



Ambulatory Clinic Policy and Procedure

Title: TUBERCULOSIS CONTROL PROGRAM	Policy Number: EP 7.7
Regulation: Joint Commission Infection Prevention Standard Reference: IC.02.03.01. CDC.	Effective Date: 12/2016

Policy:

Texas Tech University Health Sciences Center El Paso (TTUHSC El Paso) requires baseline and annual tuberculosis skin testing (TST) for all occupational groups that meet the definitions of Risk Category 1 and/or 2 defined in this policy. The purpose of this policy is to maintain a safe environment for both patients and health care workers by reducing the risk of tuberculosis transmission based on current U. S. Department of Health and Human Services and Centers for Disease Control and Prevention (CDC) Recommendations. Compliance with this policy is mandatory.

Additional requirements may apply based on HSC OP 75.11 Health Surveillance Program for TTUHSC Institutional Health and Infection Control program. (Refer to this policy for more information)

Scope and Distribution:

This policy applies throughout TTUHSC El Paso Campus including Paul L. Foster School of Medicine, Gayle Greve Hunt School of Nursing, Graduate School of Biomedical Sciences, and off - site Centers and Clinics.

Definitions:

Risk category 1 - applies to individuals performing activities with the highest risk of transmission of tuberculosis (TB). This includes staff/students who have direct contact with a possible/potential infectious individual, have face-to-face contact with an individual capable of spreading the infection, or staff/students working with research participants or animals who may pose a risk of transmission of tuberculosis. (For example: clinical personnel having patient to patient contact, patient to health care worker (HCW), HCW to patient, and HCW to HCW)

Risk category 2 - applies to individuals performing activities with a probable risk of transmission of TB as a result of the geographic location of their work on the clinical unit or in the laboratory. (For example: Medical records personnel, registration personnel, facilities personnel, greeters, and ancillary staff in clinic settings)

Risk category 3 - applies to individuals performing activities with a possible risk of transmission of TB. These activities usually involve staff who may have indirect contact with the source of the infectious agent through airborne transmission, through the use of vehicles, accidental face-to-face contact such as the cafeteria, or an academic or administrative office.

Risk category 4 - applies to individuals performing activities with minimal risk of transmission of TB. These staff work off-site, do not travel to any site with potential source of infection and do not require face to face contact with high risk people (For example: MPIP staff)



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Health Care Worker or HCW - Meaning all paid and unpaid health care personnel who have the potential for exposure to patients and / or infectious material.

Mantoux tuberculin skin test (TST) or TB test - A test that is often used to find out if you are infected with TB bacteria. A TB skin test requires two visits with a health care provider, one visit for placement and a second visit for test reading. TST is performed by injecting a small amount of fluid (called tuberculin) into the skin on the lower part of the arm.

Two step TST (Two step) - Represents a second TST, usually done 1-3 weeks after a first negative TST. The two step approach is useful to establish a true negative baseline reaction for adults who are going to be retested periodically, such as health care workers.

TST Conversion - Documented prior NEGATIVE TST and then “conversion” to skin test POSITIVE, measured across the forearm (perpendicular to the long axis) of the arm.

Infection Control Advisor (IC Advisor) - refers to a specialist in a field related to the infection control issue in question including Infectious Disease Specialists, Pulmonologists, Immunologists, or other such specialists.

TB disease - an illness in which TB bacteria are multiplying and attacking a part of the body, usually the lungs. The symptoms of TB disease include weakness, weight loss, fever, no appetite, chills, and sweating at night. Other symptoms of TB disease depend on where in the body the bacteria are growing. If TB disease is in the lungs (pulmonary TB), the symptoms may include a bad cough, pain in the chest, or coughing up blood. A person with TB disease may be infectious and spread TB bacteria to others.

Latent TB infection (LTBI) - a condition in which TB bacteria are alive, but inactive in the body. People with latent TB infection have no symptoms, don't feel sick, can't spread TB to others, and usually have a positive TB skin test or positive TB blood test reaction. Treatment for latent TB infection should be considered to prevent TB disease.

Symptomatic- HCW experiencing one or more symptoms of active tuberculosis:

- Coughing up blood (Hemoptysis)
- Fever/chills
- Night sweats
- Persistent fatigue/ loss of appetite
- Frequent persistence cough
- Unexplained weight loss

Asymptomatic - HCW experiencing none of the symptoms of active tuberculosis listed above

Exposure - an event where infectious material/aerosol comes in contact with eyes, mouth, mucous membranes, or non-intact skin, during performance of assigned duties either as an employee or student.



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Procedure:

1. TST Administration and Reading. Only TST trained administrators may administer and read TSTs. TST reading must be done 48 to 72 hours after test placement, results must be documented in millimeters (mm) of induration. Test administrators are not permitted to read their own TST.
2. Newly hired, eligible TTUHSC El Paso employees must complete the TB screening process prior to their start of employment date or within one week of employment. All eligible personnel must participate annually.
3. TST and TB questionnaire will be done annually on employees/students who at initial testing are found to be non-reactors and are in Risk Category 1 or 2.
4. Personnel with a known positive TST will be screened yearly for the development of signs or symptoms of active Tuberculosis. Annual Chest X-rays on known positive TST will not be done unless HCW presents with signs or symptoms of TB.
5. Exposure Events: It is important to administer a TST to personnel as soon as possible in the event of a documented TB exposure. Exposed HCW will undergo TST as soon as possible to establish a baseline with a subsequent TST performed 10-12 weeks after. If HCW develops a positive skin test, a chest X-Ray will be obtained. The Infection Control Nurse shall refer all converters, regardless of chest X-Ray results, to the City of El Paso Department of Public Health TB clinic for further evaluation. Personnel already known to have a reactive TST will not be retested, however, monitoring for the development of signs or symptoms of active TB will be required.
6. TST will be administered according to the table 1 below:

Table 1

Situation	Recommended testing
No previous TST result	Two-step baseline TST
Previous negative TST result (documented or not) >12 months before new employment	Two-step baseline TST
Previous documented negative TST result ≤ 12 months before new employment	Single TST needed for baseline testing; this test will be the second-step
≥ 2 previous documented negative TSTs but most recent TST >12 months before new employment	Single TST; two-step testing is not necessary.
Previous documented positive TST result	No TST
Previous undocumented positive TST result	Two-step baseline TST(s)
Previous BCG vaccination	Two-step baseline TST(s)

- a. Interpretation of TST results is based on the measurement of the reaction in millimeters, the person’s risk of acquiring TB infection, or the risk of progression to disease if infected. See the risk stratification below (Table 2)



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Table 2 – Mantoux Tuberculin Skin Test Interpretation

Accordance with current CDC recommendation as classification of Tuberculin Reactions. (Visit www.cdc.gov/tb)

Induration of $\geq 5\text{mm}$ is considered positive in:	Induration of $\geq 10\text{mm}$ is considered positive in:	Induration of $\geq 15\text{mm}$ is considered positive in:
<ul style="list-style-type: none"> • Human immunodeficiency virus (HIV)-infected persons • Recent contacts of TB case patients • Persons with fibrotic changes on chest radiograph consistent with prior TB • Patients with organ transplants and other immunosuppressed patients (e.g., receiving the equivalent of 15 mg/d of prednisone for 1 month or more) 	<ul style="list-style-type: none"> • Recent immigrants (i.e., within the last 5 years) from countries with a high prevalence of TB • Injection drug users • <i>Residents and employees* of the following high-risk congregate settings:</i> <ul style="list-style-type: none"> • - prisons and jails • - nursing homes and other long-term facilities for the elderly • - hospitals and other health care facilities • - residential facilities for patients with acquired immunodeficiency syndrome (AIDS) • - homeless shelters • Mycobacteriology laboratory personnel • Persons with the following clinical conditions that place them at high risk: <ul style="list-style-type: none"> • - silicosis • - diabetes mellitus • - chronic renal failure • - some hematologic disorders (e.g., leukemias and lymphomas) • - other specific malignancies (e.g., carcinoma of the head, neck, or lung) • - weight loss of 10% of ideal body weight • - gastrectomy • - jejunioileal bypass • Children 5 years of age • Infants, children, and adolescents exposed to adults at high risk for developing active TB 	<ul style="list-style-type: none"> • Persons with no known risk factors for TB

- b. Any employee/student with a POSITIVE TST reading will be evaluated with a chest x-ray.
- c. If the Infection Control Nurse confirms with HCW treating physician or other suitable physician that chest x-ray is negative for active TB and the employee is **asymptomatic**, then HCW is not considered a safety concern and the Office of Occupational Health may clear the employee to begin care/work/rotations. If HCW has not been treated/evaluated for Latent TB infection, the Infection Control Nurse must counsel the HCW regarding the importance of preventive therapy, and employee will be referred to the appropriate health provider such as the Health Department TB Chest Clinic for further evaluation.
- d. Even after a HCW is cleared, if at any point signs or symptoms of active TB develop, HCW should immediate notify Infection Control Nurse or the Office of Occupational Health for further evaluation.



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- e. If the Infection Control Nurse confirms with HCW treating physician or other suitable physician that chest x-ray cannot rule out the possibility of active TB, then the Infection Control Nurse / Office of Occupational Health must **NOT clear** HCW to begin care/work/rotations until suitable physician confirms HCW has no active Tuberculosis and does not pose a Safety Concern for TTUHSC El Paso.
- f. CXR Positive / abnormal findings: Notify Infection Control Advisor immediately and refer to City of El Paso Department of Public Health TB Chest Clinic for all necessary follow up. **Remove immediately from staff and patient contact** as directed by Infection Control Advisor.
- g. When a new employee, student, resident, or faculty claims to be TST POSITIVE that person must obtain documentation of positive TST from source of testing or:
 - i. TST will be offered – if TST is positive, follow Positive TB test steps (such as section 6. b, c, d, e and f if applicable). The HCW can be excluded from referral to the Health Department TB Chest Clinic if documented completion of prophylactic treatment can be provided.
 - ii. If TST is refused, a Quantiferon Gold test **MUST** be obtained at the person's own expense. If Quantiferon Gold is refused, the person must explore possible options with Human Resources/Student Affairs and/or the Infection Control Advisor. The Office of Occupational Health will **NOT clear** HCW to begin care/work/rotations until requirements are completed.
 - iii. If Quantiferon Gold is negative consider employee/student negative. Employee/student will be required to complete TST and TB questionnaire yearly.
 - iv. If Quantiferon Gold is positive, follow Positive TB test steps (such as section 6. b, c, d, e and f if applicable.)
7. Employees/students referred to City of El Paso Department of Public Health's TB Chest Clinic will have: Initial chest x-ray(s), including interpretation, clinical evaluation, counseling and treatment as deemed necessary.
 - a. TTUHSC El Paso will pay TB Chest Clinic charges if employee has converted during direct patient care at TTUHSC El Paso ambulatory clinic. (The home department of the employee pays TB Chest Clinic fees.)
 - b. Students, residents, faculty, and staff who have positive TST at time of initial employment with TTUHSC El Paso will be personally responsible for the TB Chest Clinic charges.
8. A \$ 10.00 dollar fee will be charged to the employee's home department, for each TST re-application done by the Office of Occupational Health due to HCW inability or failure to complete TST reading within 48-72 hours.
9. Work restrictions – Active pulmonary or laryngeal TB:



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- a. HCW will be excluded from work/rotations until considered no longer infectious by treating physician.
 - b. Before returning to work/school, the HCW must provide evidence of adequate therapy completion.
 - c. HCWs who discontinue treatment before the recommended course of therapy will be excluded from work/rotations until treatment is resumed, and an adequate response to therapy is documented.
10. Work restrictions – Latent TB (LTBI):
- a. HCW receiving preventive treatment for latent TB infection will be allowed to continue usual work/rotations activities.
 - b. HCWs with Latent TB infection who cannot do or take complete full course of preventive do not need to be excluded from work, however they will be counseled about the risk of developing active TB, and will be instructed to seek evaluation promptly if symptoms develop.
 - c. Tuberculosis Chest Clinic Referral Acknowledgement Form (EP 7.7A) will be signed by any employee/student referred to TB Chest Clinic. The Office of Occupational Health will maintain documentation of every referral on HCW file.
11. Responsibility: All HCWs whose responsibilities could be affected by this policy are expected to be familiar with this program. Failure / refusal to comply with this policy will be subject to appropriate performance management. (see below)
- a. Faculty-The Chair of the department.
 - b. Resident-Program Director of the Resident’s home department
 - c. Employee-The Administrator of the department.
 - d. Student-The Associate Dean of Student Affairs
12. Enforcement: HCWs non-compliant with this policy represent a health care risk to their co-workers and to our patients/visitors and **must not work in a clinical setting**. The Office of Occupational Health manages a notification process, utilizing TTUHSC erailer emails, to notify individuals, and as required, their supervisors or clinical leaders, if an individual has not completed required TST or TB questionnaire.

Notification Process:

Notice Number	Time Sent	Notice sent to
1	One month prior to month in which testing must be completed	Employee
2	Month in which testing must be completed	Employee and Supervisor
3 and subsequent	Subsequent months until testing or questionnaire are completed.	Employee, Supervisor, Administrator, Chair, Director of Clinical Operations.



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- a. 3rd and subsequent notices will contain language which indicates that the employee **must not work in a TTUHSC El Paso clinical facility until further notice.**
- b. The Office of Clinical Affairs shall notify Medical Practice Income Plan Business Operations (MPIP) and the Office of Information Technology to disable the employee’s eraider access to the Electronic Medical Record until the individual completes the required testing or questionnaire, and provides documentation to the Office of Occupational Health.

In addition, the Office of Clinical Affairs will notify the Medical Staff Office(s) of pertinent hospital(s) that non-compliant individual **should not** be allowed to provide services on behalf TTUHSC El Paso until requirements are completed.

- c. The department manager/supervisor/chair may consider formal disciplinary action against the employee.

References:

-Center for Disease Control and Prevention. Guidelines for Preventing the Transmission of Mycobacterium Tuberculosis in Health Care Settings, 2005. MMWR Dec. 30, 05, Vol 54 (No. – RR17)

-Center for Disease Control and Prevention. Guideline for infection control in health care personnel, 1998.

- Joint Commission Infection Prevention Standard. Comprehensive Accreditation Manual, 2016. IC.02.03.01.

Policy Number: EP 1.9	Original Approval Date: 10/2005
Version Number: 7	Effective Date: 12/2016
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