NURSING DIRECTIVE

SUBJECT: Management of Individuals with Latent Tuberculosis Infection (LTBI)

SECTION: Standards of Care

SUMMARY: Screening for latent tuberculosis infection (LTBI) and providing treatment to prevent progression to active disease are important for the ultimate elimination of tuberculosis. However, these strategies are lower priority than core control activities such as the identification and treatment of active cases, contact investigations that include the evaluation and treatment of contacts, and disease surveillance. As resources become more limited, it is increasingly important to direct screening performed toward those populations where the yield and benefit are likely to be greatest. Consequently, the only screening programs that should be undertaken are those that target specific, high-risk populations and that include an initial evaluation for infection and a plan to ensure completion of treatment. Local health districts vary in their ability to offer targeted testing and screening services. At a minimum, all districts must ensure appropriate screening and testing of contacts to potentially infectious TB cases, individuals with a TB classification, and individuals eligible for an initial refugee health screening.

BRIEF BACKGROUND: The primary goal for any screening and testing program for LTBI is the successful treatment of those who are infected. Case management is the preferred strategy for coordinating client care, for it not only ensures that the client is educated about LTBI and its treatment, but that he or she will be more likely to complete a course of appropriate therapy. It is beyond the scope of this document to cover all situations that may arise during the course of treatment or investigation of any one individual or community. All nurses and practitioners involved in the management of screening, testing, and treatment programs for clients with LTBI should have immediate access to guidelines, policies, and procedures published by the Centers for Disease Control and Prevention (CDC) and the Virginia Department of Health (VDH) Tuberculosis and Newcomer Health Program. All nurses involved in the LTBI case management should be trained with training documented on the VDH TB Training and Competency Assessment checklist tool.

PROCEDURE/DIRECTIVE:

Screening and Testing for Latent TB Infection

1. Before testing for latent TB infection (LTBI), screening should be performed with an approved VDH risk assessment form. See the VDH Screening and Testing webpage for more information.

2. CDC, VDH, and local district guidelines should be utilized for the administration, reading, and interpretation of tuberculin skin tests (TST) or interferon-gamma release assay (IGRA).
3. Scope of Practice:
    a. Screening:
        i. According to the Code of Virginia § 54.1-3408, a TB risk assessment can be completed by an LPN, RN or other licensed clinician. If an LPN completes the TB Risk assessment, the RN should make the final determination as to if further testing is needed.
    b. Testing:
        i. According to the Code of Virginia § 54.1-3408, TSTs can be administered by an LPN, RN, PA, NP, MD, or Pharmacists.
        ii. Licensed practical nurses working under the direct supervision of a registered nurse may place and measure a TST but may not provide interpretation. The RN, PA, NP or MD should interpret the TST reading based on the risks identified in the TB Risk Assessment.
        iii. Unlicensed personnel may not place a TST but may palpate and measure an induration. Unlicensed personnel may not provide interpretation of the TST.

Required Evaluation to Determine LTBI versus Active TB Disease

1. Individuals with a new positive TST or IGRA should be evaluated to rule out the presence of active TB disease. A review of TB signs and symptoms, past exposure history, and a chest x-ray (CXR) should be performed.
2. Individuals with a past, positive TST or IGRA who want to pursue treatment must have a CXR within three months prior to initiating treatment.
    a. If they refuse treatment, a CXR is not needed unless they are symptomatic or have a new risk for progression to active TB disease.
3. Collection of sputum is recommended if CXR shows abnormalities consistent with active TB disease, or if the client is symptomatic and able to produce sputa. If necessary, sputum induction should be attempted.
4. If bacteriology samples are collected for any individual screened, treatment for LTBI should be deferred until final culture results are received and active TB disease is ruled out. As appropriate, an individual may be started on multiple anti-TB drugs for presumptive active TB disease prior to receipt of culture results.
5. All individuals with LTBI should be offered treatment for LTBI according to CDC /VDH guidelines. See the VDH TB Infection Page for more information

Evaluation and Treatment of Latent TB Infection

1. The public health nurse (PHN) will obtain a medical and drug history, complete a VDH approved Initial TB Clinical Assessment form, and collect the results of the CXR report and all other objective tests for the practitioner to review.

   a. If abnormal findings are found at the nurse visit, then the client should be referred to the clinician for an exam prior to any further actions.
2. The practitioner will review the TB risk assessment form, medical and drug history, the Initial Visit Nursing Assessment form, the CXR report, and all other objective tests.
   a. The CXR report serves as an "appropriate examination" to meet the physical examination requirement to establish the bona fide practitioner-patient relationship needed for a practitioner to write a prescription.
3. The practitioner must document the review, assessment of the information, diagnosis, recommendations, and orders on a VDH-approved Clinician Orders and/or Progress Note forms in the client record, as indicated.
4. Baseline laboratory testing is not routinely indicated for all patients at the start of LTBI.
   a. Baseline testing is indicated for patients with HIV infection, pregnant women, and women in the immediate post-partum period (i.e., within 3 months of delivery), persons with chronic liver disease, persons who use alcohol regularly, and persons at risk for liver disorder.
   b. Baseline testing is not routinely indicated in older persons. However, such testing may be considered on an individual basis, particularly for patients taking medication for chronic medical conditions.
5. VDH practitioners may prescribe a Schedule VI antibiotic for the treatment of LTBI when the requirements above are met. Treatment should be in accordance with CDC and/or VDH guidelines.
   a. Refer also to most recent Testing and Treatment of Latent Tuberculosis Infection in the United States: Clinical Recommendations (NTCA/NTSC, 2021). Download a copy of the recommendations from the National TB Controllers Association website, or directly here (registration required to download).
6. All individuals initiating treatment should be provided with client education regarding possible side effects and adverse reactions to the selected treatment regimen, including what to do should problems arise, e.g., calling the local health department/public health nurse or holding medications.
   a. LHDs can order print educational materials here
   b. The public health nurse should provide information to the patient about the risk and benefits of the medication that the practitioner prescribes to the patient. The practitioner will direct the PHN to initiate additional interventions and follow-up care, if necessary. This information must be documented in the client record.
7. The PHN will conduct a monthly nursing assessment and review side effects of the prescribed medication.
   a. Any adverse reactions must be reported to the practitioner within one (1) business day and documented in the client record.
   b. Medications should be held until the practitioner has been contacted according to local protocol.

c. Monthly assessments should be completed in-person as the gold standard with vital signs. If extenuating circumstances like travel preclude an in-person visit, complete a monthly assessment through phone or secure virtual platform and resume in-person as soon as possible.

Notes

1. Virginia Code § 54.1-3303 establishes that a prescription shall be issued only to persons with whom the practitioner has a bona fide practitioner-patient relationship. A bona fide practitioner-patient relationship exists if the practitioner has
    a. Obtained or caused to be obtained a medical or drug history of the patient;
    b. Provided information to the patient about the benefits and risks of the drug being prescribed;
    c. Performed or caused to be performed an appropriate examination of the patient, either physically or by use of instrumentation and diagnostic equipment through which images and medical records may be transmitted electronically; and
    d. Initiated additional interventions and follow up care, if necessary, especially if prescribed drug may have serious side effects.
2. Definition of practitioner: Licensed physician, nurse practitioner, or physician assistant with prescriptive authority in the state of Virginia.

Recordkeeping:

1. A client record is needed for all encounters with the TB program.
2. Contact investigation forms and documentation should be filed in a separate pronged folder adjacent to the client record. The folder should be labeled "Contacts of [*Case Name*]."
3. A *TB Risk Assessment* form or *Contact Investigation* form alone may be appropriate for contacts with negative test results or patients with a positive test for infection and negative CXR that refuse treatment. All clients receiving medications need a health history form for 340b compliance.
4. Only a summary document detailing the findings of the contact investigation should be placed in the case record. Contact investigation records containing contact names, addresses and other HIPAA protected information should be stored elsewhere.
5. A case management record is needed for
    a. All clients with presumptive and confirmed TB – regardless of source of care
    b. All clients who meet one or more of the following criteria
        i. Referred for chest x-ray
        ii. Sputum collected
        iii. Presumptive or confirmed TB regardless of the source of medical care or site of disease.

iv. Recommended for treatment for LTBI as a contact to an active case regardless of the source of medical care. The record should contain final treatment completion outcome.

6. VDH TB Program record forms, test results, and other medical records should be filed in the client record according to VDH TB Program, agency, or local district guidelines for assembling client records.
7. *Directly Observed Therapy* (DOT) logs may be maintained in a separate folder to facilitate prompt documentation for the current month only. At the end of each month, the DOT log and any progress notes should be filed appropriately in the client record.
8. Record Retention Information

Forms used in TB case management are available in multiple languages on the VDH TB Forms for Local Health Departments site. Please contact the VDH TB Program if additional translations are needed.

EVIDENCE BASE:

Borisov AS, Bamrah Morris S, Njie GJ, et al. Update of Recommendations for Use of OnceWeekly Isoniazid-Rifapentine Regimen to Treat Latent Mycobacterium tuberculosis Infection. MMWR Morb Mortal Wkly Rep 2018; 67:723–726. DOI: http://dx.doi.org/10.15585/mmwr.mm6725a5External.

Code of Virginia (§ 54.1-3408 G.) Professional Use by Practitioners. Retrieved from: https://law.lis.virginia.gov/vacode/title54.1/chapter34/section54.1-3408/

Controlling Tuberculosis in the United States. Centers for Disease Control and Prevention. MMWR 2005; 54 (No. RR-12). Retrieved from: http://www.cdc.gov/mmwr/PDF/rr/rr5412.pdf

Essential Components of a Tuberculosis Prevention Program, MMWR Vol. 44 # RR-11, September 8, 1995. Retrieved from: http://www.cdc.gov/mmwr/PDF/rr/rr4411.pdf

Guidelines for the Investigation of Contacts of Persons with Infectious Tuberculosis. enters for Disease Control and Prevention. MMWR 2005; 54 (No. RR-15). Retrieved from: http://www.cdc.gov/mmwr/pdf/rr/rr5415.pdf

Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Settings, 2005. Centers for Disease Control and Prevention. MMWR 2005:54 (No. RR-17). Retrieved from: http://www.cdc.gov/mmwr/pdf/rr/rr5417.pdf

Prevention and Control of Tuberculosis in Correctional and Detention Facilities: Recommendations from the CDC. Centers for Disease Control and Prevention. MMWR 2006; 55 (No. RR-9). Retrieved from: http://www.cdc.gov/mmwr/PDF/rr/rr5509.pdf

Recommendations for Use of an Isoniazid–Rifapentine Regimen with Direct Observation to Treat Latent Mycobacterium tuberculosis Infection. MMWR 2011 60 (1650–1653) https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6048a3.htm

Targeted Tuberculin Testing and Treatment of Latent Tuberculosis Infection. Centers for Disease Control and Prevention. MMWR 2000; 49 (No. RR-6). Retrieved from: http://www.cdc.gov/mmwr/PDF/rr/rr4906.pdf

US Preventive Services Task Force. Screening for Latent Tuberculosis Infection in Adults:

US Preventive Services Task Force Recommendation Statement. JAMA. 2016; 316(9):962969. doi:10.1001/jama.2016.11046 Retrieved from: https://jamanetwork.com/journals/jama/fullarticle/2547762 Virginia Department of Health. (2019).

Recommendations for Tuberculosis Record and Form Use. Virginia Department of Health TB Program. Available at: https://www.vdh.virginia.gov/tuberculosis/forms-for-local-health-departments/

Virginia Department of Health. (2017) Tuberculosis Screening and Testing for Occupational Purposes. Virginia Department of Health TB Program. Available at: https://www.vdh.virginia.gov/content/uploads/sites/175/2020/02/Tuberculosis-Screening-and-Testing-for-Occupational-Purposes_2020.pdf

Virginia Department of Health. (2023) Screening and Testing for Tuberculosis. Virginia Department of Health TB Program. Available at: https://www.vdh.virginia.gov/content/uploads/sites/175/2023/03/Screening-and-Testing-for-Tuberculosis-2023_Final.pdf

Virginia Department of Health. (2018) Who Should be Screened for Tuberculosis? Virginia Department of Health TB Program. Available at: https://www.vdh.virginia.gov/content/uploads/sites/112/2018/11/Who-Should-be-Screened-for-Tuberculosis.pdf

Virginia Department of Health. (2018) Use of Isoniazid/Rifapentine for Treatment of Latent TB Infection in Health Department Settings. Virginia Department of Health TB Program. Available at:

https://www.vdh.virginia.gov/content/uploads/sites/112/2019/05/Isoniazid-Rifapentine-for-Treatment-of-Latent-TB-Infection-in-Health-Dept.-Settings.pdf

Directive Comments and Feedback

Comments and feedback regarding this directive should be directed to the Director, Public Health Nursing (804) 864-7014.