

Health Technology Assessment of treatment strategy for Latent TB Infection in India



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Policy Brief

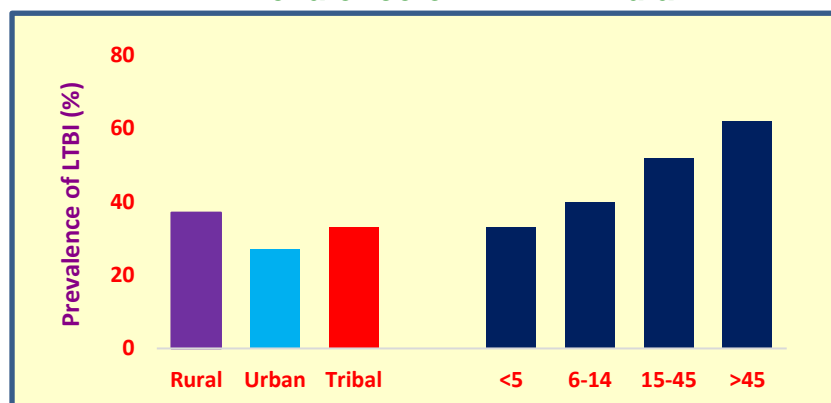
Summary

Latent TB Infection (LTBI) remains a significant public health challenge in India, with a high prevalence rate. Effective treatment options are crucial to prevent its progression to active TB. This policy brief focuses on evaluating the clinical effectiveness, cost-effectiveness, and implementation challenges of LTBI treatment strategies. The guidelines recommend the 3HP regimen, supported by the Government of India and WHO, for its higher treatment completion rates and lower incidence of adverse events compared to the traditional 6H regimen. Although specific data for India is limited, similar benefits are expected in high-prevalence settings. It emphasizes the need to prioritize LTBI testing and treatment for high-risk populations such as healthcare workers, HIV patients and close contacts of TB patients. It reemphasizes the programmatic uptake of newer, shorter, safer 3HP regimen over 6H.

Problem Statement

Latent TB Infection (LTBI) involves a persistent immune response to Mycobacterium tuberculosis (M.tb) without active TB disease.¹ In India, an estimated 33-40% of the population is affected by LTBI. A systematic review and meta-analysis reported a LTBI varies in rural, urban, tribal areas; and it increases as age increases.² Around 5-10% of those with TBI LTBI progressing to active TB.³ The Government of India's Detect-Treat-Prevent-Build strategy focuses on scaling up TB Preventive Therapy (TPT) to reduce TB incidence from 2.5% annually to 10%.⁴

Prevalence of LTBI in India



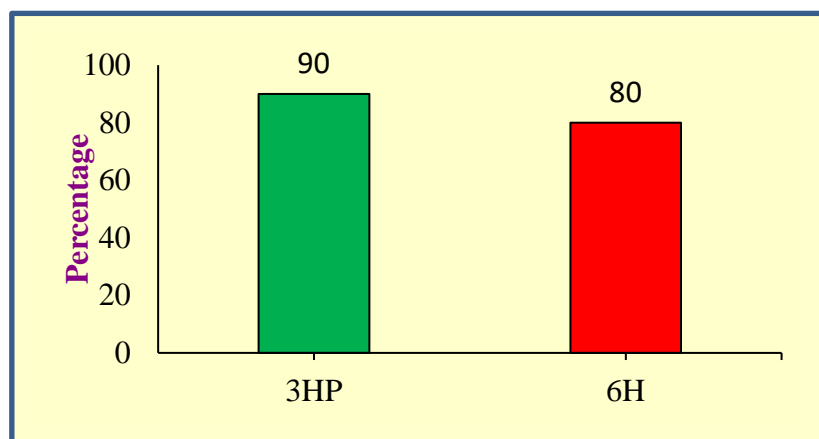
TB Preventive Treatment in India

Traditionally, isoniazid preventive treatment (IPT) and a six-month chemoprophylaxis regimen (6H) have been used. Shorter TPT regimen, such as the once-weekly isoniazid and rifapentine regimen for 12 weeks (3HP), which shows higher completion rates. The 2021 guidelines on the Programmatic Management of TPT in India recommend the 3HP regimen.

Clinical effectiveness of 3HP

- The Centers for Disease Control and Prevention, and the National Tuberculosis Controllers Association recommend the short-course 3HP regimen as it is effective, safe and has higher completion rates compared to 6H or 9H
- A Network Meta-Analysis indicated that 3HP has the highest probability of preventing TB compared to 6H.
- The risk-benefit assessment revealed that 3HP had a lower incidence of adverse events while demonstrating higher efficacy in TB prevention compared to 6H.

LTBI Treatment completion rate by 3HP vs 6H



Cost-effectiveness of 3HP

- There is a paucity of information on cost-effectiveness of 3HP from India.
- However, studies from other parts of the world have assessed the comparative cost-effectiveness of the 3HP and 6H/9H regimens for LTBI treatment. It showed that using the 3HP regimen instead of the 9H regimen for LTBI treatment is cost saving and improves health outcomes.⁵

Recommendations

- ❖ The 3HP regimen has shown superior clinical effectiveness, cost saving and improves health outcomes.
- ❖ Targeting high-risk groups and incorporating rigorous monitoring and local evidence generation will be crucial for the successful adoption of the 3HP regimen in India.
- ❖ Currently, 3HP to be considered the next best alternative treatment for LTBI.

References

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The policy brief is based upon the Health Technology Assessment of treatment strategy for Latent TB Infection in India and can be found on the link: <https://dhr.gov.in/sites/default/files/>