**Logo

Description automatically generatedTuberculosis Screening**

**Date Implemented:**

**Review/Updated Date:**

**Policy**

Tuberculosis is the namesake member organism of *M. tuberculosis* complex and the most common causative infectious agent of tuberculosis (TB) disease in humans.

To comply with rules and prevent transmission of TB disease, the following baseline screening, skin testing procedures, risk assessment, and ongoing surveillance will be implemented for residents and staff.

**Definitions**

**Bacille Calmette-Guerin (BCG) Vaccination** is a vaccine for TB. BCG vaccination is used in many countries with a high prevalence of TB to prevent childhood tuberculosis meningitis and miliary disease. BCG vaccination is not generally recommended for use in the United States because of its low risk of infection, the variable effectiveness of the vaccine against adult pulmonary TB, and the potential interference with tuberculin skin test (TST) reactivity.

**Baseline TB Screening** is the screening of health care workers (HCWs) of health care facilities as defined in Iowa Administrative Code 135C or hospitals at the beginning of employment and residents upon admission for latent tuberculosis infection (LTBI) and TB disease. Baseline screening includes a symptom screen for all HCWs and residents, and a two-step TST or single interferon-gamma-release assay (IGRA) for M. tuberculosis for those persons with previous negative results.

**Employment** or **employed** is defined as hired or retained for paid or unpaid work.

**Healthcare Worker (HCW)** is any paid or unpaid person (including students) working in a health care facility defined in Iowa Administrative Code 135C or hospital, including any person who is paid either by the health care provider or hospital or paid by another entity (such as temporary agency, private duty, or independent contractors) or any volunteer who volunteers on a consistent and regularly scheduled basis for five or more hours per week. Specifically excluded from the definition are individuals such as visitors, building contractors, repair workers, or others who are in the building for a very limited purpose.

**Interferon-gamma release assay** or **IGRA** is a whole-blood test that can aid in diagnosing M. tuberculosis infection.

**Latent TB Infection** or **LTBI** is an infection with M. tuberculosis without symptoms or signs of disease having manifested.

**Mantoux** method is a skin test performed by intradermally injecting 0.1 mL of purified protein derivative (PPD) tuberculin solution into the volar or dorsal surface of the forearm.

**Serial TB Screening** means TB screening performed at regular intervals following baseline TB screening. Serial TB screening, also called annual or ongoing TB testing, consists of two components (1) assessing for current symptoms of TB disease and (2) testing for the presence of infection with M. tuberculosis by administering either a TST or single IGRA.

**Symptom screen** is a procedure used during clinical evaluation in which persons are asked if they have experienced any departure from normal in function, appearance, or sensation related to TB disease.

**TB risk assessment** is an initial and ongoing evaluation of the risk for transmission of M. tuberculosis in a particular health care setting.

**Tuberculin skin test** or **TST** is a diagnostic aid for finding M. tuberculosis infection. The Mantoux method is the recommended method to be used for TST.

**Procedures**

Risk Assessment

* Annually, the Infection Preventionist or designee will conduct a TB risk assessment, to evaluate the risk for transmission, regardless of whether a person with suspected or confirmed TB disease is expected to be encountered in the care setting.
* The risk assessment will be used to determine the types of administrative, environmental, and respiratory protection controls needed, serves as an ongoing evaluation tool of the quality of TB infection control, and identifies the need for improvements in infection control measures.
* The risk assessment must include the following:
  + The number of persons with infectious TB encountered in the facility or hospital that resulted in conducting a contact investigation of exposed HCWs or patients in the previous 12 months.
    - TB cases include those who had undiagnosed infectious pulmonary or laryngeal TB while in the care setting during the preceding year. This does not include LTBI (treated or untreated), persons with extrapulmonary TB disease, or persons with pulmonary and laryngeal TB who met criteria for noninfectiousness.

Risk Classifications are used to determine frequency of serial TB screening. Classifications may change fluidly due to an increase or decrease in the number of TB cases in the preceding year as outlined below.

* Low risk includes care settings in which persons with active TB disease are not expected to be encountered and in which exposure to TB is unlikely. Low risk includes inpatient settings with:
  + 200 or more beds, if the setting has fewer than six TB patients for the preceding year.
  + Fewer than 200 beds and fewer than three TB patients for the preceding year.
* Medium risk includes care settings in which HCW will or might be exposed to persons with active TB disease or to clinical specimens that might contain M. tuberculosis. Medium risk includes inpatient settings with:
  + 200 or more beds with six or more TB patients in the preceding year.
  + Fewer than 200 beds and three or more TB patients in the preceding year.
* Potential ongoing transmission includes care settings in which evidence of ongoing M. tuberculosis transmission exists. Potential ongoing transmission should only be used as a temporary classification that warrants immediate investigation and corrective steps. After a determination that ongoing transmission has ceased, the setting shall be reclassified as medium risk for a minimum of one year.

Baseline & Serial Screening for **HCW:**

All HCW shall receive baseline TB screening upon employment and ongoing as dictated by the risk classification identified in the annual risk assessment. The baseline TB screening consists of two components.

1. Assessing for current symptoms of active TB disease. This includes a self-evaluation of potential signs and symptoms of possible TB disease.
2. Testing including the use of a two-step TST or single IGRA to screen for infection with M. tuberculosis. The two-step process includes administration of the Mantoux testing solution with results read within 48-72 hours of administration and a second TST initiated within one to three weeks after the first TST.
   1. If the second step of the TST is not initiated within 12 months of the first TST being read, the two-step process must be restarted unless the first step is positive.
   2. HCW with a new positive TST or IGRA shall receive one radiograph result to exclude TB disease. Repeating radiographs is not necessary unless the HCW has signs or symptoms of TB disease or it is recommended by a clinician.
   3. HCW with documentation of past positive TST or IGRA and documentation of the results of a chest radiograph indicating no active TB disease, dated after the date of the positive test does not need another chest radiograph at the time of hire.
   4. Testing does not need to be performed if the HCW has a documented history of TB disease, previously positive test result for M. tuberculosis, or documentation of completion of treatment for LTBI or TB disease. A symptom screen and documentation of a previously positive TST or IGRA result can be substituted for baseline screening.
   5. Previous BCG vaccination is not a contraindication to IGRA or TST being completed. HCWs with TST reactions shall be treated similarly to those without a vaccination history. Prior BCG vaccination does not cause false-positive IGRA test results.

Serial Screening must be conducted based on the individual settings risk classification identified in their TB risk assessment.

* Low risk – after establishing baseline TB screening of HCWs, serial TB screening when the health care setting is classified as a low risk is not necessary.
* Medium risk – After establishing TB screening, health care settings classified as a medium risk shall receive serial TB screening (symptom assessment and TST or IGRA) annually, except those with a history of a positive TST or IGRA.
  + If a HCW had a positive baseline TST or IGRA, or a new positive test, or documentation of previous treatment for LTBI or TB disease, they shall receive one chest radiograph result to exclude TB disease.
  + Instead of participating in serial testing, HCWs should receive a symptom screen annually and educating HCWs about symptoms of TB disease and instructing them that any such symptoms shall be reported immediately to occupational health or the infection preventionist.
* Potential ongoing transmission – HCWs practicing in settings that are classified as potential ongoing transmission shall receive serial TB screening every eight to ten weeks until lapses in infection control have been corrected and no additional evidence of ongoing transmission is apparent. HCWs with previous positive TB test results shall only receive symptom screening.

Screening for HCWs who transfer to other health care settings may be exempt or have reduced baseline TB screening if the hiring health care setting can:

1. Determine the previous employer’s TB risk classification.
2. Have documentation of previous baseline TB screening of the new HCW.
3. Identify that the lapse of employment from the previous health care setting to the new health care setting did not exceed 90 days.

If each of the three points above are met, the hiring health care setting can use the following for baseline TB screening:

* Low risk to low risk – No baseline TB screening necessary.
* Low risk to a medium risk – No baseline TB screening necessary.
* Low or medium risk to potential ongoing transmission – No baseline TB screening necessary.
* Medium risk to low risk – Complete a new symptom screen and one TST or IGRA.
* Potential ongoing transmission to low or medium risk – Complete a new symptom screen and one TST or IGRA

Regardless of risk classification, if the lapse in employment exceeds 90 days, baseline TB screening must be completed upon hire.

Baseline & Serial Screening for **Residents**

Baseline TB screening for residents consists of two components:

1. Assessing for current symptoms of active TB disease. This may be incorporated into an admission assessment, as long as the admission assessment includes documentation of negative symptoms consistent with TB disease.
2. Using a two-step TST or single IGRA to screen for infection of M. tuberculosis. If the first of two TST was negative, the second is recommended to be completed within one to three weeks after the first TST was read. However, if the second is initiated more than 12 months after the first was read, baseline TB screening must be repeated. If the first of two TST was positive, the second TST does not need to be completed.

Upon admission, baseline TB screening must be initiated within 72 hours unless there is documentation that baseline TB screening was completed within 90 days prior to the resident’s admission.

A resident with a new positive test result shall receive one chest radiograph to exclude TB disease. If the resident previously had a positive test result, documentation of a chest radiograph after the date of the positive test indicating there is no active TB is sufficient and another chest radiograph upon admission is not necessary.

TST or IGRA tests do not need to be performed for residents with a documented history of TB disease, previous positive results, or completion of treatment for LTBI or TB disease. Documentation of previously positive test results can be substituted for baseline TST or IGRA tests.

Serial screening for residents is not recommended.

HCW Completing TB Screening includes any nurse licensed in Iowa and has been properly trained to screen for TB and perform TB testing may screen for TB and perform TB testing.

**References**

DIAL. (5 Feb. 2025). *Chapter 59 Tuberculosis Screening.* <https://www.legis.iowa.gov/docs/iac/chapter/03-19-2025.481.59.pdf>