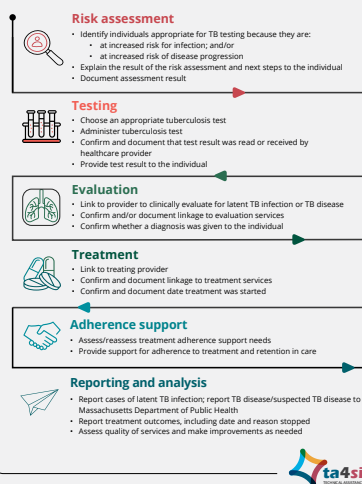


COMPONENT D:

Treatment

Components for Testing and Treatment of Individuals with Latent Tuberculosis (TB) Infection



This resource provides an overview of how to identify individuals at increased risk of TB infection. It is intended for clinical and non-clinical staff from agencies in Massachusetts that provide latent TB infection services. It includes links to tools and resources, and provides answers to questions including:

- When should an individual with latent TB infection be linked to TB treatment services?
- What are key considerations for linking individuals to treatment for treating latent TB infection?
- Which populations have specific considerations I should be aware of when linking individuals to treatment services?
- Where can individuals be treated?
- How should I communicate with individuals about treatment for latent TB infection?
- What data considerations should I be aware of for linking individuals with latent TB infection to treatment services?

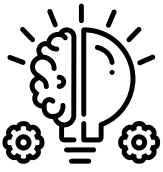
When should an individual with latent tuberculosis (TB) infection be linked to TB treatment services?

Although a TB test (IGRA or TST¹) may indicate an individual has TB infection, a provider must then evaluate the individual to diagnose latent TB infection or TB disease (see [Fact Sheet on Component C: Evaluation](#)). There are important differences between latent TB infection and TB disease, including different treatment regimens, so the evaluation helps to determine which treatment should be prescribed. Individuals who have been evaluated for TB, and received a diagnosis of latent TB infection, should be immediately linked to treatment services, whether at the same agency as the evaluation service, or a different agency.

Because the infection is contained by their immune system, an individual with a diagnosis of latent TB infection does not have symptoms and cannot transmit the infection to others. However, this situation can change if the immune system is no longer able to contain the infection. If that happens, it is possible for the individual to become sick with TB disease. Treating individuals for latent TB infection prevents them from developing TB disease.

This Fact Sheet contains basic information for providers who are linking individuals to treatment services and do not provide these services themselves. If you are a medical provider who treats latent TB infection, please refer to Centers for Disease Control and Prevention's (CDC) [web page](#) on TB treatment for detailed clinical information. The Massachusetts Department of Public Health (MDPH) has a [web page](#) with information on regimens used in Massachusetts.

¹ IGRA (Interferon-Gamma Release Assay) is a TB blood test, and TST is the tuberculin skin test.



What are some key considerations for clinical and non-clinical providers when linking individuals to treatment for latent TB infection?

Once active TB has been ruled out, several regimens are available to treat latent TB infection. The treating provider will talk with the individual about selecting the best regimen for them. Below are the key planning considerations for agencies providing services to any individual who will start latent TB infection treatment:

- **How the regimen should be taken:** Treatment for latent TB infection is administered either through directly observed therapy (DOT), or self-administered therapy (SAT). DOT requires that a trained health worker observes an individual taking a medication to help ensure they are taking the medication as prescribed, and to monitor for side effects. Some regimens must be taken via DOT (e.g., 3HP, which is taken once a week), or are recommended to be taken via DOT (e.g., treatment to young children). In Massachusetts, depending on the regimen the patient is taking, MDPH recommends the trained worker be a nurse who can assess for adverse events following the prior dose.

Individuals who are not prescribed DOT can self-administer their medications. The treatment provider gives individuals on SAT instructions on how to recognize adverse side effects, and what to do if they miss a dose or suspect an adverse reaction.

- **Clinical monitoring and side effects:** Individuals taking latent TB infection treatment should undergo a clinical assessment by a health care provider on at least a monthly basis. The assessment should include asking the individual about side effects and conducting a physical examination. The provider may recommend blood tests when the individual begins taking treatment, and may repeat these tests based on the individual's medical history and risk of toxicity from a given regimen. The treatment provider should talk with the individual about what to expect, and when to call the provider for side effects specific to their regimen. You can find more information on specific side effects by regimen from the [MDPH](#) and [CDC](#).

For safety reasons, medications are usually supplied one month at a time, with refills authorized only following a successful monthly clinical evaluation for adherence and side effects.

- **Planning for adherence support:** Whether taking treatment via DOT or self-administered therapy, any individual taking latent TB infection treatment may face challenges that make it difficult to complete treatment. It is important for providers to talk with individuals about any adherence challenges, and plan together for appropriate support early in the course of treatment (See [Fact Sheet for Component E: Adherence Support](#) for more information).



Which populations have specific considerations I should be aware of when linking individuals to treatment services?

Once active TB has been ruled out, several regimens are available to treat latent TB infection. The treating provider will talk with the individual about selecting the best regimen for them. Below are the key planning considerations for agencies providing services to any individual who will start latent TB infection treatment:

- **People Living with HIV**

- It is especially important for individuals with diagnoses of HIV and latent TB infection to be promptly referred to a treating provider. Because HIV weakens the immune system, people living with HIV should be made aware that they have a much greater chance of progressing from latent TB infection to TB disease than people without HIV.
- People living with HIV who have recently been exposed to someone with TB disease should be considered for treatment for latent TB infection even if they do not test positive for TB. This is because recent TB infection from exposure to infectious TB is more likely to progress to active TB disease, especially among individuals living with HIV who have a weakened immune system. In addition, when the immune system is weakened, it is more likely that an individual will not test positive for TB infection even if they have it. If you work with individuals living with HIV, you can discuss this with them and counsel them to communicate promptly if they have had recent contact with a person with TB disease.

- **Children**

- Children are more likely than adults to progress from latent TB infection or primary exposure to TB disease, especially those under 5 years of age. They also get sick more quickly than adults. For these reasons, it is especially important to help caregivers understand that children who have a diagnosis of latent TB infection must take and complete the treatment as prescribed.
- Children under 5 years old who have been exposed to someone with infectious TB may be considered for treatment even if they do not test positive for TB. Latent TB infection from a recent exposure to infectious TB is more likely to progress to active TB disease. You can talk to caregivers about how important it is to promptly communicate if a child has had recent exposure to a person with TB disease.
- Because it is important to ensure medications are taken as prescribed and children complete treatment, the treatment provider will likely recommend that their treatment is administered via DOT

- **Pregnant women**

- Treatment of latent TB infection in a pregnant woman can often be delayed until 2-3 months after the baby is born to avoid taking TB medications during pregnancy, when the potential for adverse side effects is increased. Your organization should determine the best way to ensure that pregnant individuals with latent TB infection are treated postpartum.
- If the individual is at higher risk of progressing from latent TB infection to TB disease, such as if they have recently been exposed to infectious TB or is infected with HIV, treatment may begin immediately.



Where can individuals be treated?

Latent TB infection treatment can generally be successfully managed in the primary care setting. If your facility does not provide latent TB infection treatment, you must link individuals with a diagnosis of latent TB infection to facilities that provide TB outpatient services. MDPH supports some facilities to provide these services with consideration of potential patient financial barriers and the [list](#) is posted on MDPH's [TB website](#). However, this list is not inclusive of all facilities or providers in Massachusetts that provide TB services.


In addition, it is often feasible and preferable for individuals to be treated for latent TB infection at the same agency where they were tested for TB and get other health services. If your agency needs support to scale up treatment services for latent TB infection, training opportunities are available. [Rutgers Global Tuberculosis Institute](#) offers educational materials, training programs, and distance learning opportunities on tuberculosis-related topics to physicians, nurses, health care workers, and government leaders. MDPH is collaborating with University of Massachusetts Memorial Medical Group to offer a Latent TB Infection [ECHO](#) virtual training program to providers in Massachusetts. Using a “hub-and-spoke” knowledge sharing approach, ECHO sessions combine a didactic session with a case study to educate providers on the components of latent TB infection care. To participate in ECHO, please contact Susan Foley at Susan.Foley@umassmed.edu.

If your agency does not provide treatment for latent TB infection, or if you need to make a referral for an individual with other complex care needs, you should investigate resources within your community to identify agencies that provide these services. It is important to establish relationships with one or more facilities or providers, supported with appropriate agreements, such as Memoranda of Understanding (MOUs).

MOUs should address the following items:

- What action(s) are both parties agreeing to?
- What are each party's roles?
- How will linkages be initiated and confirmed?
- How will an individual's clinical status be communicated?
- How will key medical information be communicated between parties?
- How will an individual's needs related to adherence support be communicated?
- How will individuals who are undocumented or otherwise uninsured get services?

By addressing these items, you can ensure that your organization is able to link each individual who requires treatment services to an appropriate provider, and can address their needs and circumstances.




What information should I communicate with individuals about treatment for latent TB infection and how should I communicate this?

When talking with individuals about TB infection treatment, you should help them understand what latent TB infection is, and encourage them to start and complete treatment. Individuals may have questions about why they need to be treated if they don't have any symptoms or signs of disease, or why they need to be treated for so long. Addressing these questions and concerns is an important part of supporting a successful linkage to services.

It is best to approach this communication as a conversation with the individual and make sure there is time for them to ask questions. You should also check that they understand what you are telling them. One approach to this is the Teach-Back method. In addition, MDPH has materials that are designed to encourage interaction and planning between providers and individuals with a diagnosis of latent TB infection, including a tip sheet for providers.

The following messages may support the linkage process by helping individuals understand how TB infection is treated and why treatment is important:

- 
- An individual with latent TB infection can have TB germs in their body for years before getting sick.
 - Taking TB medications is the only way to kill the TB germs in your body.
 - Taking your medicines for latent TB infection can prevent you from developing TB disease in the future.
 - Take your pills the right way, talk with your treatment provider about how. Ask your provider questions if it is not clear how or when to take the pills.
 - Take your pills as instructed, even though you don't feel sick.
 - If you believe the medication is making you ill in any way (you should feel "normal" when you take the medicine), stop treatment immediately and contact your provider.
 - If you see another doctor, be sure to tell them you are being treated for latent TB infection.

Individuals may also have concerns about side effects. Although the treatment provider will give them more information on the side effects specific to their regimen and how to manage them, the following messages apply for any regimen:

- Any medicine can cause side effects, including TB medication. Most people can take their TB medicine without any problems.
- Before you start this treatment plan, tell your doctor if you are taking any other medicines or use alcohol.
- Go to your planned clinic visits.
- Some people find the medications they take have less side effects when taken with food.

MDPH has more [information](#) to help providers explain TB infection to individuals. These fact sheets can be found on the [MDPH tuberculosis](#) website and are available in multiple languages. The materials are designed to invite interaction and discussion between patient and provider. MDPH also has a [video](#) on the front page of the MDPH TB website about TB infection. CDC has a [pamphlet](#) on latent TB infection (also [available in other languages](#)), as well as [Fact Sheets](#) for each regimen.



What data considerations should I be aware of for linking individuals with latent TB infection to treatment services?

The table below includes the indicators that are considered key measures of performance of latent TB infection treatment services. For each indicator, the table has information on whether the relevant data used to calculate the indicator are required to be reported to MDPH or recommended to be collected (but not reported to MDPH), as well as information on where to record these data. To learn more about collecting and reporting data, please review the [Component F Fact Sheet: Reporting and Analysis](#).

Type of Indicator	Indicator	Data for this indicator are <u>required to be reported</u> or are <u>recommended to be collected</u> ?	Where to record this data
Process Indicator	# Individuals confirmed as being linked to treating provider	Required to be reported	Integrated Testing and Linkage to Services (ITLS) form
Outcome Indicator	#/% Individuals initiating treatment (among those eligible and linked)	Required to be reported	BIDLS-generated line lists
Outcome Indicator	#/% Individuals who were initiated on a shorter course LTBI regimen	Recommended to be collected	Electronic health records (EHR), BIDLS-generated line lists

For information about how to use process mapping to link individuals with latent TB infection to treatment services, please see the Fact Sheet on [“Process Mapping for Latent TB Infection Services.”](#)