



Local Public Health Agency Administrator’s Guide to Tuberculosis (TB) Elimination

Local Public Health Agencies (LPHAs)

LPHAs are a vital part of a successful tuberculosis (TB) Elimination Program. LPHA responsibilities of TB elimination include instructing the patient on the importance of continuous and uninterrupted drug therapy, providing directly observed therapy (DOT), conducting case management and leading contact investigations. The LPHA also maintains surveillance for TB within the community and serves as liaison between local health care providers/facilities and the Missouri Department of Health and Senior Services (DHSS) TB Elimination, Program. This guide provides data and explains the services provided the DHSS, Bureau of Communicable Disease Control and Prevention, TB Elimination Program.

Latent TB Infection versus TB Disease: What is the difference?

A Person with Latent TB Infection	A Person with TB Disease
<ul style="list-style-type: none"> • Has no symptoms 	<ul style="list-style-type: none"> • Has symptoms that may include: <ul style="list-style-type: none"> - a bad cough that lasts 3 weeks or longer - pain in the chest - coughing up blood or sputum - weakness or fatigue - weight loss - no appetite - chills - fever - sweating at night
<ul style="list-style-type: none"> • Does not feel sick 	<ul style="list-style-type: none"> • Usually feels sick
<ul style="list-style-type: none"> • Cannot spread TB bacteria to others 	<ul style="list-style-type: none"> • May spread TB bacteria to others
<ul style="list-style-type: none"> • Usually has a skin or blood test result indicating TB infection 	<ul style="list-style-type: none"> • Usually has a skin or blood test result indicating TB infection
<ul style="list-style-type: none"> • Has a normal chest x-ray (CXR) and a negative sputum smear 	<ul style="list-style-type: none"> • May have an abnormal chest x-ray (CXR), or a positive sputum smear or culture
<ul style="list-style-type: none"> • Needs treatment for latent TB infection to prevent active TB disease 	<ul style="list-style-type: none"> • Needs treatment for active TB disease

Statistics

In 2020, there were **1,794 cases** of Latent Tuberculosis Infection (LTBI) reported by Missouri counties. This is a rate of 29.2 LTBI cases per 100,000 population.

In 2020, there were **75 cases** of TB Disease reported by Missouri counties. This is a rate of 1.2 TB Disease cases per 100,000 population.

For data on TB disease and LTBI in your county, please follow this link:

<https://health.mo.gov/living/healthcondiseases/communicable/tuberculosis/data.php>

Reporting Requirements

It is required for LPHAs to forward reports of active TB disease and suspected TB disease within **24 hrs.** to the DHSS TB Elimination program according to 19 CSR 20.070, “Duties of Local Health Departments”. Reports of latent TB infection (LTBI) shall be forwarded within **3 days** upon knowledge or suspicion. To report cases, a Disease Case Report (CD-1) must be completed and faxed to (573) 526-0234 and entered into the DHSS Communicable Disease Registry web-based application known as WebSurv.

Contact Investigations

A report of an active TB disease case, or suspected TB disease case, will trigger a contact investigation and evaluation. The benefits of conducting a contact investigation are finding and treating additional TB disease cases (potentially interrupting further transmission) and finding and treating persons with LTBI to avert future cases. After obtaining the list of contacts from the index case, contacts must be prioritized, and resources allocated to complete all evaluation steps for high and medium priority contacts. If there is a high percentage of positivity among the high and medium risk contacts, then low risk contact individuals must also be evaluated. Priorities are based on the likelihood of infection and the potential hazards to the individual contact if infected. The Tuberculosis Worksheet for Contacts of Newly Diagnosed Cases of TB (TBC-13) shall be completed and submitted to the DHSS TB Elimination Program, within seven business days of first notification of suspected or lab confirmed TB disease and shall include:

- Names of contacts
- Priorization of contacts – high, medium, low
- Results of first round evaluations

The TBC-13 shall be updated and resubmitted to the DHSS TB Elimination Program:

- With results of second round evaluations
- And, any time contacts or updated results are added to the list

Case Management

Case management is a system in which a specific LPHA employee is assigned primary responsibility for the patient, conducting a systematic regular review of patient progress, and making plans to address any barriers to adherence to treatment. Most TB disease and infection cases are managed by LPHAs. If cases are not directly managed by the LPHA, the LPHA should collaborate with the private provider that is providing care to the patient to ensure that appropriate case management, such as the prescribing of appropriate treatment regimen, monthly monitoring for medication side effects, directly observed therapy (DOT), and treatment completion, is being implemented by the provider. Case management includes a monthly in-person evaluation for adverse

effects of treatment, sputum collection and testing as recommended, DOT (the standard of care for all TB disease cases), and patient education. The goals of case management are to ensure:

- Patients receive uninterrupted treatment, especially when transitioning from the hospital to outpatient care;
- Disease progression and drug resistance are prevented;
- Patients receive non-fragmented care;
- Patients complete recommended number of doses and specified length of treatment within recommended time frames;
- Transmission within the community is prevented through effective contact investigations;
- The patient/family/community is educated about TB disease and infection;
- Individuals diagnosed with clinical TB or suspected TB are reported according to regulations;
- TB control activities are implemented;
- Case managers participate in policy development; and
- Case managers participate in studies to improve case management services and documentation, enhance adherence to medication, and improve the quality of TB nursing.

DHSS TB Case Management Manual

The DHSS TB Case Management Manual contains the policies, procedures, forms, and recommendations for patient care and community control of tuberculosis in Missouri. It also serves as a guide for LPHAs and health care professionals who serve those in need of TB patient care. The manual is located online at this link: www.health.mo.gov/living/healthcondiseases/communicable/tuberculosis/tbmanual/index.php.

State Public Health Laboratory (SPHL) Services

The Missouri SPHL, TB Laboratory processes specimens submitted by LPHAs at no charge to the patient, health care provider, or LPHA and charges a nominal fee to private providers. The results of acid-fast bacilli (AFB) smears, mycobacterial cultures, anti-tuberculosis drug sensitivity studies, and mycobacterial organism identification are included in the services provided. For information on submitting TB specimens, please follow this link: <https://health.mo.gov/lab/smearculture.php>.

Treatment of TB

Medications are currently provided by DHSS, at no charge to residents of Missouri, for the treatment of TB disease and, dependent on available funding, LTBI patients that have high risk factors for developing disease if they become infected. To determine if an LTBI patient is eligible for medications through the state TB Elimination Program, please refer to the Seventh Edition [Core Curriculum on Tuberculosis: What the Clinician Should Know \(cdc.gov\)](#) page 18, Box 1.1 TB medications provided through the State TB Elimination Program are currently filled through the TB Elimination Program contracted pharmacy (see page 8). The purpose of this service is to eliminate barriers in providing TB medications, and to facilitate nurse case management of TB patients through the LPHA. There are currently no financial eligibility requirements.

Directly Observed Therapy (DOT)

DOT is a treatment strategy in which a health care provider, or other trained person, watches a patient swallow each dose of prescribed anti-tuberculosis medication. It is the standard of care for all patients with TB disease, children under 5 years old, and if local resources allow, immunocompromised adults that are a contact to a LPHA Administrators Guide to TB (Updated 12/2021)

current disease case who are on LTBI treatment. Evidence has shown that the only way to achieve high medication compliance and completion rates is through DOT provision by a person accountable to the health system and accessible to the patient.

DOT can reduce the development of drug resistance. Treatment failure, or relapse after the completion of treatment. It can be provided daily or intermittently in the office, clinic, or in the field (i.e., patient's home, place of employment, school, hospitals, nursing homes, correctional facilities) or any other site that is mutually agreeable. The observer cannot be the patient's family member. If the patient is in isolation due to being infectious, it is best not to have the patient come to the LPHA office but to meet them in their home or outside in a private area. The DOT worker needs to wear an N95 mask if the patient is still infectious.

DOT should be used for all children who have active disease, LTBI and are a contact to an active case, or are being treated with window prophylaxis to ensure treatment completion. Children less than five years of age are at greater risk for progressing to TB disease once they acquire LTBI. In addition, these children are more likely than older children and adults to develop life-threatening forms of TB disease such as TB meningitis and disseminated TB. In addition, pediatric populations have more time to potentially develop TB disease during their lifetime, emphasizing the need to ensure LTBI treatment completion and compliance (missed doses impact the duration of treatment and potentially cause drug resistance). As with adult cases, the observer cannot be the child's parent or family member.

Financial Assistance is currently available (dependent on available funds), to LPHAs to assist with providing DOT **in the field**, or a location other than the LPHA, for TB disease patients and/or high-risk LTBI patients. Requests for financial assistance for DOT requires prior approval from the TB Elimination Program, submission of monthly Tuberculosis Medication Records (TBC-16), and monthly invoices. For more information on DOT financial assistance policies and procedures, please see Section 4.06 of the DHSS TB Case Management Manual located at:

<https://health.mo.gov/living/healthcondiseases/communicable/tuberculosis/tbmanual/pdf/Chap4.pdf>.

Diagnostic Services Program (DSP)

This program currently provides access to TB evaluation services for uninsured, or underinsured, patients with positive TB skin or blood test results. An individual must be unable to receive diagnostic services from any other public or private insurance program, to be eligible for DSP services. The LPHA determines eligibility for the program and completes a Diagnostic Services Eligibility/Authorization form (TBC-DSP) and faxes it to the DSP manager at (573) 526-0234, for approval and an authorization number.

The DSP program only covers diagnostic services to rule out TB disease or LTBI and medical evaluations, as needed. Services are not available to residents of penal institutions; however services are available to parolees and those who have completed their sentences.

For more information on DSP policies and procedures, please see Section 6.0 of the DHSS TB Case Management Manual located at:

<https://health.mo.gov/living/healthcondiseases/communicable/tuberculosis/tbmanual/pdf/Chap6.pdf>.

Incentives and Enablers for Completion of Treatment

Incentives are small rewards given to patients to encourage them to adhere to treatment plans and complete treatment. Examples of incentives include: gift cards or vouchers for food and snacks, meals at a restaurant, clothing, household items, etc. Alcohol, tobacco, or ammunition purchases are prohibited.

Enablers are those things that make it possible, or easier, for the patient to complete treatment and comply with treatment plans by overcoming barriers such as transportation difficulties, concerns about meeting daily expenses if they are isolated for extended periods, or experiencing other difficulties that create barriers for the patient. Examples of enablers include but are not limited to assistance with transportation, purchasing groceries, paying for childcare, adjusted clinic hours, and language translation services.

Dependent on available funding, incentives and enablers are available upon request from the LPHA. When the LPHA identifies a patient that would benefit from the use of an incentive or enabler, prior approval for reimbursement must be received from the DHSS TB Elimination Program. The LPHA must provide the incentive/enabler, after approval is received, and invoice the TB Elimination Program for reimbursement. The Walmart gift cards provided by the TB Elimination Program are an exception to the need for invoicing because there are no expenditures by the LPHA. Please see the policies and procedures for this program in the online TB Case Management Manual at:

<https://health.mo.gov/living/healthcondiseases/communicable/tuberculosis/tbmanual/pdf/Chap4.pdf>.

Court Commitment Procedures

There are Missouri statutes to meet the need for more comprehensive and specific TB elimination measures to ensure that potentially infectious TB cases are made noninfectious as quickly as possible, ensure that TB cases complete a prescribed treatment regimen, and to prevent the emergence and spread of multidrug-resistant TB (MDR-TB). When infectious TB patients are not complying with treatment regimens or following other protocols to ensure that they do not infect others, LPHAs must consider committing them to a facility that provides treatment. Committing an infectious patient requires collaboration between LPHAs, courts, and DHSS.

The DHSS Court Force handbook is a chapter within the DHSS TB Case Management Manual describing the process used by the courts and LPHAs. The handbook contains sample documents that may be used during the commitment process, a fact sheet on TB for officers of the court and transporters of TB patients, and a description of the statutes and regulations that pertain to TB. For more information on the court commitment policies and procedures, please see chapter 7 of the online TB Case Management Manual located at: <https://health.mo.gov/living/healthcondiseases/communicable/tuberculosis/tbmanual/pdf/Chap7.pdf>.

Cohort Review Process

Cohort review process is a systematic review of the management of patients with TB disease and their contacts. A “cohort” is a group of TB cases counted over a specified period of time. The cohort review can take many forms, however, in its most simplified form, TB Elimination staff at the local level meet to review the treatment outcomes of every patient listed in a chronological patient register. The DHSS TB Elimination Program conducts semi-annual cohort reviews in which all LPHAs with cases identified in the review period are requested to participate in a virtual and/or phone conference, to present and discuss their cases. All LPHAs are invited to join the conference regardless of whether or not they have a case to present.

Details regarding the management and outcomes of TB cases are reviewed approximately 6 – 9 months after they are counted. During the cohort review, case managers present the TB cases for which they are responsible. The purpose of the cohort review is to detect potential areas for improvement in the way the cases are managed, such as the use of an inappropriate treatment regimen or an inadequate number of contacts evaluated. The cohort review process is a program evaluation and learning tool for LPHAs and DHSS. The purpose is not to place blame, but to foster collaboration with other LPHAs and DHSS.

Tuberculosis Forms and Documentation

The following forms are located in the Missouri Department of Health and Senior Services TB Case Management Manual in the Appendices section.

The TB Case Management Manual is located at:

<https://health.mo.gov/living/healthcondiseases/communicable/tuberculosis/tbmanual/index.php>.

Required Forms:

LTBI:

- TB Testing Record (TBC-4) **preferred** and/or Disease Case Report (CD-1). If entered into WebSurv, please do not fax. If not entered into WebSurv, please fax to (573) 526-0234.
- TBC-2 Refusal of Tuberculosis Therapy (only required if patient refuses to take treatment), keep in patient record after faxing to state TB Nurse.

TB Disease:

- Disease Case (CD-1)
- TB History Form (TBC-10), please put patient's current weight on form
- Tuberculosis Patient Responsibilities Notification (located in the Court Force Handbook) it is highly recommended that this form be reviewed with the patient and signed at the beginning of treatment for all active tuberculosis cases and kept in the patient's record
- Worksheet for Contacts (TBC-13) please fax at the beginning of the contact investigation (within 7 business days of first notification of case) and at completion, as well as any time new contacts or results are added to the form
- Cohort Review Form (PDF Fillable) – form is started as soon as notification of an active TB case is received and filled in as the case progresses through the treatment period. **Do not fax**, until requested for a cohort review.
- Fax the above forms to the TB Elimination Program (573) 526-0234, unless otherwise indicated.

Required Documentation:

- CXR results and/or Cat Scan results (if done)
- Lab results (biopsy, sputum smear, culture, etc.)
- List of TB Meds (name of meds, doses, frequency), **please resubmit if any changes are made**
- History and Physical
- Monthly DOT sheets (**Must fax monthly**)

Please fax the above documentation to the attention of your State TB Nurse at (573) 526-0234:

Traci Hadley – Regions A, D, E, G, and H

Bev Myers – Regions B, C, F, I

Additional Forms (keep in patient's record):

- TBC-9 – Latent Tuberculosis Infection (LTBI) Medication Request Form
- TBC-8 – TB Medication Request Form. If patient has private insurance, Medicaid or Medicare, please complete the insurance portion on the form and attach a copy of the insurance card.
- TBC-1 – Tuberculosis Drug Monitoring Sheet
- TBC-DSP – Only completed if patient has no insurance or is underinsured. Complete form online and fax to (573) 526-0234. LFTs must be pre-approved by the state TB Nurse:

Traci Hadley – Regions A, D, E, G, H (417) 629-3487

Bev Myers – Regions B, C, F, I (573) 518-2697

- TBC-15A – TB Case Register Card
- TBC-16 – Tuberculosis Medication Record (**Fax to your State TB Nurse monthly**)
- Checklist for Active Tuberculosis
- Progress Notes
- Tuberculosis Signs and Symptoms Checklist (All LTBI and TB disease cases must be evaluated for signs and symptoms)

Helpful TB Web Addresses:

- Centers for Disease Control and Prevention/Tuberculosis <http://www.cdc.gov/tb/>
- Centers for Disease Control and Prevention – Seventh Edition 2021 – Core Curriculum on Tuberculosis: What the Clinician Should Know (opens best using Google Chrome for your browser)
<https://www.cdc.gov/tb/education/corecurr/pdf/CoreCurriculumTB-508.pdf>
- MMWR: Treatment of Tuberculosis, June 20, 2003/Vol. 52/No. RR-11
<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5211a1.htm>

Missouri Department of Health and Senior Services
Division of Community and Public Health
Bureau of Communicable Disease Control and Prevention
Tuberculosis (TB) Elimination Program
Contact Information

BCDCP/TB Elimination Program	(573) 751-6113
TB Elimination Program (All Staff) Fax	(573) 526-0234
Traci Hadley, Public Health Consultant Nurse/TB Controller	
TB Case Management – Regions A, D, E, G, H	
1110 East 7 th St., Ste. 12, Joplin, MO 64801	(417) 629-3487
Terri Eslahi, TB Program Manager	
930 Wildwood Dr., PO Box 570, Jefferson City, MO	(573) 522-2728
Bev Myers, Senior Public Health Nurse	
TB Case Management – Regions B, C, F, I	
142 Staples Dr., Park Hills, MO 63601	(573) 518-2697
Murhaf Alkaddour, Associate Epidemiologist	
Contact Investigations, WebSurv assistance and QA	
930 Wildwood Dr., PO Box 570, Jefferson City, MO 65109	(573) 751-6496
Diana Winder, Training Coordinator/DSP Manager	
Diagnostic Services Program, DOT Financial Assistance, Incentive/Enabler Program	
930 Wildwood Dr., PO Box 570, Jefferson City, MO 65109.....	(573) 526-5832
John Bos, BCDCP Bureau Chief	
149 Park Central Square, Ste. 116, Springfield, MO 65806	(417) 895-6945
Missouri State Public Health Laboratory (SPHL), Tuberculosis Unit	
101 North Chestnut, PO Box 570, Jefferson City, MO 65101	(573) 751-3334
Mizzou Pharmacy (TB Contract Pharmacy)	
1020 Hitt Street, Room 1001, Columbia, MO 65212.....	(573) 882-8300
Fax	(573) 884-3504