

SECTION: Nursing Policies

POLICY: # 434 Mantoux Testing/TST Tuberculin Skin Test

POLICY: CVHD will provide TST Mantoux (PPD) testing for persons based on risk factors. Screening of **LOW** risk persons should be replaced by targeted testing.

Targeted Skin testing: High Risk for Infection

Contacts of infectious TB cases

Recently arrived immigrants (< 5 years) from high prevalence countries

Persons living in institutional settings (shelters, nursing homes, correctional facilities, dialysis units)

Health care workers with patient contact

Medically underserved, low income groups

Infants, children, adolescents exposed to adults in high risk categories

Substance abusers, especially IVDU

High-risk racial or ethnic minority population (Asians, Hispanics, Native Americans, migrant workers)

(SOURCE: MMWR, Targeted Tuberculin Testing and Treatment of Latent Tuberculosis Infection. June 9, 2000, Vol. 49, No. RR-6)

SOURCE: Heartland Tuberculosis at a Glance-A Reference for Practitioners on Basic Tuberculosis Information. Revised December 2007)

CVHD will perform two-step TST when required for employment by an agency or health care facility.

PROCEDURE:

1. Obtain written parental consent for testing for persons under 18 years of age.
2. TST/Mantoux testing is available during regular office hours on Monday, Tuesday, Wednesday and Friday. No testing will be available on Thursday due to the time frame for reading the test results
3. Client will be instructed to return to CVHD in 48-72 hours for the reading of the test. If the client is unable to return within this time frame, the testing should not be completed and rescheduled at a time that is convenient for the client.
4. TST/Mantoux testing is the method of TB screening done at CVHD and recommended by the NDSHD.
5. ~~The required paperwork will be completed as outlined in the charting policy.~~ **Screening questions will be completed as outlined in the EMR PPD flow sheet.**
6. Explain the procedure to the client and allow them to ask any questions they may have. Client should be encouraged to sit for the testing.
7. Remove the Mantoux serum from the refrigerator. Check the label to insure the correct serum is used and that the bottle has not been opened more than 30 days. In the event that the vial has passed the manufacturers expiration date or has been opened for longer than 30 days, the vial should be discarded and a new vial opened.
8. If opening a new vial, write the date opened and your initials on the label to indicate when it was opened and who opened it.

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Storage and Handling

1. Serum must be refrigerated between 2-8 degrees Centigrade or 35-46 degrees Fahrenheit.
2. Avoid extended exposure to light since PPD will lose potency under prolonged exposure to light.
3. When opening a new vial, the date opened and RN initials must be written on the label to avoid use of serum beyond the 30 day recommendation for optimal serum potency.

Supplies needed

Mantoux (PPD) serum

Alcohol wipes

Cotton balls

27 gauge TB syringe

Gloves

Ruler with millimeter (mm) readings

Sharps disposal container

Client educational materials

Insulated cooler for outstation testing-**as per agency policy and storage and handling guidelines.**

Administration of TST/Mantoux test

1. Universal precautions will be followed
2. The inner aspect of the forearm is the preferred site of injection.
3. Test area will be cleansed with alcohol and allowed to dry.
4. 0.10cc of Mantoux (PPD) serum will be drawn up and injected intradermally in forearm test site using a 27 gauge TB syringe.
5. The needle is inserted with the bevel pointing upward into the dermal layer of the skin. Advance the needle approximately 3mm so that the entire bevel is covered and lies just under the skin and slowly inject the tuberculin solution.
6. A raised white area (wheal) 6-10 mm should be visible at the test site upon injection of the PPD serum. Test site may be measured using a mm ruler to confirm adequate size of wheal.
7. In the event of an improperly performed injection, the test should be repeated at another site.
8. If a drop of blood appears at the injection site, lightly blot it away with a 2x2 gauze pad or cotton ball. Do not cover the site with a bandage because the adhesive could cause irritation and interfere with the test results.
9. Document the date, time, and site of ~~testing on the Mantoux registration card.~~ **Tuberculin Skin Test (TST) on the EMR.**
10. The client will be instructed to return to CVHD 48-72 hours after administration for reading of the test.

Test Interpretation

1. The test must be read 48-72 hours after administration for examination of the site and interpretation of the test.
2. In the case that the client does not return to CVHD within 72 hours the test will be re-administered. **A POSITIVE reaction may be read up to one week after the initial testing.**
3. Tests administered at CVHD must be read by a CVHD nurse.
4. Clients are never allowed to interpret their own TST/Mantoux.
5. Test interpretation by a trained medical person at a site other than CVHD will only be allowed under special pre-arranged circumstances. Example: Client leaving the CVHD service area during the time that test needs to be read.
6. The test area is examined for any signs of swelling (induration) around the injection site.
7. The induration is measured transversely across the forearm.
8. The date of the reading and measurement (**in mm**) of induration are recorded on the client's ~~TB card~~. **EMR PPD Flow Sheet**
9. Do not record a reaction as POSITIVE or NEGATIVE.
10. Areas of erythema (redness) are not considered as a positive reaction.
11. **Information regarding the client's country of birth, reason for testing, Client's TB status, previous history of reaction and last PPD test must be recorded on the PPD flow sheet.**
12. Clients with a positive TST/Mantoux will be referred to a physician for a clinical evaluation and a chest x-ray.
 - ~~A person being tested to detect LTBI (Latent Tuberculosis) with threshold test from 5-15 mm, depending on the clinical circumstances.~~ **The threshold for a positive test varies from 5-15 mm depending on the clinical circumstances in the person being tested for LTBI.**
 - A person with suspected active tuberculosis having an induration of 5mm or greater **is considered to be positive.**

Two Step Tuberculin Testing

1. **In the case that the first test is positive, no further testing is needed**
2. **When the first test is negative, a second test is placed 1-3 weeks later.**
3. **A positive second test is an indication of LTBI and the client will be referred to a physician for clinical evaluation including a chest x-ray (CXR).**
4. **A negative 2nd test indicates the person is not infected at time of testing.**