Clinical Diagnosis of TB in Children with a **Negative/Unknown HIV Status (< 15 years)**

HIV-negative presumptive TB case based on non-remitting symptoms (refer to B)

Conduct clinical examination. If danger signs or severe illness (e.g lethargic, unconsious, seizures) are present, manage according to IMCI: stabilize and admit based on presentation. If there are no danger signs, manage as an outpatient.

Are you able to obtain a sample **(A)** for Xpert?

Yes

Follow TB diagnostic algorithm and manage based on results.
Provide HTS based on guidelines

Xpert MTB/RIF result positive

Xpert MTB/RIF result negative

Start TB treatment:
(Refer to E if RIF resistance is detected)

No

Does the **HIV-NEGATIVE** child have two or more of the following:

Two or more persistent symptoms included in B below
AND EITHER
Positive history of contact with a PTB case
OR
CXR suggestive of TB (Refer to C)
OR
Any physical sign/conditions suggestive of TB (Refer to D)

Yes

No

Give appropriate treatment based on IMCI Guidelines (i.e. broad spectrum antibiotics)

REASSESS AFTER 5 DAYS.

IF CHILD STILL UNWELL AND SYMPTOMS PERSIST :
- Reconsider TB DIAGNOSIS
- Refer for further evaluation

A. Sample types for Xpert testing:

1. Expectorated or induced sputum
2. Gastric aspirates
3. Nasopharyngeal aspirates
4. Cerebrospinal fluid
5. Lymph node fine needle aspiration.

B. Persistent non-remitting symptoms:

1. Cough for more than two weeks
2. Fever for more than 10 days
3. Weight loss for one month especially if not responding to food and/or micronutrient supplementation.
4. Lethargy/fatigue/reduced playfulness

C. CXR findings suggestive of TB

1. Miliary picture
2. Hilar adenopathy
3. Cavitation

Refer to radiologist/doctor for extrapulmonary TB X-ray findings

NOTE: A child with a prior TB treatment history or with history of contact with an MDR-TB case should be investigated for MDRTB and referred to the nearest MDR-TB treatment center

D. Conditions/signs suggestive of TB include:

1. Severe malnutrition
2. Enlarged lymph nodes around the neck or the armpit
3. Acute pneumonia not responding to a complete course of appropriate large spectrum antibiotics
4. Recurrent pneumonia (defined as at least two episodes of pneumonia in one year with at least one month of clinical recovery among episodes
5. Persistent wheeze not responding to bronchodilators (usually asymmetrical)
6. Presence of swelling in the back
7. Signs of meningitis (e.g. stiff neck, headache, altered mental status) in child with symptoms suggestive of TB

E. DR-TB considerations

1. A child with MTB detected/RIF R(Rifampicin resistance) detected results on Xpert MTB/RIF should be referred to the nearest MDR-TB treatment center

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Innovation in Global Health

Elizabeth Glaser Pediatric AIDS Foundation

Adapted from Uganda NTP Algorithm for the diagnosis of TB in children

Clinical Diagnosis of TB in Children with a **Positive HIV Status (<15 Years)**

HIV-negative presumptive TB case based on non-remitting symptoms (refer to B)

HIV-positive presumptive TB case based on symptoms (refer to B)

Are you able to obtain a sample **(A)** for Xpert?

Yes

Follow TB diagnostic algorithm to manage based on results.

Xpert MTB/RIF result positive

Xpert MTB/RIF result negative

Start TB treatment refer to E for DR TB.
If HIV co-infected, refer to ART guidelines

No

Does the **HIV-POSITIVE** child have the following:
Two or more symptoms included in B below
OR
Positive history of contact with a PTB case
OR
Two or more symptoms suggestive of TB (Refer to B)
AND either
CXR suggestive of TB (Refer to C)
OR
Any physical sign/condition suggestive of TB (Refer to D)

Yes

No

Give appropriate treatment based on IMCI Guidelines (i.e. broad spectrum antibiotics)

REASSESS AFTER 5 DAYS

IF CHILD STILL UNWELL AND SYMPTOMS PERSIST:
- Reconsider TB DIAGNOSIS
- Refer for further evaluation

A. Sample types for Xpert testing:

1. Expectorated or induced sputum
2. Gastric aspirates
3. Nasopharyngeal aspirates
4. Cerebrospinal fluid
5. Lymph node FNA

B. Symptoms:

1. Cough of any duration
2. Fever
3. Wheeze
4. Loss of appetite
5. Weight loss especially if not responding to food and/or micronutrient supplementation,
6. Lethargy/fatigue/reduced playfulness
7. Neck swelling

C. CXR findings suggestive of TB

1. Miliary picture
2. Hilar adenopathy
3. Cavitation

Refer to radiologist/doctor for extrapulmonary TB X-ray findings

NOTE: A child with a prior TB treatment history or with history of contact with an MDR-TB case should be investigated for MDRTB and referred to the nearest MDR-TB treatment center

D. Conditions/signs suggestive of TB include:

1. Severe malnutrition
2. Enlarged lymph nodes around the neck to the arm pit
3. Acute pneumonia not responding to a complete course of appropriate large spectrum antibiotics
4. Recurrent pneumonia (defined as at least two episodes of pneumonia in one year with at least one month of clinical recovery among episodes
5. Persistent wheeze not responding to bronchodilators (usually asymmetrical)
6. Presence of swelling in the back
7. Signs of meningitis (e.g. stiff neck, headache, altered mental status) in child with symptoms suggestive of TB.

E. DR-TB considerations

1. A child with MTB detected/RIF R(Rifampicin resistance) detected results on Xpert MTB/RIF should be referred to the nearest MDR-TB treatment center

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