Latent tuberculosis infection (LTBI) is a state of persistent immune response to stimulation by Mycobacterium tuberculosis antigens without evidence of clinically manifested active TB.

Someone has latent TB if they are infected with the TB mycobacteria but do not have signs of active TB disease. Although individuals with LTBI do not have active TB disease, they may develop disease in the future, making the person ill and putting them at risk of passing the infection to other people.

A quarter of the world's population is estimated to have LTBI.

Systematically providing TB preventive treatment to those at highest risk of developing active TB will prevent the development of disease and also reduce the risk of transmission in the population; this is critical to End TB locally and worldwide.

In 2017, around 1 million people living with HIV (PLHIV) and around 300,000 child household contacts < 5 were provided with preventive treatment.

TB preventive treatment is a key component of the End TB strategy, and TB preventive treatment coverage among those eligible is one of the top 10 indicators to monitor progress. Implementation is currently suboptimal but opportunities for scale-up abound. WHO estimates that approximately 30 million people*, including people living with HIV and all household contacts of TB patients, regardless of age, would need to be provided TB preventive treatment between 2018-2022.

WHO RECOMMENDATIONS FOR THE MANAGEMENT OF LTBI

**KEY FACTS**

Latent tuberculosis infection (LTBI) is a state of persistent immune response to stimulation by Mycobacterium tuberculosis antigens without evidence of clinically manifested active TB.

**AT-RISK POPULATIONS**

<table>
<thead>
<tr>
<th>LTBI testing and treatment should be considered for the following groups:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>People living with HIV (PLHIV)</strong></td>
</tr>
<tr>
<td>All adults and adolescents living with HIV</td>
</tr>
<tr>
<td>All infants and children living HIV</td>
</tr>
<tr>
<td><strong>Contacts</strong></td>
</tr>
<tr>
<td>Children &lt; 5, regardless of HIV</td>
</tr>
<tr>
<td>Adults and child contacts** in low burden settings (LBC)</td>
</tr>
<tr>
<td><strong>HIV-negative clinical risk groups:</strong> patients on anti-TNF, receiving dialysis, preparing for transplantation, and those with silicosis</td>
</tr>
<tr>
<td><strong>LTBI testing and treatment may be considered for the following groups:</strong></td>
</tr>
<tr>
<td>HIV-negative children ≥ 5, adolescents, and adults who are contacts** in high-burden settings (HBC)</td>
</tr>
<tr>
<td><strong>Contacts of patients with multidrug-resistant TB</strong></td>
</tr>
<tr>
<td><strong>HIV-negative prisoners, health workers, immigrants from HBCs, homeless persons, people who use illicit drugs, living in LBCs</strong></td>
</tr>
<tr>
<td><strong>Children living with HIV who have successfully completed treatment for TB</strong></td>
</tr>
</tbody>
</table>

**RULING OUT TB**

Exclude active TB using clinical algorithms and TB investigations (according to national or WHO guidelines)

**TESTING FOR LTBI**

Either TST or IGRA can be used to diagnose LTBI

- An LTBI test is not required prior to LTBI treatment in PLHIV and children < 5

**TREATING LTBI**

- Daily 6 or 9 months isoniazid***
- Daily rifampicin plus isoniazid for 3 to 4 months
- Weekly rifapentine plus isoniazid for 3 months
- Daily rifampicin for 3 to 4 months

*Methodology in upcoming Global TB report 2018
**Household contacts of bacteriologically confirmed active TB cases
***May be ≥ 36months in eligible PLHIV
CONSIDERATIONS FOR SCALING UP

ADVERSE EVENTS MONITORING

Mechanisms for monitoring of adverse events are encouraged, including for monitoring drug-drug interactions.

ADHERENCE AND TREATMENT COMPLETION

- Interventions to improve adherence and treatment for LTBI are encouraged.
- These should be tailored to the specific needs of the risk groups and to the local context.

MONITORING AND EVALUATION

- M & E systems should align with national patient monitoring and surveillance systems.
- Use of standardised indicators is encouraged (see below).
- Appropriate tools to support scale-up and M & E are to be considered. For example, the WHO M & E module for mobile-phones applications is available for adaptation.
- National surveillance systems for resistance to drugs used to treat LTBI should be developed.

WHO-RECOMMENDED INDICATORS FOR PROGRAMMATIC MANAGEMENT OF LTBI

CORE GLOBAL AND NATIONAL

1) Proportion of children < 5 who are household TB contacts (according to national guidelines) who have completed TB investigations.

2) Proportion of children < 5 who are household TB contacts (according to national guidelines) who are eligible for starting on TB preventive therapy that have started treatment.

3) Proportion of eligible PLHIV newly enrolled in HIV care, started on TB preventive therapy.

CORE NATIONAL INDICATORS

4) Proportion of eligible individuals from at risk populations (according to national guidelines) tested for latent TB infection.

5) Proportion of individuals from at risk populations (according to national guidelines) with a positive latent TB test who are eligible for starting TB preventive therapy that have started treatment.

6) Proportion of individuals from at risk populations (according to national guidelines) with a positive latent TB test who have started on TB preventive therapy that have completed the course.

7) Proportion of eligible PLHIV who completed a course of TB preventive therapy.

8) Proportion of children < 5 who are household contacts (according to national guidelines) who have completed a course of TB preventive therapy.

OPTIONAL

- TB incidence rate among risk populations (as defined by national guidelines).

LTBI REPRESENT THE TB RESERVOIR

MTB

5%: ACTIVE DISEASE

95%: LATENT INFECTION

5-15%: REACTIVATION