Tuberculosis

During the last decade of the 20th century, the number of new cases of TB increased worldwide.
Currently, 95% of TB cases occur in developing countries where resources are often unavailable for proper identification and treatment.
• WHO estimates that 30% of the world's population (about 2 billion) is infected with TB.

• More than 80% of TB occur and that approximately 2 million people die of TB worldwide each year.

• Almost 1.3 million cases and 450,000 deaths occur in children each year.
The global burden of TB continuous to grow owing to several factors including:

1. The impact of HIV epidemics
2. Population migration patterns
3. Increasing poverty
4. Crowded living condition
5. Inadequate health coverage and poor access to health services
6. Inefficient TB control programs
Classification of TB cases

1. New cases
2. Relapsing cases
3. Chronic cases
4. Failure cases
New cases

- Those patients who are newly diagnosed and *never* takes anti-TB drugs or use it for less than one month.
Relapsing cases

• Those patients who successfully treated by anti-TB drugs and then develop symptoms of TB, with positive sputum by stain or culture.
Chronic cases

• Patient who have positive test after full course of treatment
<table>
<thead>
<tr>
<th>Treatment regimen</th>
<th>tuberculosis</th>
<th>category</th>
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<tbody>
<tr>
<td>2nd state</td>
<td>1st state</td>
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<tr>
<td>4 RH</td>
<td>2 RHZE</td>
<td>All new cases for adults</td>
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<tr>
<td>4 RH</td>
<td>2 RHZ</td>
<td>All new cases for children</td>
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<tr>
<td>5 RHE</td>
<td>2 RHZES / 1 RHZE</td>
<td>Relapse or failure cases of pulmonary TB</td>
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<tr>
<td>6 EH</td>
<td>3 EHS</td>
<td>Extra-pulmonary</td>
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# Selected regimens for treatment of TB meningitis in children

<table>
<thead>
<tr>
<th>Reference</th>
<th>Continuation phase</th>
<th>Intensive phase</th>
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<tr>
<td>WHO guidelines</td>
<td>4 HR</td>
<td>2 HRZS</td>
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<tr>
<td>American Academy</td>
<td>7 – 10 HR</td>
<td>2 HRZ(S or E)</td>
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</table>
Multi-drug resistance TB (category IV)

- At least 3-5 previously not resistant drugs

- Levofloxacin, best suited long term and should be included in the regimen.

- Continue treatment for 18-24 months after sputum culture conversion.
Dose

• The dose is calculated according to body weight.

• Single dose before breakfast.

• The treatment should be taken under direct observation (DOTS)
Pregnancy and breast feeding

- The only contraindication is streptomycin
Anti-TB medication in liver disease

• Isoniazid is contraindicated in acute liver injury.

• Pyrazinamide is contraindicated in severe liver damage.
Anti-TB medication in renal impairment

• RHZ is safe for patient for renal impairment.
• Ethambutol & Streptomycin are nephrotoxic.
THANK YOU