

Patient Name: \_\_\_\_\_

Date: \_\_\_\_\_

DOB: \_\_\_\_\_ Age: \_\_\_\_\_

Program or Division: \_\_\_\_\_

## Arlington County Tuberculosis (TB) Screening and Risk Assessment Tool

### Symptoms Assessment:

Have you had any of the following symptoms for 3 weeks or more, that are unexplained?

No Symptoms  Cough  Coughing up blood  Fever  Weight Loss  Poor Appetite  Night Sweats  Fatigue

**For children 6 years and under only:** Has your child had any of the following symptoms for 3 weeks or more, that are

unexplained?  No Symptoms  Trouble gaining weight (Failure to Thrive)  Personality Changes  Swelling in neck, groin and/or armpit (lymph node swelling)  Decreased Activity/Playfulness/Energy

### Testing History:

Have you ever had a TB Test (PPD Skin test or Blood test) in the United States?  Yes  No

If yes, was the test positive?  Yes  No

If yes, have you had a chest X-ray in the last 10 years?  Yes  No (refer to TB Clinic or PCP)

If yes, Was the Chest X-ray normal  Yes  No

Have you ever received treatment for active or latent TB?  Yes  No

### Risk Assessment:

**Since your last Negative TB Assessment (Screen/Test/Treatment)- Answer the following Risk Assessment Questions:**

\*VDH TB High Burden Countries List: <https://www.vdh.virginia.gov/content/uploads/sites/175/2022/12/High-Burden-TB-Countries-2023.pdf>

Have you had close contact to someone with infectious TB disease  
For example: a friend/relative with TB, working in a program with TB clients  Yes  No

Have you traveled, or lived in a country with a high rate of TB for greater than 3 months (See VDH High Burden TB Countries List below)\*  Yes  No

**For Children 6 and under only:** Has your child been cared for by a parent, guardian or caretaker (nanny, babysitter) from a country with a high rate of TB (See VDH High Burden TB Countries List below)\*  Yes  No  NA

Are you a resident or employee of a congregate setting?  
For example: shelter, prison, jail, nursing home, assisted living facility  Yes  No

Do you have any of the following medical conditions? (These conditions put you at increased risk for TB progression if exposed and infected)  
For example: Radiographic evidence of prior healed TB, low body weight (10% below ideal), silicosis, diabetes mellitus, chronic renal failure or on hemodialysis, gastrectomy, jejunioleal bypass, solid organ transplant, head and neck cancer, HIV Infection.  Yes  No

Do you have any of the following conditions that would make you immunosuppressed?  
For example: Injection drug use, organ transplant recipient, or other condition that would make you immunosuppressed.  Yes  No

Are you on any of the following treatments (or have any treatments planned) that would make you immunosuppressed?  
For example: treatment with TNF-alpha antagonist (e.g., infliximab, etanercept, others), steroids (equivalent of prednisone  $\geq 15$  mg/day for  $\geq 1$  month), chemotherapy, or other immunosuppressive medication.  Yes  No

SCREENING END

**If you answered "Yes" to any of the above questions:** Have you had any Live Vaccine in the last 6 weeks?  
The current available live vaccines are: MMR vaccine (Measles Mumps Rubella), Rotavirus, Chickenpox (Varicella), Nasal Flu vaccine, Yellow Fever, Smallpox. (TB testing must be postponed 6 weeks after a live vaccine)  Yes  No  NA

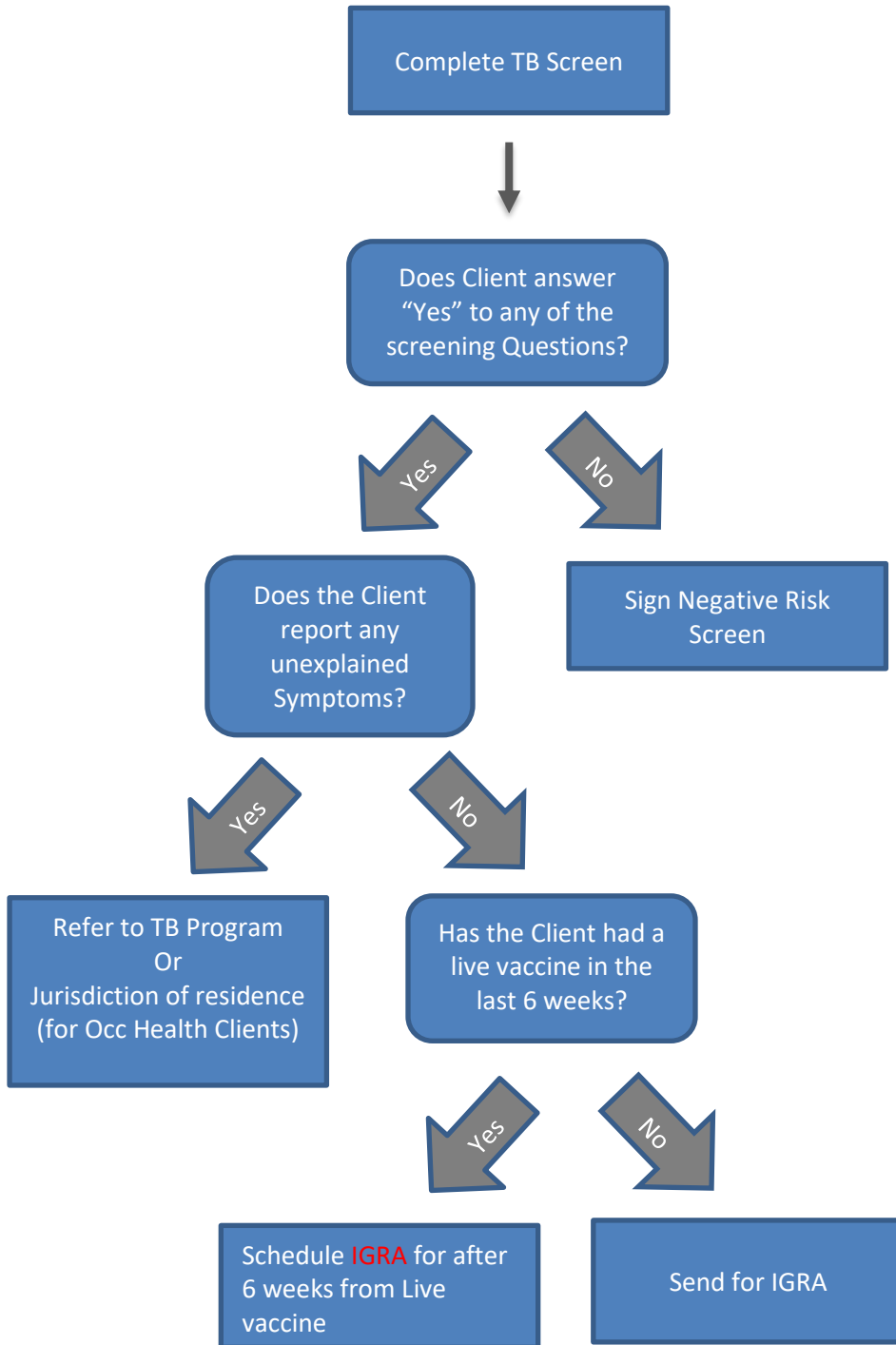
### OFFICIAL USE ONLY

One or more risk factor identified: Send for TB Testing. (Must wait 6 weeks post live vaccine to test).

No Risk factor identified: TB Screen is considered negative.

Provider Name \_\_\_\_\_ Provider Signature/Credentials: \_\_\_\_\_

# Arlington TB Screening Algorithm for Testing



# Virginia Tuberculosis Screening and Risk Assessment User Guide

Use this tool to identify asymptomatic individuals for latent TB infection (LTBI) testing.

- The symptom screen and risk factor assessment may be conducted by a licensed healthcare provider (MD, PA, NP, RN, LPN). If a symptom or risk factor for TB is identified, further evaluation should also be performed by a licensed healthcare provider (MD, PA, NP, RN, LPN), however an RN or an LPN conducting evaluations must have an order by healthcare personnel with prescriptive authority consistent with Virginia professional practice acts for [medicine](#) and [nursing](#).
- Re-testing should only be done in persons who previously tested negative and have new risk factors since the last assessment.
- A negative Tuberculin Skin Test (TST) or Interferon Gamma Release Assay (IGRA) does not rule out active TB disease.

## Symptoms that should trigger evaluation for active TB disease

Patients with any of the following symptoms that are otherwise unexplained should be evaluated for active TB disease: cough for more than 2-3 weeks, fevers, night sweats, poor appetite, weight loss, fatigue, and hemoptysis.

## How to evaluate for active TB disease

Evaluate for active TB disease with a chest x-ray (CXR), symptom screen, and if indicated, sputum acid-fast bacilli (AFB) smears, cultures and nucleic acid amplification testing. A negative tuberculin skin test (TST) or interferon gamma release assay (IGRA) does not rule out active TB disease.

## Negative test for TB infection does not rule out active TB disease

It is important to remember that a negative TST or IGRA result does not rule out active TB disease. In fact, a negative TST or IGRA in a patient with active TB disease can be a sign of extensive disease and poor outcome.

## Avoid testing persons at low risk

Routine testing of low-risk populations is not recommended and may result in unnecessary evaluations and treatment because of falsely positive test results.

### Prioritize persons with risks for progression

Prioritize patients with at least one of the following medical risks for progression:

- diabetes mellitus
- smoker within past 1 year
- end stage renal disease
- leukemia or lymphoma
- silicosis
- cancer of head or neck
- intestinal bypass/gastrectomy
- chronic malabsorption
- low body weight (10% below ideal)
- history of chest x-ray findings suggestive of previous or inactive TB (no prior treatment). Includes fibrosis or non-calcified nodules, but does not include solitary calcified nodule or isolated pleural thickening. In addition to LTBI testing, evaluate for active TB disease.

## **U.S. Preventive Services Task Force recommendations**

The USPSTF has recommended testing persons born in, or former residents of, a country with an elevated tuberculosis rate and persons who live in, or have lived in, high-risk Congregate settings such as homeless shelters and correctional facilities. Because the increased risk of exposure to TB in congregate settings varies substantially by facility and local health jurisdiction, clinicians are encouraged to follow local recommendations when considering testing among persons from these congregate settings. USPSTF did not review data supporting testing among close contacts to persons with infectious TB or among persons who are immunosuppressed because these persons are recommended to be screened by public health programs or by clinical standard of care.

## **Virginia Department of Health recommendations**

This risk assessment has been customized according to the Virginia Department of Health's (VDH) TB Program recommendations. Providers should check with local TB control programs, or the VDH TB Program at (804) 864-7906 for local recommendations.

## **Mandated testing and other risk factors**

Several risk factors for TB that have been used to select patients for TB screening historically or in mandated programs are not included among the components of this risk assessment. This is purposeful in order to focus testing on patients at highest risk. However, certain populations may be mandated for testing by statute, regulation, or policy. This risk assessment does not supersede any mandated testing. Examples of these populations include: healthcare workers, residents or employees of correctional institutions, substance abuse treatment facilities, homeless shelters, and others. Testing can also be considered in children with frequent exposure to adults at high risk of TB infection, such as those with extensive foreign travel to areas with high TB rates.

## **Age as a factor**

Age (among adults) is not considered in this risk assessment. However, younger adults have more years of expected life during which progression from latent infection to active TB disease could develop. Some programs or clinicians may additionally prioritize testing of younger, non-U.S.-born persons when all non-U.S.-born are not tested. An upper age limit for testing has not been established but could be appropriate depending on individual patient TB risks, comorbidities, and life expectancy.

## **Young children**

This risk assessment tool is intended for individuals  $\geq 6$  years old. A risk assessment tool created for use in children  $< 6$  years old can be found on the VDH website: <https://www.vdh.virginia.gov/tuberculosis/screening-testing/>

## **When to repeat a test**

Re-testing should only be done in persons who previously tested negative, and have new risk factors since the last assessment. In general, this would include new close contact with an infectious TB case or new immunosuppression, but could also include foreign travel in certain circumstances.

## **When to repeat a risk assessment**

The risk assessment should be administered at least once. Persons can be assessed for new risk factors at subsequent preventive health visits.

## **IGRA preference in BCG vaccinated**

Because the IGRA has increased specificity for TB infection in persons vaccinated with Bacillie Calmette-Guerin vaccine (BCG), IGRA is preferred over the TST in these persons. Most persons born outside the US have been vaccinated with BCG.

## **Previous or inactive tuberculosis**

Chest radiograph findings consistent with previous or inactive TB include fibrosis or non-calcified nodules, but do not include a solitary calcified nodule or isolated pleural thickening. Persons with a previous chest radiograph showing findings consistent with previous or inactive TB should be tested for TB infection. In addition to TB infection testing, evaluate for active TB disease.

## A decision to test is a decision to treat

### Emphasis on short course for treatment of TB infection

Shorter regimens for treating TB infection have been shown to be more likely to be completed and the 3-month 12-dose regimen has been shown to be as effective as 9 months of isoniazid. Use of these shorter regimens is preferred in most patients. Drug-drug interactions and contact to drug-resistant TB are typical reasons these regimens cannot be used.

### Shorter duration TB infection treatment regimens

Medication	Frequency	Duration
Rifampin	Daily	4 months
Isoniazid + Rifapentine*	Weekly	12 weeks**
Isoniazid + Rifampin	Daily	3 months

\*VDH recommends Directly Observed Therapy (DOT)

\*\*11-12 doses in 16 weeks required for completion

### Patient refusal of TB infection treatment

Refusal should be documented. Offers of treatment should be made at future encounters with medical services. Annual chest radiographs are not recommended in asymptomatic persons. If treatment is later accepted, TB disease should be excluded and CXR repeated if it has been > 3 months from the initial evaluation.

## Instructions for children under 6

### Symptoms that should trigger evaluation for active TB disease

Patients with any of the following symptoms that are otherwise unexplained should be evaluated for active TB disease: cough for more than 2-3 weeks, fevers, night sweats, weight loss, lymphadenopathy, hemoptysis or excessive fatigue.

### Negative test for TB infection does not rule out active TB disease

It is important to remember that a negative tuberculin skin test (TST) or interferon gamma release assay (IGRA) result does not rule out active TB disease. In fact, a negative TST or IGRA in a patient with active TB disease can be a sign of extensive disease. Any suspicion for active TB disease or extensive exposure to TB should prompt an evaluation for active TB disease, including physical exam, symptom review, and a 2-view chest x-ray.

### Avoid testing persons at low risk

Routine testing of low-risk populations is not recommended and may result in unnecessary evaluations and treatment because of falsely positive test results.

### Virginia Department of Health recommendations

This risk assessment has been customized according to the Virginia Department of Health's TB Program recommendations. Providers should check with local TB control programs, or the VDH TB Program at (804) 864- 7906 for local recommendations.

### Mandated testing and other risk factors

Several risk factors for TB that have been used to select children for TB screening historically or in mandated programs are not included among the components of this risk assessment. This is purposeful in order to focus testing on children at highest risk. However, certain populations may be mandated for testing by statute, regulation, or policy. This risk assessment does not supersede any mandated testing. Testing can also be considered in children with frequent exposure to adults at high risk of TB infection, such as those with extensive foreign travel to areas with high TB rates.

### When to repeat a risk assessment and testing

Risk assessments should be completed on new patients, patients thought to have new potential exposures to TB since last assessment, and during routine pediatric well- child visits. Repeat risk assessments should be based on activities and risk factors specific to the child. High-risk children who volunteer or work in healthcare settings might require annual testing and should be considered separately. Re-

testing should only be done in persons who previously tested negative and have new risk factors since the last assessment (unless they were <6 months of age at the time of testing). In general, new risk factors would include new close contact with an infectious TB case or new immunosuppression, but could also include foreign travel.

### Foreign travel

Travel to countries with an elevated TB rate may be a risk for TB exposure in certain circumstances (e.g., extended duration, likely contact with persons with infectious TB, high prevalence of TB in travel location, non-tourist travel). The duration of at least 3 consecutive months to trigger testing is intended to identify travel most likely to involve TB exposure. TB screening tests can be falsely negative within the 8-10 weeks after exposure, so are best obtained 8-10 weeks after return from travel. A list with countries with an elevated TB rate can be found here: <https://www.vdh.virginia.gov/tuberculosis/screening-testing/>

**IGRA preference in non-U.S. born children ≥2 years old** Because IGRA has increased specificity for TB infection in children vaccinated with *Bacillie Calmette-Guerin vaccine* (BCG), IGRA is preferred over TST for non-US-born children ≥2 years of age. IGRAs can be used in children <2 years of age, however, there is an overall lack of data in this age group, which complicates interpretation of test results. In BCG-vaccinated, immunocompetent children with a positive TST, it may be appropriate to confirm a positive TST with an IGRA. If IGRA is not done, the TST result should be considered the definitive result.

**Emphasis on short course for treatment of TB infection** Shorter regimens for treating TB infection have been shown to be as effective as 9 months of isoniazid, and are more likely to be completed. Use of these shorter regimens is preferred in most patients, although the 12-week regimen is not recommended for children <2 years of age, children on antiretroviral medications, or pregnant adolescents. Drug- drug interactions and contact to drug-resistant TB are typical reasons these regimens cannot be used.

Medication	Frequency	Duration
Rifampin	Daily	4 months
Isoniazid+ Rifapentine*	Weekly	12 weeks**
Isoniazid + Rifampin	Daily	3 months

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Refusal should be documented. Recommendations for treatment should be made at future encounters with medical services. If treatment is later accepted, TB disease should be excluded and CXR repeated if it has been > 3 months from the initial evaluation.