

TB Elimination

Treatment of Latent Tuberculosis Infection: Maximizing Adherence

Introduction

Latent tuberculosis infection (LTBI) is the presence of *M. tuberculosis* organisms (tubercle bacilli) without symptoms or radiographic or bacteriologic evidence of TB disease. Approximately 90-95% of those infected are able to mount an immune response that halts the progression from LTBI to TB disease. However, because prevention of TB has major public health implications, the Centers for Disease Control and Prevention (CDC) and the United States Preventive Services Task Force (USPSTF) recommend testing populations that are at increased risk for TB infection and treating those for whom TB disease has been ruled out. Health care providers must communicate the risks and benefits of treatment to their patients and encourage adherence and treatment completion.

Communicating the Value of Latent TB Infection Treatment

A patient's acceptance of LTBI treatment is often influenced by the initial approach of the health care provider. When discussing the risks and benefits of treatment it is important to explain that

- As long as TB germs are in the body, they can begin to multiply and cause disease
- Certain individuals are at especially high risk for progression to TB disease. They include persons with recent TB infection and certain medical conditions, and those taking medication that may alter immunity
- Completing treatment for latent TB infection can reduce the risk of TB disease by 90%
- Treatment decisions are based on the results of scientific research
- TB infection is treated with one or two drugs, whereas TB disease initially requires four drugs

Certain groups such as the homeless, the elderly, substance abusers, the foreign-born, and migrant workers present unique challenges and have needs that require special consideration.

Identifying Barriers to Adherence

Many variables affect a patient's adherence to the recommended treatment regimen, including

- Appointment hours that conflict with patient's schedule
- Misinformation about TB
- Health beliefs and practices
- Limited financial resources
- Co-existing medical conditions
- Medication side effects
- Language barriers
- Real or perceived stigma related to latent TB infection treatment

Strategies for Maximizing Adherence

Collaboration with community agencies

Partner with local health departments and community-based organizations that can provide

- *Case management* to ensure continuity of services
- *Directly observed therapy (DOT)*, whereby a health care worker observes the ingestion of medication; highly recommended when using intermittent regimens and for high-risk patients, such as those whose treatment has been interrupted or who often miss appointments for medication refills

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- *Incentives*, which are small rewards that encourage or motivate patients. Local businesses and organizations may be a resource for incentives such as grocery store vouchers, nutritional supplements, movie tickets, or restaurant coupons
- *Enablers* such as free van transportation or bus tickets, reminder letters or phone calls, and other assistance that makes it easier to keep appointments

Effective patient education

- Have materials available in patient's primary language and at appropriate literacy level
- Include patient's family in health education whenever possible, because they can offer support
- Reinforce educational messages at each visit
- Give clear instructions regarding side effects and when to report them to a health care provider
- Allow opportunities for questions and answers

Patient-focused strategies

- Obtain patient's agreement to complete treatment before actually starting (patient contract)
- Recommend reminders such as watches, alarm clocks, notes to self, pill boxes with days of the week
- Schedule monthly appointments to monitor progress
- Reinforce importance of treatment completion at each visit to help maintain patient's commitment
- Tailor treatment regimen to patient's needs (daily vs. intermittent dosing, alternate regimens)

- Recommend taking medication at same time every day and associate it with a daily activity such as mealtime, brushing teeth, etc.
- Recommend taking isoniazid with food if gastrointestinal upset is a problem

References

ATS/CDC. Targeted tuberculin testing and treatment of latent TB infection. *MMWR* 2000;49 (No. RR- 6). <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr4906a1.htm>

USPSTF. Latent Tuberculosis Infection: Screening Recommendation. <http://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryDraft/latent-tuberculosis-infection-screening>

Additional Resources

1. CDC Division of TB Elimination website. <http://www.cdc.gov/tb/>
2. Targeted Tuberculosis (TB) Testing and Treatment of Latent TB Infection (Slide Set). <http://www.cdc.gov/tb/publications/slidesets/LTBI/default.htm>
3. Targeted Tuberculosis Testing and Interpreting Tuberculin Skin Test Results (Fact sheet). <http://www.cdc.gov/tb/publications/factsheets/testing/skintestresults.htm>
4. Treatment Options for Latent Tuberculosis Infection (Fact sheet). <http://www.cdc.gov/tb/publications/factsheets/treatment/LTBITreatmentoptions.htm>
5. TB Education and Training Resources website. <http://www.findtbrresources.org>

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