Direct microscopy is less expensive, quick, and highly specific and provides reliable evidence of mycobacteria in the lungs. Sputum smear microscopy is therefore an important investigation in the diagnosis of PTB and is the cornerstone of the DOTS strategy. All adults and older children suspected of having PTB must be requested to provide sputum for smear examination. Young children are often unable to produce sputum because they cannot cough it up on request.

Chest X-ray Examination: Chest radiography is not a substitute for bacteriological examination. Under normal circumstances, a diagnostic chest X-ray examination for TB should only be considered after two sputum smear examinations are found negative. Chest radiography does not add value in making a diagnosis of PTB when sputum examination is already positive and so performing routine chest X-ray examination in TB suspects is not cost-effective. Chest radiography in combination with other clinical evidence is supportive for making a diagnosis of TB but one must be aware that many conditions can show TB-like changes on X-ray pictures. HIV positive patients who have TB may have normal chest radiographs. This means that a normal chest radiograph cannot reliably exclude TB in these patients.

Chest radiography for TB suspects and patients should only be performed under the following conditions:

- a patient with at least two negative sputum-smears who does not improve on broad-spectrum antibiotics
- the condition of the patient does not allow waiting for smear examination results (sputum smear examination must still be performed in these patients regardless of the X-ray examination results)
- seriously breathless patients, irrespective of sputum-smear results (possible pneumothorax, pleural effusion, atelectasis) to facilitate emergency intervention
- a patient with frequent or severe haemoptysis in order to exclude malignancy or bronchiectasis
- a patient with a history of working in mines (silicosis) or other occupational exposure to pulmonary irritants (poultry or ostrich farms, textile factory)
- a patient in whom any other pathology is suspected (e.g. CCF, Kaposi sarcoma).
- as indicated in the management of patients with drug-resistant tuberculosis (DR-TB)

Standard TB Treatment Protocols:

New Patients

Regimen - 2RHZE/4RHE

- All new patients with any form of TB
- In TB meningitis add streptomycin for at least 2 months to ensure maximum bactericidal efficacy; total duration of treatment in these cases is 9-12 months
- Streptomycin should not be used in pregnancy
- In severe forms of EPTB other than meningitis, total treatment duration may be extended to a maximum of 9 months

Patients Who are Already Receiving Retreatment

Retreatment regimen with 1st line medicines - 2 RHZE/1RHZE/5RHE

Initial phase of 2 months of RHZES daily, followed by 1 month of RHZE daily, followed by continuation phase of 5 months of RHE daily (total 8 months).

DOTS Recommendations:

New patients

The most reliable measure to ensure that patients do take their medicines as prescribed is DOT. DOT means that TB patients swallow their TB medicines in the presence of another person observing that all the medicines are taken as prescribed. The person who observes is called a DOT supporter because psychological support is crucial for DOT. The DOT supporter can be a healthcare worker or any other person who has assumed co-responsibility for the TB treatment of the patient for the entire treatment period.

Children

Year Issued:

2011

TB Screening Frequency for PLHIV:

A strategy to delay routine BCG for HIV-exposed infants with unknown status, the majority of whom will be HIV-negative, until confirmed HIV negative, could result in many such infants becoming infected with, and dying from TB. Hence even HIV-exposed newborns in Namibia, a high TB prevalence setting, should be given BCG vaccination unless they already show signs of HIV infection.

Screening Recommendations during TB Treatment:

Children should be assessed by a healthcare worker at 2 and 4 weeks after treatment initiation, at the end of the intensive phase, and every month thereafter until treatment is completed. At each visit there should be:

- A symptom assessment including, for example, presence of cough, fever, poor appetite, and fatigue
- A weight measurement
- A directed physical examination depending on symptoms
- An assessment of adherence to treatment
- An inquiry about any adverse events
- Review of any relevant specimen collections done or due
- Assignment of date for next visit

Adherence is assessed by reviewing the treatment card. If medicines have been dispensed to the caregiver (DOT supporter) to take at home, they should be asked to show any remaining tablets that they have, and should demonstrate to the HCW the number of each type of tablet that the child is taking. TB treatment dosages must be adjusted according to increase in weight. The new treatment dosages should be carefully explained and demonstrated to the caregiver. Bacteriologic response to TB therapy in children should be monitored in the same way as in adults (Chapter 5). A follow-up sputum specimen for microscopy should be obtained at 6 weeks and after the 5th month of treatment for any child who was sputum smear positive at diagnosis, unless this would mean an invasive procedure such as gastric aspiration. Regimen adjustments and the need for specimens for culture and DST should follow the schedule delineated for adults (Chapter 5).

Diagnostic methods:

All new cases in children:

2(HRZ)/4(HR)

Add Streptocycin during intensive phase in case of severe form of TB (e.g. miliary TB or TB meningitis)

Standard TB Treatment Protocols:

Many children may be treated as outpatients; however children with severe disease should be hospitalised. Children with any of the following conditions must be admitted:

- a. respiratory distress
- b. severe forms of EPTB such as TB meningitis, miliary TB, spinal TB and pericardial TB
- c. severe adverse reactions such as hepatotoxicity.

It is also reasonable to admit any child in whom it is not possible to ensure good adherence to treatment due to social or logistical reasons.

As with adults, the choice of TB treatment regimen in a child is determined by whether the child has new TB, previously treated TB, or DR TB, irrespective of HIV status. TB treatment in children should be given daily (7 days per week) during the intensive and continuation phases of therapy. Response to TB treatment in even young and immunocompromised children is generally good and swift.

Standard regimen for new patients (new patient regimen):

2HRZE / 4HRE

Standard regimen for previously treated patients (retreatment regimen with first line medicines):

2HRZES / 1HRZE / 5HRE

All children receiving first line treatment regimens will have ethambutol as part of their regimen. This change from the previous guideline takes into account the high prevalence of primary isoniazid resistance in Namibia, thus making it unsafe to treat any form of TB disease with less than 4 oral medications during the initial phase. Inclusion of ethambutol in the continuation phase covers the possibility of isoniazid-resistant TB which would otherwise result in inadvertent rifampicin —monotherapy|| if ethambutol was not added. Previous concerns about using ethambutol in children were addressed by WHO in a 2006 publication which extensively reviewed evidence from multiple studies and concluded that in view of an almost total lack of ocular toxicity, children of all ages can safely be given ethambutol in daily doses of 20 (range 15-25) mg/kg/day.

DOTS Recommendations:

It is recommended that all children with TB receive directly observed therapy (DOT) for the complete

duration of therapy. Parents and caregivers need to be counselled about the importance of adherence for the full treatment period and the potential adverse effects of the medicines. This counselling should be repeated at each follow-up visit.

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