

## Tuberculosis Risk Assessment

**The frequency of testing for infection with *Mycobacterium tuberculosis* will be determined by the risk assessment for each facility.**

**If the assessment indicates a facility exceeds low risk for transmission of TB, the facility medical director and local health department in the county where the facility is located should be contacted for additional guidance.**

**Low Risk** – If the facility has admitted no residents with TB, had no resident/staff TST conversions, the facility TB rate is less than the county rate, no person to person transmission has occurred, and an agreement exists to refer residents with active B for initial inpatient care, the facility is classified as *low risk*.

**Medium Risk** – A facility with TST conversion rates greater than those in the county where the facility is located is classified as *medium risk*. If the population served by the facility is not representative of the community in which the facility is located, an alternate comparison population might be appropriate.

If the facility experienced a cluster of TST conversions of residents or health care workers, the facility is classified as *medium risk*.

Facilities that serve communities with a high incidence of TB disease or that treat populations at high risk (e.g., those with human immunodeficiency virus infection or other immunocompromising conditions) or that treat residents with drug-resistant TB disease might need to be classified as *medium risk*, even if they meet the low-risk criteria.

**Potential Ongoing Transmission** – This classification should be applied to a specific group of health care workers or to a specific area of the facility in which evidence of ongoing transmission is apparent, if such a group or area can be identified. Otherwise, a classification of potential ongoing transmission should be applied to the entire setting. This classification should be temporary and warrants immediate investigation and corrective steps after a determination has been made that ongoing transmission has ceased. A new TB Risk Assessment should be performed. *The setting should be reclassified as medium risk, and the recommended timeframe for screening this medium risk classification is at least 1 year.*

During an investigation of *potential ongoing transmission* of *M. tuberculosis*, testing for *M. tuberculosis* infection should be performed every 8–10 weeks until lapses in infection controls have been corrected and no further evidence of ongoing transmission is apparent.

Procedures for contact investigations should not be confused with two-step TST, which is used for newly hired health care workers.

All **health care workers** (HCW's) and newly admitted **residents** should have a baseline two-step tuberculin skin test (TST) or one blood assay for *M. tuberculosis* (BAMT) result at each new facility, even if the setting is determined to be low risk. Establishment of a reliable baseline result can be beneficial if subsequent screening is needed after an unexpected exposure to TB. Health-care workers refer to all staff working in facilities that have the potential for exposure to *M. tuberculosis* through air space shared with persons with TB disease.

**TST conversion rate** - The percentage of a population with a converted test result (TST or BAMT) for *M. tuberculosis* within a specified period. This is calculated by dividing the number of conversions among eligible HCWs and residents in the facility in a specified period (numerator) by the number of HCWs and residents who received tests in the facility over the same period (denominator) multiplied by 100.

## CDC Glossary of Terms Related to TB Screening and Assessment

**Baseline TST or baseline BAMT** -The TST or BAMT is administered at the beginning of employment to newly hired health care workers (HCWs) and newly admitted residents. If the TST method is used, for HCWs who have not had a documented negative test result or *M. tuberculosis* during the preceding 12 months, the baseline TST result should be obtained by using the two-step method. BAMT baseline testing does not need the two-step method.

**Cluster (TB)** - A group of patients with LTBI or TB disease that are linked by epidemiologic, location, or genotyping data. Two or more TST conversions within a short period can be a cluster of TB disease and might suggest transmission within the setting. A genotyping cluster is two or more cases with isolates that have an identical genotyping pattern.

**Conversion rate** - The percentage of a population with a converted test result (TST or BAMT) for *M. tuberculosis* within a specified period. This is calculated by dividing the number of conversions among eligible HCWs in the setting in a specified period (numerator) by the number of HCWs who received tests in the setting over the same period (denominator) multiplied by 100.

**Facility** - A physical building or set of buildings.

**Health-care workers (HCWs)** - All paid and unpaid persons working in health-care settings.

***Mycobacterium tuberculosis*** - The namesake member organism of *M. tuberculosis* complex and the most common causative infectious agent of TB disease in humans. In certain instances, the species name refers to the entire *M. tuberculosis* complex, which includes *M. bovis* and *M. african*, *M. microti*, *M. canetii*, *M. caprae*, and *M. pinnipedii*.

**Tuberculosis (TB) disease** - Condition caused by infection with a member of the *M. tuberculosis* complex that has progressed to causing clinical (manifesting symptoms or signs) or subclinical (early stage of disease in which signs or symptoms are not present, but other indications of disease activity are present. The bacteria can attack any part of the body, but disease is most commonly found in the lungs (pulmonary TB). Pulmonary TB disease can be infectious, whereas extrapulmonary disease (occurring at a body site outside the lungs) is not infectious, except in rare circumstances.

**TB risk assessment** An initial and ongoing evaluation of the risk for transmission of *M. tuberculosis* in a particular health-care setting. To perform a risk assessment, the following factors should be considered: the community rate of TB, number of TB patients encountered in the setting, and the speed with which patients with TB disease are suspected, isolated, and evaluated. The TB risk assessment determines the types of administrative and environmental controls and respiratory protection needed for a setting.

**TST conversion** A change in the result of a test for *M. tuberculosis* infection wherein the condition is interpreted as having progressed from uninfected to infected. An increase of >10 mm in induration during a maximum of 2 years is defined as a TST conversion for the purposes of a contact investigation. A TST conversion is presumptive evidence of new *M. tuberculosis* infection and poses an increased risk for progression to TB disease.

**Two-step (TST) Procedure** used for the baseline skin testing of persons who will receive serial TSTs (e.g., HCWs and residents or staff of long-term-care facilities) to reduce the likelihood of mistaking a boosted reaction for a new infection. If an initial TST result is classified as negative, a second step of a two-step TST should be administered 1–3 weeks after the first TST result was read. If the second TST result is positive, it probably represents a boosted reaction, indicating infection most likely occurred in the past and not recently. If the second TST result is also negative, the person is classified as not infected.