

TUBERCULOSIS (TB) PREVENTION AND CONTROL - (policy)

PURPOSE

Provide guidelines and procedures for early identification and treatment of active tuberculosis (TB) disease and latent tuberculosis infection (LTBI).

POLICY

Employees, interns, students and volunteers shall present evidence of annual TB skin tests, risk assessment questionnaires and/or chest x-rays so that the department can identify persons with LTBI or active TB disease, and provide treatment

DEFINITIONS

(CMH) Infection Control Committee: Representatives from Community Mental Health (CMH,) who hold the responsibility for the Infection Control Program of CMH including the development and implementation of processes designed to reduce the risk of infections including TB

Converter: A person whose TB skin test reaction has increased in size by a minimum of 6 mm from a reaction of less than 10 mm induration to greater than 10 mm within the last 2 years.

High Risk Group: A group identified by local data collection as being more likely to become infected and develop TB disease

Induration: Palpable firm swelling that may occur at the site of a tuberculin skin test.

Infection Control/Exposure Control Coordinator: A manager or supervisor level employee who has responsibility for assuring that the Infection Control Program and System is implemented. The assigned employee has knowledge and experience working with infectious/communicable disease and health care systems.

Latent TB Infection (LTBI): LTBI is characterized by continuing presence of TB bacilli in the body following initial infection. There is typically a positive TST with absence of clinical or radiographic evidence of active TB disease. There is a life-long risk of reactivation.

Surveillance: The regular collecting, summarizing, and analyzing of data on newly diagnosed cases of any infectious disease for the purpose of identifying high-risk groups in the population, and to reduce or eliminate its transmission.

Tuberculin Skin Test (TST): The Mantoux skin test method uses purified protein derivative (PPD) containing 5 US Todd Units (TU) per test dose (0.1 ml), injected intradermally on the volar surface of the forearm.

Tuberculosis Disease: An infectious disease caused by the mycobacterium tuberculosis bacillus which may be characterized by an abnormal chest x-ray, positive skin test, the presence of TB bacilli in the sputum, and/or clinical signs and symptoms.

Two Step TST Testing: A placement of a second TST 1-3 weeks after an initial negative TST. Two step testing should be used for the initial skin testing of adults who will be retested periodically, such as health care workers.

PROCEDURE

See procedures manual

REFERENCES

- Treatment of Tuberculosis. American Thoracic Society, CDC, and Infectious Disease Society of America, MMWR, 6/20/03
- Recommendations of the Michigan Advisory Committee for the Elimination of Tuberculosis (MI-ACET). March 2003, American Lung Association
- Controlling Tuberculosis in the United States, Recommendations from the American Thoracic Society, CDC, and the Infectious Diseases Society of America. MMWR, 11/04/05, Vol. 54
- Core Curriculum on Tuberculosis, What Every Clinician Should Know Fourth Edition, 2004, U.S. Department of Health and Human Services, CDC Request for Tuberculin Skin Test
- Guidelines for Preventing the Transmission of Mycobacterium Tuberculosis in Health-Care Facilities, 2005, MMWR 12/30/05 Vol.54

EXHIBITS

- A. Washtenaw County Employee TB Skin Testing Instruction Sheet
- B. WCPHD Statement of Disease Status form
- C. Washtenaw County Annual TB Questionnaire
- D. Confirmation of Employee's TB Questionnaire
- E. X-ray Clearance
- F. CMH Request for Tuberculin (TB) Skin Test



EXHIBIT A

Washtenaw County Public Health Department Employee TB Skin Testing Instruction Sheet

1. All Employees: please read, and complete the CMH Request for Tuberculin (TB) Skin Test (Purple sheet) Exhibit F prior to receiving a TB skin test.

IF YOU HAVE HAD A PREVIOUS POSITIVE TB SKIN TEST AND/OR PRIOR DRUG THERAPY FOR LATENT TB INFECTION, OR A HISTORY OF ACTIVE TB DISEASE see step 2.

Employees are responsible for bringing the CMH Request for Tuberculin (TB) Skin Test (purple sheet) with them when having their skin test read within 48 hrs. of test. CMH nurse reading the test will take this form and forward a copy of it and the test results to the CMH HR Liaison along with a copy to the Nursing Supervisor as soon as possible.

2. Washtenaw County Public Health Department Annual TB Questionnaire (Exhibit C)

This form is to only be completed by employees who have had a previous documented positive TB skin test and/or prior drug therapy for TB infection, or a history of TB disease.

THESE INDIVIDUALS DO NOT NEED TO HAVE ANOTHER TB SKIN TEST. Employees are responsible to complete the questionnaire. They will be sent a copy for their records and the original completed questionnaire will be sent to the CMH HR Liaison at 555 Towner, 2nd FL. CMH HR Liaison will forward a copy to the TB Nurse Coordinator at Washtenaw County Public Health and the envelope will be marked "CONFIDENTIAL".

3. Employees with new positive TB skin tests (previous test was negative, now positive)

There is a required follow-up medical evaluation:

- Consult with your personal health care provider (at your own expense and within 2 weeks): you will then need to forward a completed copy of the Statement of Disease Status form, (Exhibit B) and the completed Washtenaw County Annual TB Questionnaire (Exhibit C) in addition to a chest x-ray radiology report to the CMH HR Liaison at 555 Towner, 2nd FL. CMH HR Liaison will forward a copy to the TB Nurse Coordinator at Washtenaw County Public Health and mark the envelope "CONFIDENTIAL".

**WASHTENAW COUNTY PUBLIC HEALTH DEPARTMENT
STATEMENT OF DISEASE STATUS**

The Washtenaw County Public Health Department requires you to provide the following information:

Name	Birthdate
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Address

- **PPD (Mantoux TB skin test) measured _____ mm of induration on _____ Date**
- **(A chest x-ray is indicated only if the person had a positive skin test reaction according to CDC guidelines or has symptoms suggestive of tuberculosis.)
Chest x-ray results: Attach a copy of the radiologist’s report.**
- **Physician clearance letter showing that the physician reviewed the Radiology report and the employee’s history, etc. and clears them for work.**

Print Physician Name

Sign Physician Name

Date

Phone

If you have questions please contact the TB Program office (734) 544-6700

**WASHTENAW COUNTY ANNUAL TB QUESTIONNAIRE
EMPLOYEES WITH POSITIVE TB SKIN TEST**

Step 1. All staff, interns, students, and volunteers with documented positive skin tests must complete this form and RETURN COMPLETED FORM IN A CONFIDENTIAL ENVELOPE TO:

CMH HR Liaison, 555 TOWNER 2nd Fl.

What year was your TB skin test positive? _____

What year was your last chest x-ray? _____

- | | <u>YES</u> | <u>NO</u> | <u>N/A</u> |
|---|------------|-----------|------------|
| 1. Did you take medicine for the positive skin test?
If yes, what medicine, when, and for how long? | _____ | _____ | _____ |
| <hr/> | | | |
| 2. Do you have a persistent cough now?
How long have you been coughing? | _____ | _____ | _____ |
| <hr/> | | | |
| 3. Do you have any of the following symptoms now? | | | |
| a. Fever | _____ | _____ | _____ |
| b. Chills | _____ | _____ | _____ |
| c. Night sweats | _____ | _____ | _____ |
| d. Easily fatigued | _____ | _____ | _____ |
| e. Loss of appetite | _____ | _____ | _____ |
| f. Loss of weight without weight reduction diet | _____ | _____ | _____ |
| g. Coughed up blood | _____ | _____ | _____ |
| <hr/> | | | |
| 4. Have you seen a physician and /or have a chest x-ray now
because of these symptoms? | _____ | _____ | _____ |
| <hr/> | | | |
| 5. Do you think you have any current health problems that
could be related to your latent TB infection ? | _____ | _____ | _____ |

NAME (PRINT)	BIRTHDATE
SIGNATURE	DATE
WORK #	NAME of SUPERVISOR

Reviewed by: _____ _____
DATE

Step 2: CMH HR Liaison forwards a copy to the Public Health TB Nurse Coordinator who then reviews, signs, and forwards a copy to TB Program Clerk for data entry and filing. The Public Health TB Nurse Coordinator forwards the original to Washtenaw County Human Resources Department to be filed in the employee's confidential medical file. The Public Health TB Nurse Coordinator completes the Confirmation of Employee's TB Questionnaire (exhibit D) and sends it to the CMH HR Liaison who notifies the employee's supervisor.



Confirmation of Employee's TB Questionnaire

To CMH HR Liaison:

RE:

Date:

I have reviewed the above named individual's TB questionnaire and determined that there are no contraindications related to work. I have kept a copy of the TB questionnaire on file in the TB office, and forwarded the original to be filed in the employee's Confidential Medical File at the Washtenaw County Human Resources department. This document is forwarded to the Administrative Coordinator (or person maintaining files for the Department) for data entry and tracking compliance.

TB Nurse Coordinator
(734) 544-6700



X-Ray Clearance

Date _____

Name

Birthdate

Your chest x-ray on _____ showed no evidence of active Tuberculosis disease.

If we can be of any help in the future, please contact the TB Program at (734) 544-6700

Sincerely,

TB Nurse Coordinator
WCPHD Tuberculosis Clinic

EXHIBIT F



**Washtenaw County (TB) Clinic
COUNTY EMPLOYEE FORM**



Thank you for coming to our clinic! Please ask a clinic nurse if you have any questions.

Name	Last	First	Middle Initial	Date of Birth	Male	Female
Home Address	Street			County	Phone Number	
	City/Zip Code					
Allergies				Primary Physician	Mother's Maiden Name	

Primary Worksite		Department	
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Screening Questions	YES	NO
Have you ever had a positive reaction to the Mantoux/PPD Test?		
Have you received the MMR or Chicken Pox vaccination(s) in the past 30 days?		
Have you ever been given the BCG (bacille Calmette-Guérin) vaccine?		
Are you currently taking any corticosteroid or immunosuppressant medications?		
Have you been living in the US for 5 years or more?		*
*If you were not born in the US, what is your country of Origin?		
*If you were not born in the US, what year did you come to the US?		
I have received a copy of the Notice of Privacy Practices of the Washtenaw County Public Health Department.	✓	

I have been given a copy and have read, or have had explained to me, the information contained in the most current Vaccine Information Sheet or the appropriate Important Information Statement about Tuberculosis and the skin test which is to be administered today. I have had a chance to ask questions that were answered to my satisfaction. I believe I understand the benefits and risks of the skin test. I request the skin test be given to me, or to the person named above for whom I am authorized to make this request.

- *I understand that if any staff member is exposed to my blood/body fluids, a request will be made for a blood test.
- *I also understand if I do not return in 48 – 72 hours to have the test read, I will have to repeat the test and be charged an additional administration fee.

✕ _____
Signature

_____ Date

FOR CLINIC USE ONLY	
Location: LEFT or RIGHT (Forearm)	
Administration Date:	Read date:
Manufacturer: Sanofi Pasteur Lot Number:	Induration: _____ mm Positive Negative
Nurse:	Nurse:

Criteria for Tuberculin Positivity (Circle all appropriate criteria)

≥ 5mm induration	≥ 10 mm induration	≥ 15 mm induration
<p>0 – 18 years specific:</p> <ul style="list-style-type: none"> • Children or adolescents w/ suspected TB disease • Finding on Chest x-ray consistent with active or previously active TB • Clinical evidence of TB disease <p>All Ages:</p> <ul style="list-style-type: none"> • HIV+ • Recent contact TB case • Fibrotic changes on CXR consistent w/prior TB • Organ transplant • Immunosuppressed • (equivalent of ≥ 15 mg/day of prednisone for 1 month+) 	<p>0 – 18 years specific:</p> <ul style="list-style-type: none"> • < 4 years of age • With parents who were born in a country with a high prevalence of TB cases • At increased risk of disseminated disease • Frequently exposed to adults with risk factors for TB disease: <ul style="list-style-type: none"> ○ HIV + ○ Homeless ○ Illicit drug users ○ Incarcerated ○ Migrant farm workers <p>All Ages:</p> <ul style="list-style-type: none"> • Immigrant within 5 years from a country with high prevalence of TB • Injecting illicit drugs • Residents/employees of high risk settings: <ul style="list-style-type: none"> ○ Correctional facilities ○ Long-term care ○ Hospital ○ Health Care ○ Shelters • Mycobacteriology lab personnel • Born in a country of high prevalence of TB • Traveling to a country with a high prevalence of TB • Medical conditions: <ul style="list-style-type: none"> ○ Hodgkin’s disease ○ Lymphoma ○ Diabetes Mellitus ○ Renal failure ○ Malnutrition ○ Silicosis ○ Hematological disorders such as Leukemia and Lymphoma ○ Specific malignancies such as carcinomas of the head, neck or lung ○ Weight loss ≥ 10% of ideal body weight ○ Gastrectomy ○ Jejunioileal Bypass 	<p>All Ages:</p> <ul style="list-style-type: none"> • ≥ 4 years old with no known risk factors

<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr4906a1.htm#tab7>

Converter: A negative tuberculin skin test reaction in a person who undergoes repeat skin testing, which increases in reaction size by ≥ 10 mm within 2 years is considered a skin-test conversion and is indicative of recent infection with *M. tuberculosis*.

General TB Skin Test Questions and Answers

1. What is the reason for having a tuberculin (TB) skin test?

The tuberculin skin test can show if a person has been exposed to tuberculosis (TB) germs. These germs can cause you to feel sick with TB disease or may remain in your body and not make you feel sick. When the germ doesn't cause you to feel sick it is called latent tuberculosis infection; you feel fine and cannot spread the germ to others.

2. How is the Mantoux test given?

A small amount (0.1mL) of a testing material (PPD) is placed just under the top layer of the skin on the inside of a person's forearm with a very small needle and syringe. The needle will feel like a pinprick it is not a shot or immunization. Two or three days later, the skin test reaction is measured and the results recorded by a trained health care worker. Only a trained health care worker can determine if the reaction is negative or positive.

3. May I be tested if I am pregnant?

Yes. The TB skin test is safe and reliable for pregnant women. Dangerous effects to the fetus have never been documented. Treatment of Latent TB Infection is generally delayed until 2-3 months after delivery unless the woman is likely to have been recently infected or has a high – risk medical condition such as HIV infection.

4. Should I be tested if I've been given a BCG Vaccination?

People who have had a BCG vaccination should still receive a tuberculin skin test. It is not a contraindication.

5. Are there any side effects from the Mantoux skin test?

Side effects are uncommon from the Mantoux skin test. However, a person who has been exposed to TB germs may occasionally have a sizable reaction, which may cause some mild itching, swelling or irritation. These kinds of reactions should disappear in one to two weeks. Rarely, in highly sensitized persons, blistering or ulceration may occur. This should be brought to the attention of your health care provider for treatment. Allergic reactions can occur, but are extremely rare.

6. If I have a positive TB test, will I need to be tested again?

No. Once a skin test is positive it usually remains positive. You never have to have another TB test again, but you should keep documentation of the result to show to your health care providers.

7. How should I care for the test site?

- ✓ Bathe/shower as usual. Pat the arm dry after washing.
- ✓ Do not cover with a Band-Aid
- ✓ Don't scratch, wipe or scrub the arm
- ✓ Don't apply any creams or lotions. If it itches, put a cold compress on it.
- ✓ *Remember to return 48-72 hours later to have the test reaction read!*