Nevada Tuberculosis Program:

Healthcare Facilities
Tuberculosis Screening Manual

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PURPOSE OF THIS MANUAL

The purpose of this manual is to provide healthcare facilities in Nevada with direction from the Nevada Division of Public and Behavioral Health (DPBH) Tuberculosis (TB) Program on TB screening and surveillance activities that are required by state law and statutes (Nevada Administrative Code, NAC, and Nevada Revised Statute, NRS). To streamline the process of TB screening, the DPBH TB Program has also provided a set of standardized forms.

GENERAL INFORMATION

Which Healthcare Facilities Are Required to Conduct TB Screening & Surveillance Activities?

The term healthcare facility in this manual includes all types of Nevada licensed medical and/or healthcare facilities, facilities for the dependent, and homes for individual residential care that are required under Nevada law to conduct TB screening and surveillance activities for healthcare employees/personnel/workers/contractors/volunteers, paid or unpaid, herein referred to as healthcare personnel (HCP), formerly referred to as healthcare workers (HCW), and residents/patients/clients within their facilities. The full laws can be found at

- **NRS/NAC 449**: Delineates definitions and specifies which licensed facilities will perform TB screening activities; https://www.leg.state.nv.us/NRS/NRS-449.html#NRS449 and https://www.leg.state.nv.us/NAC/NAC-449.html
- **NAC 441A:** Delineates how TB screening activities should be performed; https://www.leg.state.nv.us/NAC/NAC-441A.html#NAC441A .

Nevada Administrative Code (NAC) 441A.375 states that "Medical facilities, facilities for the dependent, homes for individual residential care and outpatient facilities" must conduct TB screening and surveillance activities to include the "Management of cases and suspected cases; surveillance and testing of employees; counseling and preventive treatment."

NAC 441.380 states that before "admission of persons to certain medical facilities, facilities for the dependent or homes for individual residential care" TB activities must be completed of "Testing; respiratory isolation; medical treatment; counseling and preventive treatment; documentation."

A **Medical facility** is defined by **Nevada Revised Statutes (NRS) 449.0151** to include the following 16 subtypes of facilities:

1. A surgical center for ambulatory patients
2. An obstetric center
3. An independent center for emergency medical care
4. An agency to provide nursing in the home
5. A facility for intermediate care
6. A facility for skilled nursing
7. A facility for hospice care
8. A hospital
9. A psychiatric hospital
10. A facility for the treatment of irreversible renal disease
11. A rural clinic
12. A nursing pool
13. A facility for modified medical detoxification
14. A facility for refractive surgery
15. A mobile unit
16. A community triage center

Definitions of the medical facilities subtypes, facilities for the dependent, homes for individual residential care and outpatient facilities can be found within NAC 449 and NRS 449.

What Is the Definition of Healthcare Personnel (HCP) as It Pertains to the TB Laws in the NAC and NRS?

In this manual, the term "Healthcare Personnel" (HCP) refers to the following categories as defined by the Centers for Disease Control and Prevention (CDC)*. It is the healthcare facility's responsibility to determine which healthcare personnel should be included in their facility's infection control plan, as well as the initial and annual TB Screening activities.

- Administrators or managers
- Bronchoscopy staff
- Chaplains
- Clerical staff
- Computer programmers
- Construction staff
- Correctional officers
- Craft or repair staff
- Dental staff
- Dietician or dietary staff
- ED staff
- Engineers
- Food service staff
- Health aides
- Health and safety staff
- Homeless shelter staff
- Housekeeping or custodial staff
- Infection-control staff
- ICU staff
- Janitorial staff
- Laboratory staff
- Maintenance staff
- Morgue staff
- Nurses
- Outreach staff
- Pathology laboratory staff
- Patient transport staff, including EMS
- Pediatric staff
- Pharmacists
- Phlebotomists
- Physical and occupational therapists
- Physicians (assistant, attending, fellow, resident, or intern), including anesthesiologists, pathologists, psychiatrists, or psychologists
- Public health educators or teachers
- Public safety staff
- Radiology staff
- Respiratory therapists
- Scientists
- Social workers
- Students (e.g., medical, nursing, technicians, and allied health)
- Technicians (e.g., health, laboratory, radiology, and animal)
- Veterinarians
- Volunteers

In addition, an HCP who performs any of the following activities should also be included in the TB screening program:

- Entering patient rooms or treatment room whether or not a patient is present;
- Participating in aerosol-generating or aerosol producing procedures (e.g. bronchoscopy, sputum induction, and administration of aerosolized medications);
- Participating in suspected or confirmed *M. tuberculosis* specimen processing; or
- Installing, maintaining, or replacing environmental controls in areas in which persons with TB disease are encountered.

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* CDC MMWR publications regarding HCP TB testing referenced here are: (1) Centers for Disease Control and Prevention. "Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, 2005." MMWR 2005;54(No. RR-17): 1-121; and, (2) Sosa LE, Njie GJ, Lobato MN, et al. "Tuberculosis Screening, Testing, and Treatment of U.S. Health Care Personnel: Recommendations from the National Tuberculosis Controllers Association and CDC, 2019." MMWR Morb Mortal Wkly Rep 2019;68:439–443.

TUBERCULOSIS SCREENING AND TUBERCULOSIS SURVEILLANCE

For clarification purposes, the DPBH TB Program has differentiated screening and surveillance activities to be defined as follows.

Tuberculosis Screening

"TB Screening" includes diagnostic tests that are used to diagnose TB disease. The most common TB screening test is the tuberculin skin test (TST) or interferon-gamma releasing assay (IGRA) blood test. The TST (2-step TST) or IGRA is given to a resident/patient upon admittance into a healthcare facility and to HCP before initial employment activities begin. TB screening activities may also include an individual TB risk assessment, a signs and symptoms questionnaire, a medical evaluation, a chest X-ray, and additional diagnostic testing. After initial admittance TB screening activities, residents/patients should receive TB tests on an annual basis (Exceptions – see page 10 of this manual for testing law review, NAC 441A.380). For HCP, after initial placement/hire TB screening activities, the serial or annual TB testing requirements depend on the healthcare facility's infection control policy.

Note: There may be instances when TB screening activities do not include an actual TB test (TST or IGRA) but use methods to watch for the development of pulmonary symptoms. These non-testing TB screening methods will include the use of a *Signs and Symptoms Questionnaire*. A specific questionnaire has been created by the DPBH TB Program and its use is strongly recommended. HCP and patient/resident questionnaires can be found on pages 21-25 of this manual or at http://dpbh.nv.gov/Programs/TB Resources, Forms page.

Tuberculosis Surveillance

"Tuberculosis Surveillance" is the ongoing systematic collection and analysis of TB data through mandatory case reporting by local laboratories and healthcare providers. The provision of data leads to actions to prevent and control TB disease. The data is reported in the form of confidential morbidity reports or lab results and contain information on the disease diagnosis or suspect diagnosis (results may be a positive TST, positive IGRA, other laboratory results, or abnormal chest X-rays). These positive tests are then confidentially sent to the appropriate local health authority (health department or state) for follow up and further investigation.

- When it is determined that an individual does have suspected TB or active TB disease, the local health authorities provide individual case management and treatment services. They also have the capability to conduct outbreak investigations, as needed.
- There are several types of healthcare professionals that are required by Nevada law (NAC 441A.225-255) to report suspect or active cases to their local health authority:
  - Healthcare Providers;
  - Director or other person in charge of a medical laboratory;
  - Director or other person in charge of a medical facility or a correctional facility;
  - Parole Officer or Probation Officer;
  - Principal, Director or other person in charge of a school or child care facility;
  - Person in charge of a blood bank;
  - Registered pharmacist and intern pharmacist;
  - Health insurer who requires or requests an applicant for a policy of life insurance to be subjected to any medical, clinical or laboratory test that then produces evidence consistent with the presence of tuberculosis; and

- Any person who reasonably suspects or knows that another person has tuberculosis and knows that the other person is not receiving healthcare services from a healthcare provider.

Note: Not specifically included in the NAC language, an individual with a case of active TB disease may be treated by a primary healthcare provider in lieu of the local health authority; however, the local health authority must still be notified of any suspect/active TB cases within 24 hours of discovery.

Nevada Law Pertaining to Healthcare Personnel (HCP) TB Screening and TB Surveillance Activities

Nevada Administrative Code, NAC 441A.375, designates HCP specified TB-related activities to be conducted by "**Medical facilities, facilities for the dependent, homes for individual residential care and outpatient facilities: Management of cases and suspected cases; surveillance and testing of certain employees and independent contractors; counseling and preventive treatment**." Below is a copy of NAC 441A.375 that was revised and approved by the Nevada Board of Health in June 2019 (updated regulations pending publication):

1. A case having tuberculosis or a suspected case considered to have tuberculosis in a medical facility, a facility for the dependent or an outpatient facility must be managed in accordance with the guidelines of the Centers for Disease Control and Prevention as adopted by reference in paragraph (h) of subsection 1 of NAC 441A.200.

2. A medical facility, a facility for the dependent, a home for individual residential care or an outpatient facility shall maintain surveillance of employees and independent contractors of the facility or home, who provide direct services to a patient, resident or client of the facility or home, for tuberculosis and tuberculosis infection.

3. Before an employee or independent contractor described in subsection 2 first commences to work in a medical facility, a facility for the dependent, a home for individual residential care or an outpatient facility the employee or independent contractor must have a:
    a. Physical examination or certification from a healthcare provider which indicates that the employee or independent contractor is in a state of good health and is free from active tuberculosis and any other communicable disease;
    and
    b. Tuberculosis screening test within the preceding 12 months, including persons with a history of bacillus Calmette-Guerin (BCG) vaccination. If the employee has only completed the first step of a 2-step Mantoux tuberculin skin test within the preceding 12 months, then the second step of the 2-step Mantoux tuberculin skin test or other single-step tuberculosis screening test must be administered.

4. A tuberculosis screening test must be administered to each employee or independent contractor described in subsection 3 not later than 12 months after the last day of the month on which the employee accepted the offer of employment, and annually thereafter, unless the medical director of the facility or a designee thereof determines that the risk of exposure is appropriate for a lesser frequency of testing and documents that determination at least annually. The risk of exposure and corresponding frequency of

examination must be determined by following the guidelines of the Centers for Disease Control and Prevention as adopted by reference in paragraph (h) of subsection 1 of NAC 441A.200.

***NOTE* - Important 2019 updated CDC recommendations apply to the above:**
NAC 441A.200, subsection 2, provides for "the most current version of a recommendation, guideline or publication adopted by reference pursuant to subsection 1 which is published will be deemed to be adopted by reference." In May 2019, the CDC published updates to the referenced subsection 1 (h) "Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Settings, 2005." The DPBH has determined acceptable inclusion of these updated CDC recommendations for discontinuation of annual TB testing of certain HCP in the absence of exposure or ongoing transmission. A healthcare facility must still complete, and retain as documentation, an annual facility TB risk assessment and its approval by the medical director or designee thereof. These updated recommendations are discussed on pages 11 & 12 of this manual or may be found in "Tuberculosis Screening, Testing, and Treatment of U.S. Health Care Personnel: Recommendations from the National Tuberculosis Controllers Association and CDC, 2019". Sosa LE, Njie GJ, Lobato MN, et al. MMWR Morb Mortal Wkly Rep 2019;68:439–443.

5. An employee or independent contractor described in subsection 2 who has a documented history of a positive tuberculosis screening test shall, not later than 6 months after commencing employment, submit to a chest radiograph or produce documentation of a chest radiograph* and be declared free of tuberculosis disease based on the results of that chest radiograph. Such an employee or an independent contractor:

    a. Is exempt from screening with blood or skin tests or additional chest radiographs; and
    b. Must be evaluated at least annually for signs and symptoms of tuberculosis.

6. An employee or independent contractor described in subsection 2 who develops signs or symptoms which are suggestive of tuberculosis must submit to diagnostic tuberculosis screening testing for the presence of active tuberculosis as required by the medical director or other person in charge of the applicable facility or home, or his or her designee.

7. Counseling and preventive treatment must be offered to a person with a positive tuberculosis screening test in accordance with the guidelines adopted by reference in paragraph (g) of subsection 1 of NAC 441A.200.

8. A medical facility shall maintain surveillance of employees and independent contractors described in subsection 2 for the development of pulmonary symptoms. A person with a history of tuberculosis or a positive tuberculosis screening test shall report promptly to the infection control specialist, if any, or to the director or other person in charge of the medical facility if the medical facility has not designated an infection control specialist, when any pulmonary symptoms develop. If symptoms of tuberculosis are present, the employee or independent contractor must be evaluated for tuberculosis.

9. As used in this section, "outpatient facility" has the meaning ascribed to it in NAC 449.999417.

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* Although the CDC recommends up to six months for obtaining or receiving an interpretable chest radiograph copy, the DPBH TB Program recommends obtaining a chest x-ray/radiograph within 30 days.

Nevada Law Pertaining to Resident/Patient/Client TB Screening and TB Surveillance Activities

Nevada Administrative Code, NAC 441A.380, designates resident/patient/client specified TB-related activities for "**Admission of persons to certain medical facilities, facilities for the dependent or homes for individual residential care: Testing; respiratory isolation; medical treatment; counseling and preventive treatment; documentation.**" Below is a copy of NAC 441A.380 that was revised and approved by the Nevada Board of Health in June 2019 (updated regulations pending publication):

1. The staff of a facility for the dependent, a home for individual residential care or a medical facility for extended care, skilled nursing or intermediate care shall:
   a. Before admitting a person to the facility or home, determine if the person: (1) Has had a cough for more than 3 weeks; (2) Has a cough which is productive; (3) Has blood in his or her sputum; (4) Has a fever which is not associated with a cold, flu or other apparent illness; (5) Is experiencing night sweats; (6) Is experiencing unexplained weight loss; or (7) Has been in close contact with a person who has active tuberculosis.
   b. Within 24 hours after a person, including a person with a history of bacillus Calmette-Guerin (BCG) vaccination, is admitted to the facility or home, ensure that the person has a tuberculosis screening test, unless:
      1) The person had a documented tuberculosis screening test within the immediately preceding 12 months, the tuberculosis screening test is negative and the person does not exhibit any of the signs or symptoms of tuberculosis set forth in paragraph (a); or
      2) There is not a person qualified to administer the test in the facility or home when the patient is admitted…the staff of the facility or home shall ensure that the test is performed within 24 hours after a qualified person arrives at the facility or home or within 5 days after the patient admitted, whichever is sooner.
   c. If the person has only completed the first step of a two-step Mantoux tuberculin skin test within the 12 months preceding admission, ensure that the person has a second two-step Mantoux tuberculin skin test or other single-step tuberculosis screening test.

2. Except as otherwise provided in this section, after a person has had an initial tuberculosis screening test, the facility or home shall ensure that the person has a tuberculosis screening test annually thereafter, unless the medical director or a designee thereof determines that the risk of exposure is appropriate for testing at a more frequent or less frequent interval and documents that determination at least annually.

3. A person with a documented history of a positive tuberculosis screening test shall, upon admission to a facility described in subsection 1, submit to a chest radiograph or produce documentation of a chest radiograph and be declared free of tuberculosis disease based on the results of that chest radiograph. Such a person is exempt from skin testing and routine annual chest radiographs, but shall be evaluated at least annually.

4. If the staff of the facility or home determines that a person has had a cough for more than 3 weeks and that the person has one or more of the other symptoms described in paragraph (a) of subsection 2, the person may be admitted to the facility or home if the staff keeps the person in respiratory isolation.

5. If a test or evaluation indicates that a person has suspected or active tuberculosis, the staff of the facility or home shall not admit the person to the facility or home or, if he or she has already been admitted, shall not allow the person to remain in the facility or home, unless the facility or home keeps the person in respiratory isolation. The person must be kept in respiratory isolation until a health care provider:

   a. Determines, in accordance with the guidelines adopted by reference in paragraph (h) of subsection 1 of NAC 441A.200, that the person does not have active tuberculosis or certifies that, although the person has active tuberculosis, he or she is no longer infectious; and
   b. Coordinates a plan for the treatment and discharge of the person with the health authority having jurisdiction where the facility is located.

6. A healthcare provider shall not determine that the person does not have active tuberculosis or certify that a person with active tuberculosis is not infectious pursuant to subsection 5 unless:
   a. The healthcare provider has obtained not less than three consecutive negative sputum AFB smear results, with the specimens being collected at intervals of 8 to 24 hours and at least one specimen collected during the early morning; and
   b. If the healthcare provider determines that the person likely suffers from active tuberculosis disease:
      1) The person has been on a prescribed course of medical treatment for at least 14 days and his or her clinical symptoms are improving; and
      2) The healthcare provider has determined that the tuberculosis is not likely to be drug resistant.

7. If a test indicates that a person who has been or will be admitted to a facility or home has active tuberculosis, the staff of the facility or home shall ensure that the person is treated for the disease in accordance with the recommendations of the Centers for Disease Control and Prevention for the counseling of, and effective treatment for, a person having active tuberculosis, as adopted by reference in paragraph (g) of subsection 1 of NAC 441A.200.

8. The staff of the facility or home shall ensure that counseling and preventive treatment are offered to each person with a positive tuberculosis screening test in accordance with the guidelines of the Centers for Disease Control and Prevention as adopted by reference in paragraph (h) of subsection 1 of NAC 441A.200.

9. The staff of the facility or home shall ensure that any action carried out pursuant to this section and the results thereof are documented in the person's medical records.

What Is the Definition of the Medical Director as It Pertains to the NAC 441A.375 and 380?

The term **medical director** is not uniformly defined within the NAC and NRS but is defined for specific settings within the NAC and NRS. Generally, the definition of medical director is a physician licensed to practice medicine in the state of Nevada who provides guidance and leadership regarding medical practice and policies within a healthcare organization.

EXCEPTIONS FOR TB TESTING ACTIVITIES

Are There Exceptions in the Nevada TB Law That State Individuals, HCP or Residents/Patients, Can Be Excepted from TB Testing with a TST or IGRA?

Yes, there are three common exceptions for TB testing upon initial hire/employment/placement or admittance:

1. If the individual has valid documentation of a one-step TST within the past 12 months, then only the 2nd part of the two-step TST is required to be completed. This second step TST must be completed at the time of hire, pre-duties, or admittance to a facility (*not* within 12 months of the previous TST).

2. If an individual has a documented past allergic or adverse reaction to the TST (tuberculin skin test), then an IGRA blood test (QuantiFERON® or TSPOT®) should be offered in place of the skin test.

3. If an individual has a *documented*:
    a) history of past TB disease or latent TB infection (LTBI), whether LTBI was treated or untreated;
    b) past positive IGRA or TST result that a healthcare provider believes represents a true positive result and is not suspected of false positivity.

    Then the following screenings should be performed in place of actual IGRA/TST testing:

    - Evaluated for signs and symptoms and complete a *Signs and Symptoms Questionnaire* (see DPBH TB created forms on pages 21 through 25 of this manual).

    - Chest X-ray results must also be consulted and documented. Existing documentation of the chest x-ray does not need to be repeated unless the individual has signs and symptoms of active TB disease or if recommended by the healthcare provider.

Note: Past BCG vaccination is not an exception to the law. An IGRA blood test should be offered in place of the TST.

Annual TB Testing: Are There Provisions in the Law That State a Healthcare Facility Can Use an Alternate TB Screening Activity Besides Annual TB Testing for HCP and Residents/Patients?

Yes, there is a provision that is based on CDC guidance. The healthcare facility must complete and retain as documentation an annual facility TB risk assessment that is approved by the medical director or designee thereof (see page 9 of this manual for a definition). Using the CDC's *Facility Risk Assessment Worksheet* is highly recommended and can be found in the CDC's "Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, 2005". MMWR 2005;54(No. RR-17): 1-121, Appendix B. See pages 13 and 14 of this manual for additional information.

UPDATES TO THE CDC GUIDELINES FOR HEALTHCARE PERSONNEL TB TESTING (Updated May 2019)

Are the Recent May 2019 Updated CDC Guidelines for TB Testing HCP Applicable to Nevada Law?

Yes, the May 2019 updated CDC guidelines for HCP TB testing (*excludes resident/patient testing*) may be incorporated into a healthcare facility's infection control policies if the facility's medical director (see page 9 of this manual for a definition) or designee thereof determines this acceptable for the facility and completes an annual healthcare facility *Facility Risk Assessment Worksheet*; see pages 13-14 for more information. The annually completed facility risk assessment guides infection control policies and assists in evaluation for potential exposure and ongoing transmission within the facility.

Note:

- Per the 2019 updated recommendations, a facility's designation as Low-risk or Medium-risk is no longer a consideration for TB testing frequency of HCP.
- The 2019 updated recommendations are intended for Healthcare Personnel (HCP) and do not specifically reference resident/patient/client or inmate testing. Per Nevada law, NAC 441A.380, a facility must have a medical director (see page 9 of this manual for a definition) or designee thereof determine a lesser frequency for resident/patient serial TB testing based on its annual facility TB risk assessment.

2019 updated CDC guidelines for HCP TB testing, as found in "Tuberculosis Screening, Testing, and Treatment of U.S. Health Care Personnel: Recommendations from the National Tuberculosis Controllers Association and CDC, 2019." Sosa LE, Njie GJ, Lobato MN, et al. MMWR Morb Mortal Wkly Rep 2019;68:439–443, **recommend the following**:

- Continued emphasis on completion of an annual Facility TB Risk Assessment;
    - This provides information for Infection Control policy and practice.
- Baseline (preplacement) TB screening to include;
    - TB test with IGRA or TST (2-step TST in Nevada);
    - Symptoms evaluation;

      And,
- Administering a baseline (pre-placement) Individual TB Risk Assessment*;
    - Individual TB risk assessments only to be used upon hire/pre-placement;
    - This provides information useful in interpreting TB testing results.
- Not performing routine annual TB testing of HCP;
    - Facilities may consider serial TB testing for select HCP groups.
- Conducting annual TB education for *all* HCPs;
    - Training should include information about individual TB exposure risks (community and occupational).
- Strongly encourage treatment for all untreated LTBI in HCPs.

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*The Individual TB Risk Assessment is a new recommendation and should be used pre-placement only. The *Nevada Healthcare Personnel Baseline TB Individual Risk Assessment* form can be found at the DPBH website, or page 26 of this manual. A CDC developed individual TB risk assessment can be found on the CDC website.

IMPORTANT:
The facility must still complete an annual *Signs and Symptoms Questionnaire* for all individuals who have a documented history of a positive TB test. Please see page 21 of this manual for instructions on administering the Nevada *Signs and Symptoms Questionnaire*.

After known exposure to a person with potentially infectious TB disease and *without* the use of adequate personal protection, postexposure screening and testing of HCP must be conducted.

Comparison of CDC HCP TB Testing Recommendations, 2005 and 2019

The following table has been retrieved from the 2019 MMWR at MMWR Morb Mortal Wkly Rep 2019;68:439–443

TABLE. Comparison of 2005* and 2019† recommendations for tuberculosis (TB) screening and testing of U.S. health care personnel (HCP)

Category	2005 Recommendation	2019 Recommendation
Baseline (preplacement) screening and testing	TB screening of all HCP, including a symptom evaluation and test (IGRA or TST) for those without documented prior TB disease or LTBI.	TB screening of all HCP, including a symptom evaluation and test (IGRA or TST) for those without documented prior TB disease or LTBI (unchanged); individual TB risk assessment (new).
Postexposure screening and testing	Symptom evaluation for all HCP when an exposure is recognized. For HCP with a baseline negative TB test and no prior TB disease or LTBI, perform a test (IGRA or TST) when the exposure is identified. If that test is negative, do another test 8–10 weeks after the last exposure.	Symptom evaluation for all HCP when an exposure is recognized. For HCP with a baseline negative TB test and no prior TB disease or LTBI, perform a test (IGRA or TST) when the exposure is identified. If that test is negative, do another test 8–10 weeks after the last exposure (unchanged).
Serial screening and testing for HCP without LTBI	According to health care facility and setting risk assessment. Not recommended for HCP working in low-risk health care settings. Recommended for HCP working in medium-risk health care settings and settings with potential ongoing transmission.	Not routinely recommended (new); can consider for selected HCP groups (unchanged); recommend annual TB education for all HCP (unchanged), including information about TB exposure risks for all HCP (new emphasis).
Evaluation and treatment of positive test results	Referral to determine whether LTBI treatment is indicated.	Treatment is encouraged for all HCP with untreated LTBI, unless medically contraindicated (new).

Abbreviations: IGRA = interferon-gamma release assay; LTBI = latent tuberculosis infection; TST = tuberculin skin test.
* Jensen PA, Lambert LA, Iademarco MF, Ridzon R. Guidelines for preventing the transmission of *Mycobacterium tuberculosis* in health-care settings, 2005. MMWR Recomm Rep 2005;54(No. RR-17). https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5417a1.htm.
† All other aspects of the Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, 2005 remain in effect, including facility risk assessments to help guide infection control policies and procedures.

Retention of the Annual Facility Risk Assessment

Per NAC regarding annual TB testing, the CDC's *Facility Risk Assessment Worksheet* must be completed annually and determined to be accurate by the medical director of the facility or designee thereof. This document should be kept on file and available at the facility for inspection. See excerpt of the law below:

NAC 441A.375, 3 (b) …An annual tuberculosis screening test must be administered thereafter, unless the medical director of the facility or a designee thereof determines that the risk of exposure is appropriate for a lesser frequency of testing and *documents that determination at least annually*.

FACILITY RISK ASSESSMENT WORKSHEET & TIPS

Where Can I Find More Information on the CDC's Healthcare Facility TB Risk Assessment and the Processes to Complete the Worksheet?

A healthcare facility, facility for the dependent, outpatient facility, medical facility for extended care, skilled nursing or intermediate care may elect not to annually TB test HCP or residents if the facility completes an annual facility TB risk assessment and it is reviewed by the medical director (see page 9 of this manual for a definition) or designee thereof. However, annual TB screening using a TB signs and symptoms questionnaire must continue to be conducted for those with a documented positive TB test or history of LTBI/TB. Healthcare facilities may utilize the *Nevada Tuberculosis Signs and Symptoms Questionnaire* found on pages 21-25 of this manual.

More information on the CDC's *TB Risk Assessment Worksheet (Appendix B)* and guidelines can be found in the 2005 MMWR, "Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, 2005." MMWR 2005;54(No. RR-17): 1-121. This 2005 MMWR can be retrieved from the CDC webpage: https://www.cdc.gov/mmwr/pdf/rr/rr5417.pdf

Additionally, the DPBH TB website provides these helpful resources for completing the risk the *Facility Risk Assessment Worksheet*:

- CDC Form: Healthcare Facility Risk Assessment Worksheet (Appendix B)
- CDC Form: Healthcare Facility Risk Classification (Appendix C)
- Annual Nevada TB Incidence, Publication: TB Fast Facts (2007 – current)
- CDC Reports, Publications: Guidelines for Preventing the Transmission of Mtb in Healthcare Settings, 2005
- CDC Reports, Publications: TB Screening, Testing, and Treatment of HCP in U.S., 2019

Tips for Completing the CDC's Healthcare Facility TB Risk Assessment Worksheet

1. Healthcare facilities can use this worksheet template form for settings related to HCP or to residents/patients.
   Note: A separate form is needed for each of the two groups, annually.
2. A healthcare facility's risk classification for a setting is:
   -Low-Risk
   -Medium-Risk
   -Potential Ongoing Transmission
   Note: Per the 2019 updated recommendations, a facility's designation as Low-risk or Medium-risk is no longer a consideration for TB testing frequency of HCPs.
3. A healthcare facility may have more than one setting and, therefore, more risk classifications within its facility or network of facilities.
   - For each separate facility, setting, or department, a separate *Facility Risk Assessment Worksheet* must be completed annually.

- For example, a large hospital that has isolation rooms, an ER, and a lab that manipulates sputum will need to annually complete a separate *Facility Risk Assessment Worksheet* for each of these settings/departments.

4. A facility's, or setting's, risk classification may change at any time during the year. Evidence of exposure or ongoing transmission should be addressed at that time and should not wait for the annual TB facility risk assessment.

5. When completing responses to areas of the CDC's *Facility Risk Assessment Worksheet*:
   - Yes/No or requested responses are required if the healthcare facility has the applicable equipment/service/department.
   - Not Applicable/NA responses may be appropriate for some facilities without the applicable equipment/service/department.

6. Documents must be completed by staff who are authorized to do so:
   - The CDC's *Facility Risk Assessment Worksheet* can only be completed by a facility's "medical director or a designee thereof" (**NAC 441A. 375. 3b, & NAC 441A.380. 2**).
     - Example: The medical director appoints the Infection Control personnel.

REPORTING LAW UPDATES: TB AND LATENT TB INFECTION (LTBI)

Updated Language to NAC 441A.350 Related to TB & LTBI Reporting, June 2019

Below is the language approved by the State Board of Health, effective June 26, 2019:

NAC 441A.350 A healthcare provider shall notify the health authority within 24 hours of discovery of any case having active tuberculosis or any suspected case considered to have active tuberculosis who:

1. Fails to submit to medical treatment or who discontinues or fails to complete an effective course of medical treatment prescribed by a healthcare provider in accordance with the recommendations, guidance and publications adopted by reference pursuant to NAC 441A.200;
2. Has shown a positive reaction to the Mantoux tuberculin skin test [TST] or another diagnostic test [IGRA] recognized by the United States Food and Drug Administration; or
3. Has completed a course of medical treatment prescribed by a health care provider in accordance with the guidelines adopted by reference in paragraph (g) of subsection 1 of NAC 441A.200.

NAC 441A.350 subsection 2 contains updated language requiring reporting latent tuberculosis infection (as represented by a positive TST or IGRA test) for *all* individuals, not solely for those under five years of age as previously required. Subsection 3 is a new addition to the law for reporting of treatment completion.

The Significance of the Updated LTBI Reporting Law (NAC 441A.350; 2)

Individuals with a positive TST or IGRA test, absence of sign or symptoms indicative of TB disease, and a recent chest X-ray (CXR) result not suggestive of TB-related pathology are considered infected with *Mycobacterium tuberculosis* bacteria, also termed latent TB infection (LTBI), and not experiencing active, infectious TB disease.

The state of Nevada and the DPBH recognize the importance of reporting LTBI for the surveillance of LTBI prevalence and the risk of progression to active TB disease within the Nevada population. Therefore, in June 2019, the State Board of Health approved the expansion of LTBI reporting to include *all* individuals with a positive TB test result (TST or IGRA). Formerly, reporting of LTBI was mandated for children less than five years of age. For more information on risk factors associated with acquiring TB infection, risk factors associated with the progression of LTBI into active TB disease, diagnosis of LTBI, and treatment of LTBI, please visit the CDC TB website or consult with your local health department TB program or state TB program.

The updated CDC guidelines for HCP TB testing includes identifying LTBI in HCPs and encouraging treatment completion for all untreated LTBI in HCPs. Below is an excerpt from the May 2019 updated guidelines:

> "Health care facilities should aim to identify LTBI among health care personnel and encourage LTBI treatment. Health care facilities are urged to collaborate with public health agencies to assist in achieving this goal. Public health agencies can serve as a source for technical assistance, medical consultation regarding diagnosis and treatment of LTBI, and clarification of state or local regulations, surveillance requirements, and guidelines."
>
> Retrieved from: https://www.cdc.gov/mmwr/volumes/68/wr/pdfs/mm6819a3-H.pdf .

The treatment of individuals diagnosed with LTBI and with a high risk of progression to active TB disease is encouraged by the DPBH TB Program as well as by the CDC. Treatment for LTBI provides the benefit of decreasing an individual's likelihood of progressing to active disease over his or her lifetime. Noteworthy, in the United States, more than 80% of TB disease cases originate from LTBI progression to active TB disease.

What LTBI Information Should Be Reported and How?

Reporting of LTBI should be made to the local health department or state and include:

- *Latent Tuberculosis Infection (LTBI) Confidential Report Form*, recommended and available at the DPBH TB Forms webpage or found in Appendix B of this manual, pages 50-51; or an alternative form in accordance with reporting requirements per NAC 441A.225-240.
- TB test results and date (TST or IGRA);
- Chest X-ray results and date;
- Treatment status (referral for treatment: to whom; or, on-site: treatment regimen).

The Report of Completed Course of Medical Treatment (NAC 441A.350; 3)

Reporting the completion of treatment for TB disease and LTBI facilitates the communication between HCPs and public health authorities. Through this report, assessment of the treatment adequacy and the treatment outcome can be monitored and provide accurate required national disease surveillance data.

NEVADA TUBERCULOSIS TESTING RECORD INSTRUCTIONS

Documentation

Complete a *TB Test Record* with the HCP or resident/patient. This TB test record should be similar to the DPBH TB Program template. This template is recommended and can be found on pages 17-18 for residents/patients and pages19-20 for HCPs. Ensure all fields are correctly and completely filled out. Once completed, place the validated document in HCP or resident/patient's confidential file.

Copies of valid documentation of the following should be obtained and kept confidentially on file (if applicable):

- Baseline *Individual TB Risk Assessment* (2019 updated CDC recommendation);
- Past TB test results;
- Chest X-ray reports/results;
- Signs and symptoms questionnaires;
- Records/documents of past TB or LTBI treatment.

Individuals with Subsequent Positive TB Tests Results

Please see the **flowcharts** on pages 27-30 of this manual to assist with the appropriate steps.

Latent TB Infection (LTBI)

The healthcare facility should record the date and include any supporting documentation when they refer an HCP or resident/patient for a chest X-ray, healthcare provider examination, diagnosis, and education/counseling for recommended LTBI treatment.

Reporting of **LTBI is required by Nevada law since June 2019**. Reporting of LTBI should be made to the local health department or state and include:

- *Latent Tuberculosis Infection (LTBI) Confidential Report Form,* available at the DPBH TB Forms webpage or found in Appendix B of this manual, pages 50-51;
- TB test results and date (TST or IGRA);
- Chest X-ray results and date;
- Treatment status (referral: to whom; or, on-site: treatment regimen).

Active or Suspected TB Disease

In cases involving suspected or confirmed active TB disease, the healthcare facility should follow the CDC recommendations for isolation and infection control found in the 2005 MMWR, "Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, 2005." MMWR 2005;54(No. RR-17): 1-121; accessed at: http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5417a1.htm.

Reporting suspected or confirmed cases of active TB disease is required by Nevada law. Reporting must be in accordance with NAC 441A.225-240 (general requirements and contents for report). TB disease is a nationally notifiable infectious disease. The healthcare facility should record the date and include any supporting documentation when they submit a report of active or suspected TB disease to the local health department or state.

- Reporting Form**:** Confidential Morbidity Report Form, available at the DPBH TB Forms webpage or found in this manual pages 52-53, Appendix C.

Individuals with a History of Past Positive TB Test (Documented)

Please use the *Nevada Tuberculosis Signs and Symptoms Questionnaire* instructions and forms found on pages 21-25 of this manual.

Nevada Tuberculosis Testing Record:
Resident/Patient

The Nevada Administrative Code (NAC) regarding testing for Tuberculosis (TB) requires that a resident/patient be tested upon admittance into a healthcare facility/home within 24 hours; however, certain exceptions can be made. To review the approved exceptions, see **NAC 441A.380** at http://www.leg.state.nv.us/NAC/NAC-441A.html.

Residents or patients who are admitted into a healthcare facility must complete a TB screening test; either the two-step TB skin test (TST) or an approved TB screening blood test (IGRA: QFT or T-spot) **(NAC 441A.380)**. If the individual has a valid documented allergic/adverse reaction to the TB skin test, they need to instead be offered a blood test.

If an individual has a previously documented positive TB screening test or a documented diagnosis of TB or Latent Tuberculosis Infection (LTBI), regardless of treated or untreated, upon admission shall submit to a chest X-ray or produce a documentation of a chest X-ray and be declared free of TB disease based on the results of that chest X-ray. The facility should perform TB screening activities that include the use of the following form instead of a TST or IGRA: *Nevada Tuberculosis Signs and Symptoms Questionnaire*. A repeat chest X-ray is only required if symptoms develop or it is recommended by a healthcare provider (per www.cdc.gov/mmwr/pdf/rr/rr5417.pdf p. 51). A chest x-ray should not be used in place of the *Signs and Symptoms Questionnaire*.

If the resident/patient has a positive TB screening test, the facility or home shall ensure that counseling and preventative treatment are offered to each person **(NAC 441A.380, subsect. 8).**

I understand the above information and consent to a two-step TB skin test or a blood test and any treatment and care as required by law. By doing this, I will be complying with **NAC 441A.380** which mandates that an individual being admitted into a healthcare facility must complete a TB test within the required timeframe.

Name: _____ Date of Birth: _____
(Please Print)

Resident/Patient or
Authorized Representative's Signature: _____ Date: _____

Authorized Medical Screener's Signature: _____ Date: _____

Authorized Medical Screener's Name: _____

Nevada Tuberculosis Testing Record:

Resident/Patient

Date Test Given (mm/dd/yyyy): _____ Site: ☐ Left Arm ☐ Right Arm Date Test Read (mm/dd/yyyy): _____ Interpretation: ☐ Negative ☐ Positive	Test Given by (Name of Individual & Facility): _____ Test Read by (Name of Individual & Facility): _____ Measurement of Induration: (mm) _____
SECOND STEP OF THE TWO-STEP TB SKIN TEST:	
Date Test Given (mm/dd/yyyy): _____ Site: ☐ Left Arm ☐ Right Arm Date Test Read (mm/dd/yyyy): _____ Interpretation: ☐ Negative ☐ Positive	Test Given by (Name of Individual & Facility): _____ Test Read by (Name of Individual & Facility): _____ Measurement of Induration: (mm) _____ Induration Guide: www.cdc.gov/tb/publications/LTBI/diagnosis.htm
BLOOD TEST (IGRA):	
Type of IGRA (T-spot or QFT): _____ Date Blood Drawn (mm/dd/yyyy): _____ Blood Drawn by (Name of Individual&Facility): _____	Date Results Reported to Facility-by Lab or Resident/Patient (mm/dd/yyyy): _____ Results Reported to (Department Name and Individual): _____ Interpretation: ☐ Negative ☐ Positive
CHEST X-RAY (CXR):	
(The CXR should only be performed if an individual has a positive skin/blood test. The CXR is used to rule out active TB disease) **NOTE: If active TB is suspected do CXR – do not wait for TST or IGRA result, may be falsely negative**	
Date of CXR (mm/dd/yyyy): _____	Interpretation: ☐ Normal ☐ Abnormal If Abnormal, Date Referred for Medical Evaluation (mm/dd/yyyy): _____

LTBI OR ACTIVE TB DIAGNOSIS:

LTBI: Date resident/patient was referred for and provided LTBI education/information by healthcare facility. (Report sent to local health department pursuant to NAC 441A.350 via Nevada's *Confidential Report Form-Latent Tuberculosis Infection*, see pages 50-51, Appendix B, of the *Healthcare Facilities TB Screening Manual*).
(mm/dd/yyyy): _____

Active TB: Date local health district/TB clinic was notified of suspect or active TB case pursuant to NAC 441A. 325 and NAC 441A. 350. (Report sent to local health department via Nevada's *Confidential Morbidity Report*, see pages 52-53, Appendix C, of the *Healthcare Facilities TB Screening Manual*).

(mm/dd/yyyy): _____

Last Name: _____ First Name: _____ DOB: _____

Nevada Tuberculosis Testing Record:

Healthcare Personnel/Employee

Prior to employment the healthcare personnel/employee must complete a baseline tuberculosis (TB) test, either the two-step TB skin test (TST) or an approved TB screening blood test (IGRA: QFT or T-spot) **NAC 441A.375**. If the individual has a valid documented allergic/adverse reaction to the TB skin test, they need to instead be offered a blood test.

Baseline (preplacement) TB screening should include an Individual TB Risk Assessment, per updated CDC recommendations for Healthcare personnel TB testing (MMWR, 2019, https://www.cdc.gov/mmwr/volumes/68/wr/pdfs/mm6819a3-H.pdf).

Counseling and preventive treatment is highly recommended and must be offered to a person with a positive TB screening test **(NAC 441A.375; 7, formerly 5).**

If the healthcare personnel/employee has a previously documented positive TB screening test or a documented diagnosis of TB or Latent Tuberculosis Infection (LTBI), regardless if treated or untreated, the facility should perform annual TB screening activities that includes the use of the following form instead of the TST or IGRA: *Nevada Tuberculosis Signs and Symptoms Questionnaire*. A repeat chest X-ray is only required if symptoms develop or it is recommended by a clinician (p. 51, *MMWR* , 2005, www.cdc.gov/mmwr/pdf/rr/rr5417.pdf). A chest X-ray should not be used in place of the *Signs and Symptoms Questionnaire*.

A healthcare personnel/employee who is a suspect case of TB (tests positive for Tuberculosis or has tested positive in the past) may not begin work until he/she is deemed non-infectious, pursuant to **NAC 441A.360** and **NRS 441A.120.**

Healthcare personnel/employees are not required by law to be treated for LTBI.

I understand the above information and consent to a two-step TB skin test or a blood test and any treatment and care as required by law. By doing this, I am complying with **NAC 441A.375** which mandates that a new healthcare personnel/employee in a healthcare facility must have a physical examination before initial employment and a completed two-step TST or IGRA TB test.

Name: _____ Date of Birth: _____
(Please Print)

Healthcare Personnel/Employee's Signature: _____ Date: _____

Authorized Medical Screener's Signature: _____ Date: _____

Authorized Medical Screener's Name: _____

Nevada Tuberculosis Testing Record:
Healthcare Personnel/Employee

Date Test Given (mm/dd/yyyy): _____ Site: ☐ Left Arm ☐ Right Arm Date Test Read (mm/dd/yyyy): _____ Interpretation: ☐ Negative ☐ Positive	Test Given by (Name of Individual & Facility): _____ Test Read by (Name of Individual & Facility): _____ Measurement of Induration: (mm) _____
SECOND STEP OF THE TWO-STEP TB SKIN TEST:	
Date Test Given (mm/dd/yyyy): _____ Site: ☐ Left Arm ☐ Right Arm Date Test Read (mm/dd/yyyy): _____ Interpretation: ☐ Negative ☐ Positive	Test Given by (Name of Individual & Facility): _____ Test Read by (Name of Individual & Facility): _____ Measurement of Induration: (mm) _____ Induration Guide: www.cdc.gov/tb/publications/LTBI/diagnosis.htm
BLOOD TEST (IGRA):	
Type of IGRA (T-spot or QFT): _____ Date Blood Drawn (mm/dd/yyyy): _____ Blood Drawn by (Name of Individual&Facility): _____	Date Results Reported to Facility-by Lab or HCW (mm/dd/yyyy): _____ Results Reported to (Department Name and Individual): _____ Interpretation: ☐ Negative ☐ Positive
CHEST X-RAY (CXR):	
(The CXR should only be performed if the individual has a positive skin/blood test. The CXR is used to rule out active TB disease.) **NOTE: If active TB is suspected do CXR – do not wait for TST result, may be false negative**	
Date of CXR (mm/dd/yyyy): _____	Interpretation: ☐ Normal ☐ Abnormal If Abnormal, Date Referred for Medical Evaluation (mm/dd/yyyy): _____
LTBI OR ACTIVE TB DIAGNOSIS:	
LTBI: Date resident/patient was referred for and provided LTBI education/information by healthcare facility. (Report sent to local health department pursuant to NAC 441A.350 via Nevada's *Confidential Report Form-Latent Tuberculosis Infection*, see pages 50-51, Appendix B, of the *Healthcare Facilities TB Screening Manual*). (mm/dd/yyyy): _____ Active TB: Date local health district/TB clinic was notified of suspect or active TB case pursuant to NAC 441A. 325 and NAC 441A. 350. (Report sent to local health department via Nevada's *Confidential Morbidity Report*, see pages 52-53, Appendix C, of the *Healthcare Facilities TB Screening Manual*). (mm/dd/yyyy): _____ **Last Name:_____ First Name:_____ DOB: _____**	

NEVADA TUBERCULOSIS SIGNS AND SYMPTOMS QUESTIONNAIRE INSTRUCTIONS

Completing the Signs and Symptoms Questionnaire

The *Signs and Symptoms Questionnaire* **cannot** be solely self-completed. It may be completed in one of two ways:

1. Conducted in an interviewer/interviewee manner where a staff person who has received appropriate training asks the questions and completes the questionnaire.
   Or
2. Filled out by the individual (HCP/employee or resident/patient); however, a second trained staff member must review and sign off.

Once the *Signs and Symptoms Questionnaire* is completed, reviewed and signed, it should be placed in the resident/patient or healthcare personnel/employee's secure file at the facility.

Training for Administering the Signs and Symptoms Questionnaire

Training of staff should include information to provide adequate knowledge of:

- the medical terminology used in the questionnaire;
- the transmission of *M. tuberculosis* (TB) and the TB disease process;
- the risk factors associated with TB infection and progression to TB disease;
- the signs and symptoms of TB disease.

Note: Evidence (documentation) of a staff member's adequate training in the signs and symptoms of TB disease is strongly recommended.

Nevada Tuberculosis Signs and Symptoms Questionnaire

(Resident/Patient)

Last Name: _____ First Name: _____

DOB: _____Age:_____

Interpreter needed ☐ Yes ☐ No

Language _____ Interpreter Name and Number _____

1. Country of Birth ☐ U.S. ☐ Other_____	**Notes related to assessment:** _____ _____
2. If not born in the U.S.: When did the individual arrive in the U.S.? Month _____ Year _____ When was last BCG received? _____	_____ _____ _____ _____ _____
3. Has the individual lived or extensively traveled outside of the U.S.? ☐ Yes ☐ No	**If YES, Where/When/How long:** _____ _____ _____
4. Month & Year of last TST/IGRA (circle which test) Date: _____ **Results:** ☐ Negative ☐ Positive	**Reason for TST/IGRA:** _____ _____ **Results documented in file?** ☐ Yes ☐ No
5. Has the individual had a chest X-ray in last five years? ☐ Yes ☐ No Year taken:_____	**Reason for chest X-ray:** _____ _____ **Results documented in file?** ☐ Yes ☐ No
6. Has the individual been in close contact with a person sick with TB? ☐ Yes ☐ No	**If YES, Where/When/How long:** _____ _____ _____
7. Has the individual ever been treated for TB? ☐No ☐Not sure ☐Active TB ☐LTBI (TB Infection) Where: _____ Year _____ How Long? _____	**Describe treatment and medications:** _____ _____ _____ _____ _____ _____
8. Does the individual have an immunocompromised condition? ☐ Yes ☐ No	**Comments:** _____ _____ _____ _____

9. Is the patient currently on any medications ☐ Yes ☐ No	**Comments:**_____ _____ _____
10. Does the individual have the following risk factors? (check the box for YES) ☐ Been homeless or lived/worked in a shelter ☐ Lived/worked in a nursing home ☐ Been an inmate or worked in a jail/prison ☐ Worked in the healthcare field ☐ Alcohol use, recreational drug use, smokes ☐ Consumed unpasteurized milk products ☐ **NONE**	**Comments:**_____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____
11. Does the individual have any of the following symptoms? (checked box = YES) ☐ Cough > three weeks ☐ Fevers ☐ Night Sweats ☐ Fatigue ☐ Loss of Appetite ☐ Loss of Weight Usual Average Weight: _____ Weight Today: _____ ☐Other_____ ☐ **NONE**	**Specify any YES answers:** _____ _____ _____ _____ _____ _____ _____ _____

I understand I am completing this *Signs and Symptoms Questionnaire* (in place of a TB skin test or blood test) to comply with **NAC 441A.380,** which states, "After a person has had an initial tuberculosis screening test, the facility or home shall ensure that the person has a single tuberculosis screening test annually thereafter."

I understand that with a positive TB test or a medical evaluation indicating I am suspected of active TB, I am not allowed to be admitted into the facility or home based on **NAC 441A.380**. If I have already been admitted, I understand I cannot remain in the facility or home, unless I am kept in respiratory isolation (Negative air pressure room or AII room), and that I will be kept in isolation until a healthcare provider determines that I do not have active tuberculosis or certifies that I am no longer infectious.

By signing this document, I agree the information I have reported is true and accurate to the best of my knowledge, and I consent to any necessary tests and evaluations to rule out active tuberculosis and also consent to any treatment and care prescribed to me as mandated by **NAC 441A.355.**

Resident or Patient Signature: _____ Date: _____
(or Authorized Representative's Signature)

Authorized Medical Screener's Signature: ___ _____ Date: _____

Authorized Medical Screener's Name: _____

Nevada Tuberculosis Signs and Symptoms Questionnaire

(Healthcare Personnel/Employee)

Last Name _____ **First Name** _____

DOB: _____ **Age**:_____

1. Country of Birth ☐ U.S. ☐ Other_____	**Notes related to assessment:** _____ _____ _____
2. If not born in the U.S.: When did the individual arrive in the U.S.? Month _____ Year _____ When was last BCG received? _____	_____ _____ _____ _____ _____
3. Has the individual lived or extensively traveled outside of the U.S.? ☐ Yes ☐ No	**If YES, Where/When/How long:** _____ _____ _____
4. Month & Year of last TST/IGRA (circle which test) Date: _____ **Results:** ☐ Negative ☐ Positive	**Reason for TST/IGRA:** _____ _____ **Results documented in file?** ☐ Yes ☐ No
5. Has the individual had a chest X-ray in last five years? ☐ Yes ☐ No Year_____	**Reason for chest X-ray:** _____ _____ **Results documented in file?** ☐ Yes ☐ No
6. Has the individual been in close contact with a person sick with TB? ☐ Yes ☐ No	**If YES, Where/When/How long:** _____ _____ _____
7. Has the individual ever been treated for TB? ☐No ☐Not sure ☐Active TB ☐LTBI Where: _____ Year _____ How Long? _____	**Describe treatment and medications:** _____ _____ _____ _____ _____ _____
8. Does the individual have an immunocompromised condition? ☐ Yes ☐ No	**Comments:** _____ _____ _____ _____

9. Does the individual have the following risk factors? (check the box for YES) ☐ Been homeless or lived/worked in a shelter ☐ Lived/worked in a nursing home ☐ Been an inmate or worked in a jail/prison ☐ Worked in the healthcare field ☐ Alcohol use, drug use, smokes ☐ Consumed unpasteurized milk products ☐ **NONE**	**Comments:** _____ _____ _____ _____ _____ _____ _____ _____ _____ _____
10. Does the individual have any of the following symptoms? (check the box for YES) ☐ Cough > three weeks ☐ Fevers ☐ Night Sweats ☐ Fatigue ☐ Loss of Appetite ☐ Loss of Weight Usual Average Weight: _____ Weight Today: _____ ☐ Other_____ ☐ **NONE**	**Specify any YES answers:** _____ _____ _____ _____ _____ _____ _____ _____

I understand I am completing this *Signs and Symptoms Questionnaire* (in place of a Tuberculosis skin test or blood test) to comply with **NAC 441A.375** which states that TB screening must take place "Before initial employment…and…A single annual tuberculosis screening test must be administered thereafter."

I understand that with a positive TB test, if/when any pulmonary symptoms develop, I am required by **NAC 441A.375** to immediately report to the infection control specialist, if any, or to the director or the person in charge of the medical facility if the medical facility has not designated an infection control specialist.

By signing this document, I agree the information I have reported is true and accurate to the best of my knowledge, and I consent to any necessary tests and evaluations to rule out active Tuberculosis and also consent to any treatment and care prescribed to me as mandated by **NAC 441A.355**.

Healthcare Personnel/Employee's Signature: _____ Date: _____

Authorized Medical Screener's Signature: _____ Date: _____

Authorized Medical Screener's Name: _____

Nevada Healthcare Personnel Baseline Tuberculosis (TB) Individual Risk Assessment

Healthcare Personnel (HCP) should be considered at increased risk for TB if any of the following statements are marked "YES":

Check the appropriate risk factor boxes below.

If LTBI test result is positive and active TB disease is ruled out,
LTBI treatment is strongly recommended.

Non-U.S.-born or temporary residence ≥ 1 month in a country with a high TB rate. YES ☐ NO ☐

- Includes countries other than the United States, Canada, Australia, New Zealand, or Western and North European countries.
- Interferon Gamma Release Assay is preferred over Tuberculin Skin Test for non-U.S.-born persons.

Immunosuppression, current or planned, including YES ☐ NO ☐

HIV infection; immunosuppressive treatment with TNF-alpha antagonist (e.g., infliximab, etanercept, or other), chronic steroids (equivalent of prednisone ≥15 mg/day for ≥1 month) or other immunosuppressive medication; organ transplant recipient.

Close contact with someone who has had infectious TB disease since the last TB test. YES ☐ NO ☐

HCP Name: _____

Date Assessed: _____

Reviewer Name & Title: _____

Date Assessment reviewed: _____

This individual risk assessment was adapted for use in Nevada from the *California Tuberculosis Risk Assessment* document created by the California TB Controllers Association, 2015, www.ctca.org, and the *HCP Baseline Individual TB Risk Assessment* created by the Centers for Disease Control and Prevention, 2019, www.cdc.gov/tb .

This publication was supported by a grant NU52PS004681 funded by the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services.

Resident/Patient

Tuberculosis Testing Flowchart

All residents/patients must receive a two-step TST (skin test) or the IGRA (blood test) before being admitted into the facility, regardless of the facility's annual Risk Assessment determination*.

INSTRUCTIONS

Follow the flowchart to determine the actions to be taken for each new resident/patient.

(If resident/patient has documented 1st step of TST in prior 12 months, proceed to "**2nd Step TST**" below).

*If resident/patient has had two-step TST or the IGRA test completed in prior 12 months **AND** has valid documentation of negative TB result, no further test or evaluation is needed before admittance.

**If resident/patient has valid documentation of past positive TB test, use the "Nevada Signs and Symptoms Questionnaire" to rule out active TB (pages 21-25 of this manual). Further testing or evaluation may be needed.

Symptoms

- Night sweats
- Chills
- Cough-progresses in frequency & production of mucous
- Hemoptysis, chest pain
- Fatigue
- Extreme weight loss
- Fever

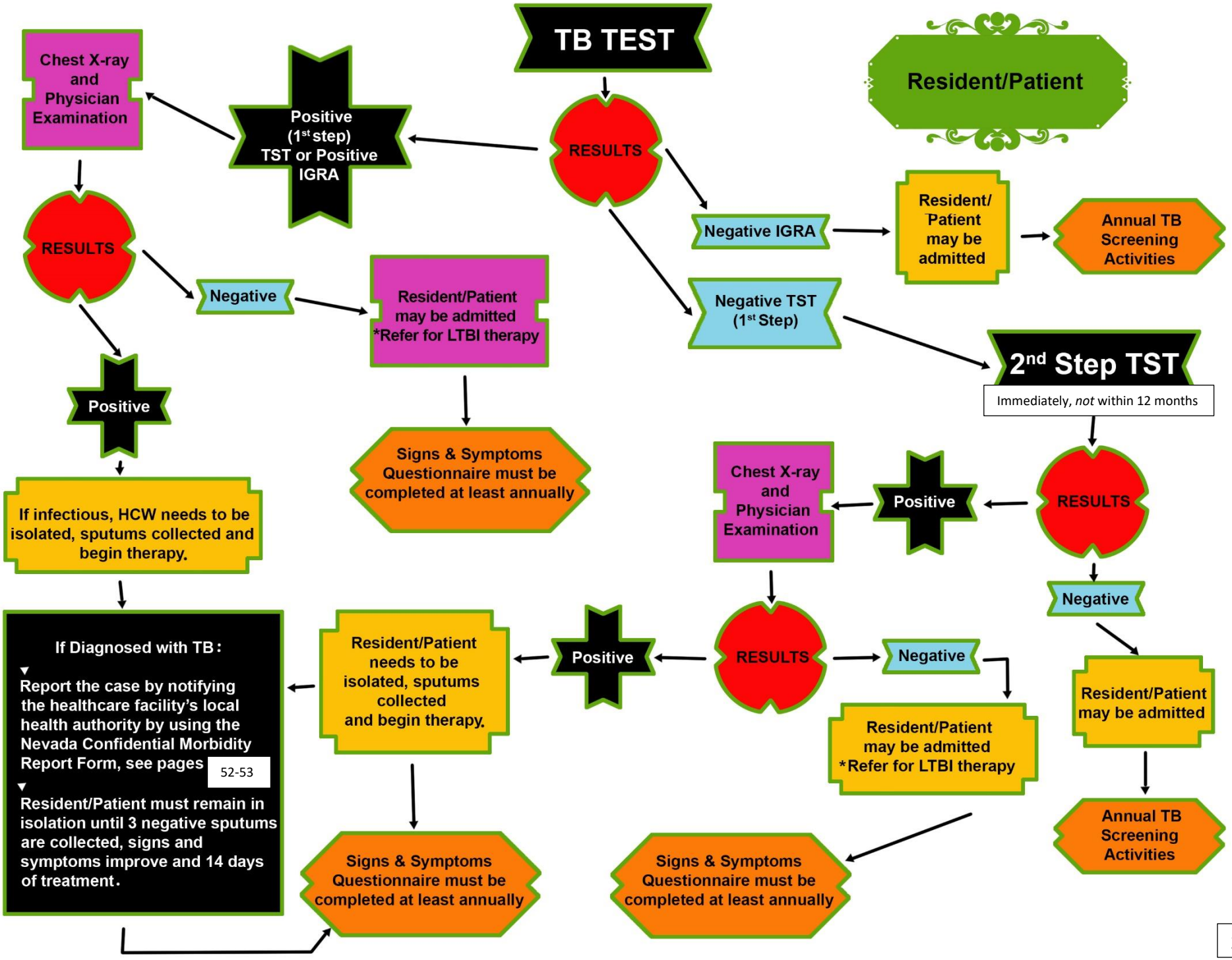
Testing/Retesting Frequency

- On admittance
- Annually
- Post exposure
- If individual becomes symptomatic
- Determination of facility's Medical Director

At least annually, the healthcare facility must complete TB screening activities which can include TB tests, the signs and symptoms questionnaire and/or the facility's annual Risk Assessment Worksheet.

TB screening activities may be determined based on the facility's annual Risk Assessment Classification; however the Signs and Symptom Questionnaires MUST still be completed for any individual with a positive TB test.

Note: A repeat chest x-ray is not required along with the annual Signs and Symptoms Questionnaire, unless there are reported signs or symptoms of active disease, or it is recommended by a clinician.


TB TEST
Resident/Patient
Chest X-ray and Physician Examination
Positive (1st step) TST or Positive IGRA
RESULTS
Negative IGRA
Resident/ Patient may be admitted
Annual TB Screening Activities
RESULTS
Negative
Resident/Patient may be admitted *Refer for LTBI therapy
Negative TST (1st Step)
2nd Step TST
Immediately, not within 12 months
Positive
Signs & Symptoms Questionnaire must be completed at least annually
Chest X-ray and Physician Examination
Positive
RESULTS
If infectious, HCW needs to be isolated, sputums collected and begin therapy.
Negative
If Diagnosed with TB:
Report the case by notifying the healthcare facility's local health authority by using the Nevada Confidential Morbidity Report Form, see pages 52-53
Resident/Patient must remain in isolation until 3 negative sputums are collected, signs and symptoms improve and 14 days of treatment.
Resident/Patient needs to be isolated, sputums collected and begin therapy.
Positive
RESULTS
Negative
Resident/Patient may be admitted
Resident/Patient may be admitted *Refer for LTBI therapy
Signs & Symptoms Questionnaire must be completed at least annually
Signs & Symptoms Questionnaire must be completed at least annually
Annual TB Screening Activities

HealthCare Personnel/Employee (HCP)

Tuberculosis Testing Flowchart

All HCW must receive a two-step TST (skin test) or the IGRA (blood test) before employment activities begin, regardless of the facility's annual Risk Assessment determination.

*Healthcare Personnel/Employees (HCP) transferring from one healthcare facility to another, will need further assessment. (For CDC guidance, refer to pages 12-13 of the "Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, 2005," *Morbidity and Mortality Weekly Report.* http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5417a1.htm.)

INSTRUCTIONS:

Follow the flowchart to determine the actions to be taken for each new Healthcare Personnel/Employee (HCP).
(If HCP/Employee has documented 1st step of TST in prior 12 months, proceed to "**2nd Step TST**" below).

*If HCP/Employee has had physical exam and two-step TST or the IGRA test completed in prior 12 months **AND** has valid documentation of negative TB result, no further test or evaluation is needed before HCP's start date. However, not applicable if following MMWR 2019 guidance.

**If HCP/Employee has valid documentation of past positive TB test, use the "*Nevada Signs and Symptoms Questionnaire"* to rule out active TB (pages 21-25 of this manual). Further testing or evaluation may be needed.

Symptoms

- Night sweats
- Chills
- Cough-progresses in frequency & production of mucous
- Hemoptysis, chest pain
- Fatigue
- Extreme weight loss
- Fever

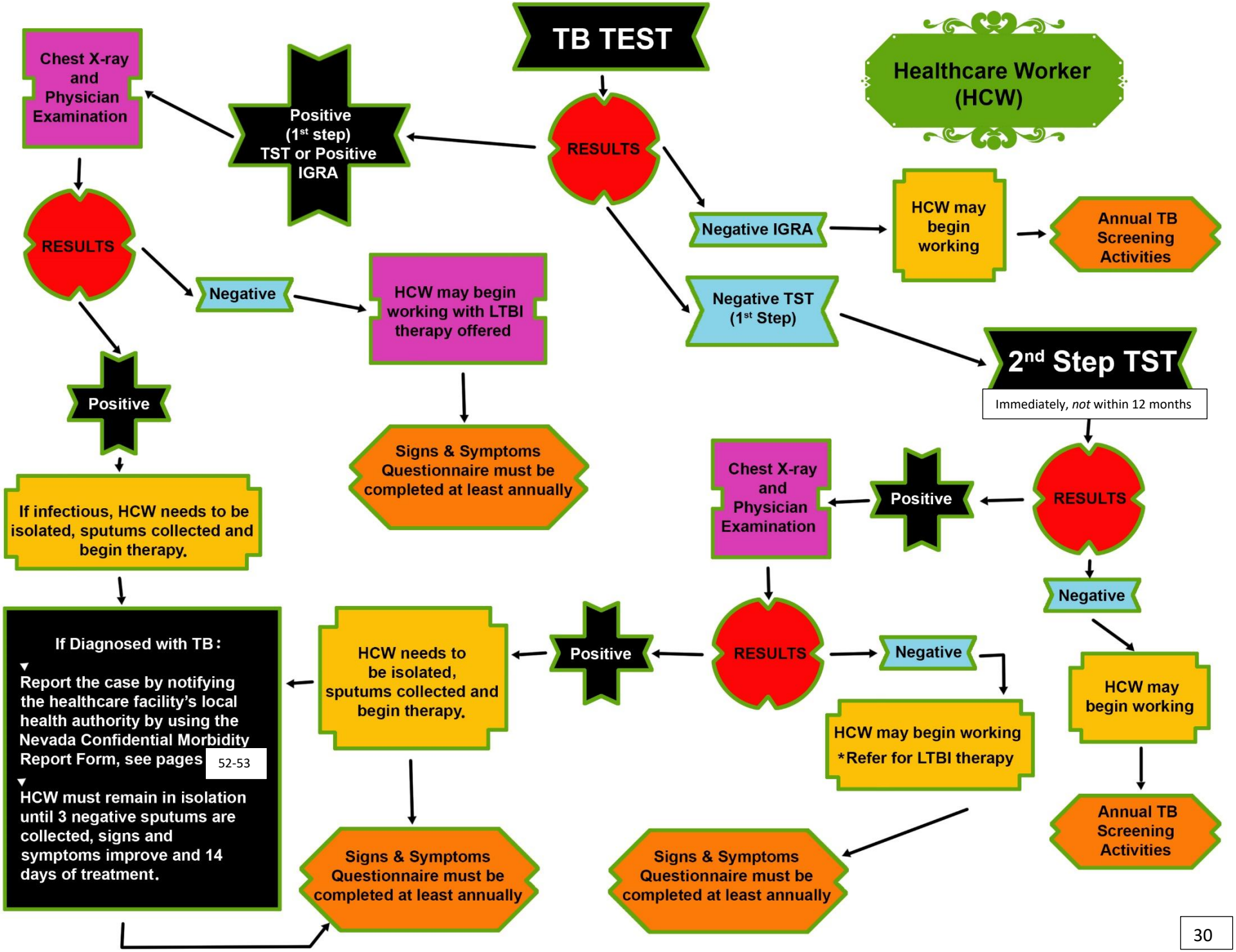
Testing/Retesting Frequency

- On admittance
- Post exposure
- If individual becomes symptomatic
- Annually, or,
- Determination of facility's Medical Director

At least annually, the healthcare facility must complete TB screening activities which can include TB tests, the signs and symptoms questionnaire and/or the facility's annual Risk Assessment Worksheet.

TB screening activities may be determined based on the facility's annual Risk Assessment Classification; however the Signs and Symptom Questionnaires MUST still be completed for any individual with a positive TB test.

Note: A repeat chest x-ray is not required along with the Signs and Symptoms Questionnaire, unless there are reported signs or symptoms of active disease, or it is recommended by a clinician.


TB TEST
Healthcare Worker (HCW)
RESULTS
Positive (1st step) TST or Positive IGRA
Chest X-ray and Physician Examination
RESULTS
Negative
HCW may begin working with LTBI therapy offered
Signs & Symptoms Questionnaire must be completed at least annually
Positive
If infectious, HCW needs to be isolated, sputums collected and begin therapy.
If Diagnosed with TB:
Report the case by notifying the healthcare facility's local health authority by using the Nevada Confidential Morbidity Report Form, see pages 52-53
HCW must remain in isolation until 3 negative sputums are collected, signs and symptoms improve and 14 days of treatment.
HCW needs to be isolated, sputums collected and begin therapy.
Signs & Symptoms Questionnaire must be completed at least annually
Negative IGRA
HCW may begin working
Annual TB Screening Activities
Negative TST (1st Step)
2nd Step TST
Immediately, not within 12 months
RESULTS
Positive
Chest X-ray and Physician Examination
RESULTS
Negative
HCW may begin working
Annual TB Screening Activities
Positive
Negative
HCW may begin working
*Refer for LTBI therapy
Signs & Symptoms Questionnaire must be completed at least annually

FREQUENTLY ASKED QUESTIONS (FAQs)

For additional information and guidance on TB skin or blood tests, treatment for LTBI, healthcare facility TB risk assessment, environmental controls, respiratory protection, and cough-inducing and aerosol-generating procedures, please refer to the following CDC published documents: "Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, 2005," *Morbidity and Mortality Weekly Report* [54(RR17):1-141, December 30, 2005], https://www.cdc.gov/mmwr/pdf/rr/rr5417.pdf . And, "Tuberculosis Screening, Testing, and Treatment of U.S. Health Care Personnel: Recommendations from the National Tuberculosis Controllers Association and CDC, 2019." Sosa LE, Njie GJ, Lobato MN, et al. MMWR Morb Mortal Wkly Rep 2019;68:439–443.

Please note, the questions/answers listed below are either recommendations from CDC or are requirements of the DPBH TB program based on the laws in the Nevada Administrative Code (NAC) and Nevada Revised Statutes (NRS).

1. **What is the relationship between the State of Nevada's Health Care Quality and Compliance (HCQC) bureau and healthcare facilities in Nevada?**

   Health Care Quality and Compliance (HCQC) is the governmental bureau for the state of Nevada that licenses medical and other health facilities in Nevada in accordance with Nevada Revised Statutes (NRS) Chapter 449 and with NAC (Nevada Administrative Code) Chapter 449. HCQC also has an agreement with the federal Centers for Medicare and Medicaid Services (CMS) to certify medical facilities and providers and skilled nursing facilities in Nevada in the Medicare and Medicaid reimbursement programs. Surveys (inspections) are conducted in accordance with applicable regulations (Code of Federal Regulations, Title 42), based on the type of facility, and following specific time frames and procedures. HCQC also conducts complaint investigations for all licensed and/or certified facilities. (http://dpbh.nv.gov/Reg/HealthFacilities/HealthFacilities_-_Home/)

2. **What does the term "annual" mean in annual TB screenings?**

   The term "annual" in Annual TB screenings means that the TB screening activity should be completed each year. Ideally, it would be within 365 days; however, within the end of the hire month every year after the initial pre-employment screening is also acceptable. For example, to be in compliance with Nevada regulations, a person screened on July 10th, would be required to complete their annual retest (both the administration of the test and results reported) on or before July 31st of the following year.
   Healthcare facilities electing to adopt the 2019 updated CDC recommendations for TB testing of HCP in their infection control policy would no longer perform annual TB testing but continue annual TB education to all personnel and annual signs and symptoms screening to personnel with documented histories of past positive TB tests.

3. **What does the term "initial employment" or "upon hire" mean regarding TB screening activities for healthcare personnel/employees (HCP) who are going to begin employment at a new facility/setting?**

   The TB screening must occur before "initial employment/upon hire" which means that the healthcare personnel/employee must have the TB screening test administered and results reported of non-active TB disease before the healthcare personnel/employee may

start any employment activities. The specific language can be found within the December 2017 Revised Statutes under NAC 441A.375 (3).

4. **What should an individual do if they cannot have the TST completed because they are allergic to the test?**

   An individual stating that they are allergic or have had an adverse reaction to the TB skin test must still receive a TB test and should be presented with an IGRA blood test option. If someone cannot have the skin test performed because of a past adverse reaction and/or has had a past positive skin test or IGRA test, they must show proof of the past test and can then proceed with being evaluated by a medical professional or the medical director's designated agency by answering the *Nevada Tuberculosis Signs and Symptoms Questionnaire*.
   The purpose of a signs and symptoms questionnaire is to rule out active TB for individuals who have in the past tested positive or have been treated for TB or LTBI. An individual that says they have had a BCG vaccine before will still need to show a documented history of their TB results and then complete the *Signs & Symptoms Questionnaire.* If they have not documentation of a past positive result, they will have to submit to the skin or blood test again.

5. **What does the term "documented history" mean related to TB regulations?**

   The definition of "documented history" in the context of tuberculosis in the Nevada Administrative Code (NAC) is defined as a written copy from a qualified licensed healthcare professional, hospital, clinic, or laboratory of the TB skin test results, blood test results, and chest X-rays results.

   - The language in **NAC 441A**, regarding the phrase "documented history" means that all residents, patients, inmates, and healthcare personnel/employees will need to have a TB skin or blood test unless they have a written copy from a qualified licensed medical professional/clinic/hospital/laboratory stating that the individual has a past positive TB test result. The individual should also provide the chest X-ray result that was completed at the time the positive TB test was acknowledged. If the individual has had treatment in the past for TB or LTBI, they need to provide the healthcare facility or correctional facility with those records as well.
   - Additionally, "documented history" could include past signs and symptoms questionnaires, positive or negative TB skin test records, blood or lab records, chest X-rays, and TB/LTBI treatment records (if they had treatment).

6. **How long after a positive TST or IGRA blood test should a chest X-ray be completed?**

   Ideally, as soon as possible after the positive TST or IGRA result, less than 30 days. The CDC guidelines state that a chest X-ray should be completed "within a reasonable time frame, such as 6 months" (page 10 of MMWR, 2005). The CDC guidelines provide clarification in the FAQ section of this MMWR, 2005 (page 3) that the reasonable time frame of six months is an example; a shorter time frame may be necessary based on the treating physician's decisions. Therefore, a healthcare facility may have a stricter policy regarding the time frame for obtaining a chest X-ray or they may state that it is based on the treating provider's decision.

7. **Should an individual with a positive TST or IGRA receive periodic chest X-rays?**

   Periodic chest X-rays are not needed for healthcare personnel/employees or residents/patients to screen for active TB. However, the CDC guidelines state, "Repeat radiographs are not needed **unless symptoms or signs of TB disease develop or unless recommended by a clinician**" (page 10 MMWR December 2005).

8. **Should individuals who report they have had a positive TST result or have been previously treated for LTBI or TB disease receive the baseline two-step TST or IGRA blood test before beginning work or being admitted into the facility?**

   Unless the individual has documentation of the positive TST/IGRA result or previous treatment, they should receive baseline two-step/IGRA blood testing before starting duties. If documentation of a positive TST/IGRA result is available, then this result can be considered the baseline TB test result for the HCP at the new setting and additional TST or IGRA is not necessary. A chest X-ray should be consulted (or ordered as necessary) and a Signs and Symptoms Questionnaire will be necessary.

9. **Should healthcare personnel/employees transferring from one healthcare facility to another receive another two-step TB test?**

   Another two-step TB test is usually not needed when healthcare personnel/employees transfer from one facility to another. However, a retest of the 2nd step of the TST is required. If the HCP has documentation of a single-step TST within the preceding 12 months, then only the 2nd step must be completed at this time, not up to 365 days from previous test.

10. **What is the procedure for a newly hired HCP with a documented negative TST at their previous job within the last 12 months?**

    The documented negative TST result within the previous 12 months should be considered the first step of the baseline two-step TST. This person should receive one baseline TST upon hire, before the HCP begins assigned duties, to complete the 2-step at this new facility. If the HCP does not have documentation of any TST result, the HCP should be tested with a two-step TST (one TST upon hire and one TST placed 1–3 weeks after the first TST result was read) or an IGRA blood test. (MMWR 2005)

11. **Our healthcare facility completes an annual Facility TB Risk Assessment and no longer requires annual TB testing of its employees. If a newly hired HCP presents with documentation of a previous negative IGRA test within the preceding 12 months, then we do not need to obtain a preplacement IGRA result for this HCP?**

    Under NAC 441A.375, the situation of an HCP providing documentation of a negative IGRA or 2-step TST within 12 months is acceptable as demonstrating TB testing upon employment. However, the CDC 2019 updated guidelines recommend administering a new, preplacement baseline IGRA or 2-step TST (in this situation the 2nd step TST). The intent of this baseline is to provide a comparison result within that facility in the event of potential or known exposure to *M. tb*. This should be a strong consideration when determining the Infection Control policy for a facility.

12. Should residents/patients of healthcare facilities receive another two-step TST prior to being admitted to a new healthcare facility?

Per NAC 441A.380, yes, residents/patients should have a two-step TST or IGRA test within 24 hours (up to five days in certain circumstances) of admission. However, if the person has documentation of such a test, an IGRA or two-step TST, within the previous 12 months and exhibits no signs or symptoms of TB disease, then they do not require additional testing. If only the first step of a two-step TST was completed with the preceding 12 months, then a second TST must be administered at the time of admittance to complete the two-step TST *(not* within 365 days of the previous test).

13. Do healthcare personnel/employees that work in a personal care/in-home setting have to receive the baseline two-step TB or IGRA test, and subsequent annual TB testing?

Yes, all healthcare personnel/employees who do not have a previously documented positive TST result or treatment records of LTBI or TB disease should receive a baseline two-step TST or IGRA. Baseline testing for *M. tuberculosis* infection will ensure that TB disease or LTBI is detected before employment begins and treatment for LTBI or TB disease is offered, if indicated. Annual TB testing is required for facilities without a medical director (see page 9 of this manual for a definition) or designee thereof, per NAC 441A.380, subsection 4 (for full regulation, see NAC 441A.380).

14. Do the residents/patients of healthcare facilities and homes for individual residential care require annual TB testing?

This depends on the healthcare facility**.** If the facility has a medical director or designee thereof, then it may complete an annual *Facility Risk Assessment* and determine the risk of TB exposure to warrant a lesser frequency (see page 10 of this manual). However, if the facility does not have a medical director, then it must continue annual TB testing as per NAC 441A.380.

15. Is a Signs and Symptoms Questionnaire required every time a TST/IGRA is being completed?

No. The Signs and Symptoms Questionnaire can be used as often as the facility/setting would like in order to be in compliance with the law of maintaining TB Surveillance. Minimally, it must be used upon initial hire/pre-placement or admittance and annually when an individual has a documented history of a past positive TB test, past LTBI treatment, or active TB disease treatment. It must also be completed for any contacts to an active or suspect TB case as part of the Contact Investigation process.

16. After the initial hire baseline HCP Individual TB Risk Assessment (as recommended in the updated 2019 CDC Guidelines), is an Individual TB Risk Assessment necessary as an annual TB screening activity?

No. An HCP Individual TB Risk Assessment is recommended as part of the initial hire/preplacement TB screening activities (new recommendation in the updated 2019 CDC Guidelines, MMWR 2019). Thereafter, annual TB education for all HCP should include TB risk factors.

17. What is the Bacille Calmette-Guérin (BCG) vaccine?

BCG is a vaccine used widely throughout the world to prevent childhood tuberculous meningitis and military disease. BCG may cause a positive TST (i.e., false-positive) result initially; however, tuberculin reactivity caused by BCG vaccination typically wanes after 5 years but can be boosted by subsequent TST. No reliable skin test method has been developed to distinguish tuberculin reactions caused by vaccination with BCG from reactions caused by natural mycobacterial infections, although TST reactions of ≥20 mm of induration are not usually caused by BCG. (MMWR 2005)

18. What type of TB test should be given to an individual who recently had the BCG vaccine?

A TST may be placed any time after a BCG vaccination, but a positive TST result after a recent BCG vaccination can be a false-positive result (MMWR 2005). An IGRA blood test (QuantiFERON or T-Spot) should be used instead as it is not affected by prior BCG vaccination and less likely to give a false-positive result (see 2017 joint recommendations for *Diagnosis of TB in Adults and Children*, https://www.cdc.gov/tb/publications/guidelines/pdf/ciw778.pdf).

19. Do I need a two-step TB test again if I lapsed with my annual TB test and my employer has not changed?

No, two-step TSTs are needed only to establish a baseline for a specific setting for newly hired HCP and others who will receive serial TST (e.g., residents or staff of correctional facilities or long-term care facilities). The HCP should have a single TST or IGRA blood test upon returning to work and should then resume a routine testing schedule on the next normal TST anniversary date. (MMWR 2005)

20. Can I receive a TST if other vaccines are also being placed at the same time?

A TST should be administered either on the same day as vaccination with live-virus or 4 to 6 weeks later. Vaccines that might cause a false-negative TST result are measles, varicella, yellow fever, smallpox, BCG, mumps, rubella, oral polio, oral typhoid, and live-attenuated influenza. (MMWR 2005)

21. Can a healthcare personnel/employee or patient read and report their own TST results?

HCP and patients are not allowed to read and report their own TST results; therefore, self-reading cards for reporting TST results are not recommended. All TST results should be read and recorded by a trained TST reader other than the person on whom the TST was placed. (MMWR 2005)

22. Who should be treated for LTBI?

Persons with LTBI who are at increased risk for developing TB disease should be offered treatment for LTBI regardless of age if they have no contraindication to the medicine. (For lists see page 53 of MMWR, 2005 or visit CDC TB website). Furthermore, the updated 2019 CDC guidelines for HCP TB testing recommends regarding all HCP "[LTBI] treatment should be offered, and strongly encouraged to complete, treatment with a recommended regimen, including short-course treatments, unless contraindication exits" (MMWR 2019, page 4).

23. What is an Airborne Infection Isolation (AII) room?

"AII room" is an accepted term and is used in the American Institute of Architects (AIA) guidelines that describe the purpose for and details of ventilation of AII rooms. An AII room is a special negative-pressure room for the specific purpose of isolating from the general setting persons who might have suspected or confirmed infectious TB disease or other airborne infectious diseases. Not all negative-pressure rooms are AII rooms because they might not have the required airflow or differential pressure of an AII room. For a hospital with 120 beds, a minimum of one AII room is needed. (MMWR 2005)

24. What is a fit test and who does fit testing?

Fit testing of HCP respirator personal protective equipment should be performed during the initial respiratory-protection program training and periodically thereafter, based on the healthcare facility's TB risk assessment for the setting and in accordance with applicable federal, state, or local regulations. A fit test is used to determine which respirator does or does not fit the user adequately and to ensure that the user knows when the respirator fits properly. Fit testing must be performed by a qualified health professional. Periodic fit testing for respirators used in TB environments can serve as an effective training tool in conjunction with the content included in employee training and retraining. The frequency of fit testing should be determined by a change in the 1) risk for transmission of *M. tuberculosis*, 2) facial features of the wearer, 3) medical condition that would affect respiratory function, 4) physical characteristics of the respirator (despite the same model number), or 5) model or size of the assigned respirator. (MMWR 2005)

25. Should a healthcare personnel/employee perform a user seal check ("fit check") on a respirator before each use when encountering an individual who has suspected or active TB?

Yes, performing a user seal check on respirators before each use is essential to minimize contaminant leakage. Each respirator manufacturer has a recommended user seal check procedure that should be followed by the user each time the respirator is worn. Additionally, the recommended respiratory protection for HCP who provide care in the homes of patients with suspected or confirmed infectious TB disease is at least an N95 respirator. (MMWR 2005)

INTERFERON GAMMA RELEASING ASSAY (IGRA) TB BLOOD TESTING

IGRAs are acceptable and often preferred as an alternative to TST TB testing. The advantages of IGRAs include reduced likelihood of false-positive results in those with a history of BCG vaccine, greater specificity to *M. tb* than TST (not affected by *M. avium* or other non-tuberculous mycobacterium) and requires only one patient visit. The U.S. FDA approved IGRAs available are QuantiFERON Gold Plus (QFT Plus)® and T-SPOT®. An IGRA blood test is equivalent to baseline testing with a two-step TST. It is also an effective annual or serial TB test. (See CDC IGRA Fact Sheet, https://www.cdc.gov/tb/publications/factsheets/testing/igra.htm)

TWO-STEP TB SKIN TEST (TST) FOR BASELINE TB TESTING

Common Questions when Administering and Reading the TST

Q. When performing two-step skin testing, what should be done if the second-step TST is not placed in 1–3 weeks?

Perform the second-step TST as soon as possible, even if several months have passed.

Q. If a person does not return for a TST reading within 48–72 hours, when can a TST be placed on them again?

A TST can be administered again as soon as possible. If the second step of a two-step TST is not read within 48–72 hours, administer a third test as soon as possible (even if several months have elapsed), and ensure that the result is read within 48–72 hours.

Q. How should a TST result be interpreted?

Information provided by the CDC can be found on page 39 of this manual. Additionally, information regarding how to administer and interpret TB skin test results may be referenced in the Mantoux Tuberculosis Skin Test: Facilitator Guide, 2013 located on-line at http://www.cdc.gov/tb/education/mantoux/pdf/mantoux.pdf.

Q. Should a TST reading of ≥10 mm be accepted 7 days after the TST was placed?

If the TST was not read between 48–72 hours, another TST should be placed as soon as possible and read within 48–72 hours. However, certain studies indicate that positive TST reactions might still be measurable 4–7 days after the TST was placed. If the TST reaction is read as ≥15 mm 7 days after placement, the millimeter result can be recorded and considered to be a positive result.

For more information and supporting guidance for the questions listed above, please reference the following CDC document: "Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, 2005," *Morbidity and Mortality Weekly Report* [54(RR17):1-141, December 30, 2005], https://www.cdc.gov/mmwr/pdf/rr/rr5417.pdf

Approaches to Administering/Reading the Two-Step TST

The two-step TST has two different approaches. Either one is acceptable to the DPBH TB Program and the Centers for Disease Control and Prevention (CDC).

Note: Unlike the typical annual administer and read TST, the two-step TST includes two separate skin tests and is used to detect individuals with past TB infection who now have

diminished skin test reactivity. This procedure reduces the likelihood that a boosted reaction is later interpreted as a new infection.

The Three Visit Approach

Visit 1, Day 1
The first skin test is placed/administered and the individual returns in 7 days for the test to be read. If the first test is positive, it indicates that the individual is infected with TB. A chest X-ray and evaluation are necessary. If the individual is asymptomatic and the chest X-ray indicates no active disease, the individual can enter patient care areas.

Visit 2, Day 7 (one week after first TST placed)
A second skin test is placed/administered to individuals whose first test was negative at 7 days.

Visit 3, Day 9 or 10 (48-72 hours after second TST placed)
The second test is read. A positive test 2nd test indicates TB infection in the distant past.

The individual is referred for a chest X-ray and evaluation by a physician. An asymptomatic individual, whose chest X-ray indicates no active disease, may enter patient care areas.

The majority of significant PPD skin test reactions will remain "positive" for 7 days after application. Those that have diminished or disappeared by day 7 will be boosted back to positive by the 2nd skin test. Reducing the number of visits from 4 to 3 will not reduce the sensitivity of the two-step test.

The Four Visit Approach

Visit 1, Day 1
The first skin test is placed/administered.

Visit 2, Day 3 (48-72 hours after first TST placed)
The TST test is read. If the first test is positive, it indicates that the individual is infected with TB. A chest X-ray and evaluation are necessary. If the individual is asymptomatic and the chest X-ray indicates no active disease, the individual can enter patient care areas.

Visit 3, Day 7 (one week after first TST placed)
A second TST skin test is placed/administered to those individuals in whom the first TST skin test is negative.

Visit 4, Day 9 (48-72 hours after second TST placed)
The second test is read. A positive 2nd test indicates TB infection in the distant past.

The individual is referred for a chest X-ray and evaluation by a physician. An asymptomatic individual whose chest X-ray indicates no active disease may enter patient care areas.

For those individuals who were vaccinated against TB with the BCG vaccine, IGRA blood testing is recommended. TST may still be used provided 3-5 years have elapsed since receiving the BCG vaccination. Positive TST tests at this point could indicate TB infection. Thus, a chest X-ray is necessary.

INTERPRETING TB SKIN TEST RESULTS

When administering and reading a TB skin test for healthcare personnel/employees and/or residents/patients, a positive result will vary based on the individual's other risk factors.

Table 1: Criteria for Classifying Positive TST Reactions

Positive IGRA result or a TST reaction of 5 or more millimeters of induration is considered positive in:	**Positive IGRA result or a TST reaction of 10 or more millimeters of induration is considered positive in:**
• HIV-infected persons • Recent contacts of a TB case • Persons with fibrotic changes on chest radiograph consistent with old TB • Organ transplant recipients • Persons who are immunosuppressed for other reasons (e.g., taking the equivalent of >15 mg/day of prednisone for 1 month or longer, taking TNF-a antagonists)	• Recent immigrants (< 5 years) from high-prevalence countries • Injection drug users • Residents and employees of high-risk congregate settings (e.g., correctional facilities, nursing homes, homeless shelters, hospitals, and other health care facilities) • Mycobacteriology laboratory personnel • Children under 4 years of age, or children and adolescents exposed to adults in high-risk categories

Positive IGRA result or a TST Reaction of 15 or more millimeters of induration is considered positive in:

- Persons with no known risk factors for TB*

* Although skin testing programs should be conducted only among high-risk groups, certain individuals may require TST for employment or school attendance. An approach independent of risk assessment is not recommended by CDC or the American Thoracic Society.

Special Considerations

Questions often arise about the interpretation of TST results in persons with a history of Bacille Calmette-Gurin (BCG) vaccine, HIV infection, and recent contacts to an infectious TB case.

BCG vaccine is currently used in many parts of the world to protect infants and children from severe TB disease, especially TB meningitis. It does not confer lifelong immunity, and its significance in persons receiving the TST causes confusion in the medical and lay community.

- History of BCG vaccine is NOT a contraindication for tuberculin skin testing
- TST reactivity caused by BCG vaccine generally wanes with time
- If more than 5 years have elapsed since administration of BCG vaccine, a positive TST reaction is most likely a result of *M. tuberculosis* infection

Persons who are HIV infected have a much greater risk for progression to TB disease if they have LTBI.

- Individuals with HIV infection may be unable to mount an immune response to the TST and may have false-negative TST results
- Usefulness of anergy testing in TST-negative persons who are HIV infected has not been demonstrated

Persons with a positive TST result who are contacts of an individual with infectious TB should be treated regardless of age.

- Some TST-negative persons should also be considered for treatment (i.e., young children, immunosuppressed)
- Repeat TST in 8–10 weeks if initial test result is negative. A delayed-type hypersensitivity response to tuberculin is detected 2–8 weeks after infection

Information retrieved from Centers for Disease Control and Prevention, 2011. "Table 1: Criteria for Classifying Positive TST Reactions" located on-line at http://www.cdc.gov/tb/publications/factsheets/testing/skintestresults.htm.

COMMON TB ACRONYMS

(Adapted from the Centers for Disease Control and Prevention website and publications, 2019, www.cdc.gov/tb.)

Refer to the list below for abbreviations used in this manual.

AFB	Acid-Fast Bacillus
AII	Airborne infection isolation
BCG	Bacille Calmette-Guérin
CDC	Centers for Disease Control and Prevention
CXR	Chest radiograph (chest X-ray)
HCP	Healthcare Personnel (formerly HCW)
HCW	Healthcare Worker
IGRA	Interferon gamma release assay
INH	Isoniazid
LTBI	Latent tuberculosis infection
M. tb	*Mycobacterium tuberculosis*
MDR-TB	Multidrug-resistant tuberculosis
MIRU	Mycobacterial interspersed repetitive units
MOTT	Mycobacterium other than tuberculosis (also referred to as NTM)
NAA	Nucleic acid amplification
NAAT	Nucleic acid amplification test
NTM	Non-tuberculous Mycobacterium (also referred to as MOTT)
PPD	Purified protein derivative
QFT	QuantiFERON®-TB test
RIF	Rifampin
TB	Tuberculosis
TST	Tuberculin skin test
3HP	Short-course LTBI regimen, 3 = 3 months, H= Isoniazid, P= Rifapentine

TB TERMINOLOGY

(Adapted from the Centers for Disease Control and Prevention website and publications, 2019, www.cdc.gov/tb.)

Tuberculosis:

Mycobacterium Tuberculosis (*M. tuberculosis* or *M. tb*)
A type of tuberculosis mycobacteria; a gram-positive bacterium that causes tuberculosis. Sometimes called the tubercle bacillus.

Tuberculosis (TB) Disease
Tuberculosis is a condition caused by the bacterium *Mycobacterium tuberculosis* (or *M. tuberculosis*) that has progressed to causing clinical or subclinical disease. TB disease usually affects the lungs, but it can also affect other parts of the body, such as the lymph nodes, bone, or brain. If TB is treated properly, most people can be cured. If TB is not treated properly, the disease can be fatal or develop into drug-resistant forms of TB. Compare to latent TB infection (LTBI). See also extrapulmonary TB and pulmonary TB.

Latent TB Infection (LTBI)
Persons with latent TB infection have *M. tuberculosis* organisms in their bodies but do not have active TB disease, have no symptoms, and are noninfectious. Such persons usually have a positive reaction to a TST or IGRA.

Pulmonary TB
Active TB disease that occurs in the lung, usually producing a cough that lasts ≥ 3 weeks. Pulmonary TB is typically associated with the infectious form of TB.

Extrapulmonary TB
Active TB disease in any part of the body other than the lungs (e.g., lymph nodes, bone). An individual can have both pulmonary and extrapulmonary TB disease at the same time. Extrapulmonary TB is typically not considered infectious.

Airborne Infection Isolation (AII)
Isolation of patients infected with organisms that are spread via airborne droplet nuclei smaller than five microns in diameter (e.g., *M. tuberculosis*).

Bacille Calmette-Guérin (BCG) Vaccine
A vaccine for TB used in many countries where active TB disease is endemic. It is not used in the United States. BCG vaccine helps prevent disseminated and meningeal TB disease in infants and young children but offers much less protection for adults.

Chest X-ray (chest radiograph)
This is a diagnostic test that takes a picture of the inside of a person's chest. A chest X-ray is made by exposing a film to X-rays that pass through the chest. A doctor can look at this film to see whether TB bacteria have damaged the lungs.

Contact
A person who has spent time with a person with infectious TB.

Culture
A culture is a test that is processed in a laboratory to see whether there are TB bacteria in a person's phlegm or other body fluids. This test can take 2 to 4 weeks in most laboratories.

Exposure
Being subjected to something (e.g., an infectious agent) that could have an adverse health effect. A person exposed to *M. tuberculosis* does not necessarily become infected. (See also transmission).

Facility TB Risk Assessment (Healthcare Facility)
An initial and ongoing evaluation of the risk for transmission of *M. tuberculosis* in a particular healthcare 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 at which patients with active TB disease are suspected, isolated, and evaluated. The Facility TB Risk Assessment determines the types of administrative and environmental controls and respiratory protection needed for a setting.

Healthcare Facility
A place where healthcare is delivered.

Healthcare Personnel (HCP)/Employee (formerly Healthcare Worker – HCW)
All paid and unpaid persons working in healthcare settings who have the potential for exposure to *M. tuberculosis* through direct patient contact and/or those who share airspace with persons suspected of or diagnosed with TB disease. Healthcare personnel can be those who do not perform routine health/medical activities but are conducting activities in a setting where individuals are tested or treated for TB. See page 4 of this manual for a list of possible groups that could be defined as Healthcare personnel and could be included in TB surveillance and screening activities.

Hemoptysis
Coughing up of blood or blood-tinged sputum; one of the possible symptoms of pulmonary TB disease. Hemoptysis can also be observed in other pulmonary conditions (e.g., lung cancer).

Independent Contractor
All paid and unpaid persons working in healthcare settings who have the potential for exposure to *M. tuberculosis* through direct patient contact and/or those who share airspace with persons suspected of/with TB disease. Independent Contractors can be those who do not perform routine health/medical activities but are conducting activities in a setting where individuals are tested or treated for TB. See page 4 of this document for a list of possible groups that could be defined as Independent Contractors and could be included in TB surveillance/screening activities.

Individual Risk Assessment
TB screening tool to assess an individual's risk for TB exposure, non-occupationally. Individual risk assessment is part of the recommended baseline (preplacement) TB screening activities. It provides information helpful for interpreting test results.

Induration
A palpable, raised, hardened area that may develop in response to the injection of tuberculin antigen (PPD). Induration is measured in only one direction (across the forearm), and the result is recorded in millimeters. It is not the measure of erythema (redness). The measurement is compared with guidelines to determine whether the test result is classified as positive or negative.

Infection Control
Infection control refers to policies and procedures used to minimize the risk of spreading infections, especially in hospitals and human or animal healthcare facilities.

Infection Control Specialist
The staff person responsible for implementing and adhering to a facility's infection control plan (policies and procedures) with the goal of reducing the transmission of diseases.

Infectious
The ability of an individual with active TB disease to transmit (spread) TB bacteria to other persons. Directly related to the number of TB bacteria that the individual expels into the air. Persons who expel many bacilli are more infectious than those who expel few or no bacilli.

Initial TB Test (Baseline TB Screening)
The initial screening for TB performed prior to when an individual begins work in a healthcare facility or at the time residents are admitted to a healthcare facility (but no later than 5 days after admittance into facility). Baseline screening identifies individuals with LTBI or active TB disease and is also used to compare with any future screening results. This initial/baseline TB test may be the 2nd step of a 2-step TST if a prior single-step TST has been recorded in the past 12 months. See also TB screening.

Initial Employment
See information on page 31 in the Frequently Asked Questions section of this manual.

Interferon Gamma Release Assay (IGRA)
A TB test that detects the presence of *M. tuberculosis* infection by measuring the immune response to the TB bacteria in the blood. There are two U.S. Federal Drug Administration approved commercially available IGRAs: QuantiFERON-TB® and T-Spot®.

Mantoux Tuberculin Skin Test
See Tuberculin Skin Test.

Medical Director
The term **medical director** is not uniformly defined within the NAC and NRS but is defined for specific settings within the NAC and NRS. Generally, the definition of medical director is a physician licensed to practice medicine in the state of Nevada who provides guidance and leadership regarding medical practice and policies within a healthcare organization.

Medical Evaluation
A process for diagnosing active TB disease or LTBI, selecting treatment, and assessing response to therapy. A medical evaluation can include medical history and TB symptom screen, clinical or physical examination, screening and diagnostic tests (e.g., TSTs, IGRAs, chest X-rays, bacteriologic examination, and HIV testing), counseling, and treatment referrals.

Multidrug-resistant TB (MDR TB)
TB disease caused by bacteria resistant to two or more of the most important medicines: Isoniazid (INH) and Rifampin (RIF).

Negative
Usually refers to a test result. If you have a negative TB skin test reaction, you probably do not have TB infection.

Positive
Usually refers to a test result. If you have a positive TB skin test reaction, you probably have TB infection.

Potential/Ongoing Transmission
A risk classification for TB screening, including testing for *M. tuberculosis* infection when evidence of ongoing transmission of *M. tuberculosis* is apparent in the setting. Testing might need to be performed every 8–10 weeks until lapses in infection controls have been corrected and no further evidence of ongoing transmission is apparent. Use potential ongoing transmission as a temporary risk classification only. After corrective steps are taken and conversion rates stabilize, reclassify the setting as medium risk for a period of at least one year.

Purified Protein-Derivative (PPD) (tuberculin)
A material used in the tuberculin skin test (TST) for detecting infection with *M. tuberculosis*. In the United States, PPD solution is approved for administration as an intradermal injection (5 TU per 0.1 mL), a diagnostic aid for LTBI (see Tuberculin Skin Test).

Respiratory Protection
The use of N-95 or other respirators to protect an HCP from inhaling droplet nuclei containing *M. tuberculosis.*

Serial TB screening
TB screening performed at regular intervals following initial baseline TB screening.

Signs and Symptoms Questionnaire
A signs and symptoms questionnaire asks tuberculosis related health questions as a screening tool to identify individuals who may be symptomatic for active TB.

Smear
A test to see whether there are TB bacteria in your sputum/phlegm or other fluids/tissues suspected of *M. tb* presence. To do this test, lab workers smear the sputum on a glass slide, stain the slide with a special stain, Acid-Fast Bacillus stain (AFB), and look for the presence of TB bacteria on the slide. This test usually takes one day to produce the results.

Sputum
Sputum is phlegm coughed up from deep inside the lungs. Sputum is examined for TB bacteria using a smear; part of the sputum can also be used to do a culture. Sputum is not saliva/spit.

Suspected or confirmed infectious or potentially infectious TB disease
Means any of the following: 1) A patient with a smear-positive AFB and/or nucleic acid amplification test positive for *M. tb* and/or a culture positive for *M. Tb* or *M. Tb* complex (this applies only to specimens from sputum, bronchio-alveolar lavage, gastric aspirate, lung tissue or other tissue of the respiratory tract such as the larynx or epiglottis); 2) A patient with a chest radiograph, computed tomography scan, or clinical findings indicative of pulmonary tuberculosis sufficient to warrant treatment with anti-tuberculosis medications; 3) A patient whose chest radiograph or respiratory symptoms improve while taking anti-tuberculosis medication; or, 4) A

patient with respiratory symptoms indicative of pulmonary tuberculosis until a diagnostic evaluation is completed to rule out TB as a cause of the symptoms.

Suspected or confirmed 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, and coughing up blood. A person with TB disease may be infectious and spread TB bacteria to others.
Means one or more of the following: 1) A patient meeting the definition of suspected or confirmed infectious or potentially infectious TB disease; 2) A patient with a smear-positive AFB and/or nucleic acid amplification test positive for *M. tuberculosis* and/or a culture positive for *M. tuberculosis* or *M. tuberculosis* complex from a location outside the respiratory tract; 3) A patient with extra-pulmonary clinical findings indicative of tuberculosis sufficient to prescribe treatment with anti-tuberculosis medications; 4) A patient whose extra-pulmonary symptoms improve on anti-tuberculosis medications; or, 5) A patient with symptoms indicative of extra-pulmonary tuberculosis until a diagnostic evaluation is completed to rule out TB as the cause of these symptoms.

Symptom Screen
A procedure used during a clinical evaluation in which patients are asked if they have experienced any of the common symptoms of active TB disease (e.g., cough, weight loss, night sweats, fevers, fatigue).

TB Blood Test
See IGRA

TB Disease – (active TB)
The *M. tuberculosis* bacteria are present in the body and the individual has signs/symptoms of being infectious. While the individual is infectious they can spread the *M. tuberculosis* bacteria to others.

Tuberculosis Infection
See Latent TB Infection (LTBI) page 41.

TB Screening
The TB screenings employ methods to identify persons who have active TB disease or LTBI. May include one or more of the following: TST, IGRA, chest X-ray, microbiological testing, or signs and symptoms questionnaires.

Transmission of *M. tuberculosis*
Transmission occurs when a person inhales droplet nuclei containing *M. tuberculosis*, and the droplet nuclei transverse the mouth or nasal passages, upper respiratory tract, and bronchi to reach the alveoli of the lungs, resulting in infection.

Tuberculin Skin Test (TST)
The TST is a skin test used to detect TB infection. It is sometimes referred to as “PPD (purified protein derivative)” or “Mantoux.”

Two-Step TST
The two-step TST is a procedure used for the baseline skin testing of persons who will receive serial TSTs (e.g., HCW and residents 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, the 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.

Upon Hire
See information on page 31 of this manual in the Frequently Asked Questions section.

ONLINE RESOURCES

Tuberculosis Disease

Centers for Disease Control and Prevention. (Updated: 2016). Basic TB Facts. Retrieved from http://www.cdc.gov/tb/topic/basics/default.htm

US National Library of Medicine, Pub Health. (2011, March). "Clinical Diagnosis and Management of Tuberculosis, and Measures for Its Prevention and Control" NICE Clinical Guidelines, No. 117. London: National Institute for Health and Clinical Excellence. Retrieved from http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0046788/

TB Skin Testing

Centers for Disease Control and Prevention. (October 2011). TB Elimination, Tuberculosis Skin Testing. Retrieved from http://www.cdc.gov/tb/publications/factsheets/testing/skintesting.pdf.

Centers for Disease Control and Prevention. (Updated: 2016). Table 1: Criteria for Classifying Positive TST Reactions. Retrieved from http://www.cdc.gov/tb/publications/factsheets/testing/skintestresults.htm.

Latent TB Infection Diagnosis and Treatment

Centers for Disease Control and Prevention. (2014, November 26). Latent Tuberculosis Infection: A Guide for Primary Health Care Providers: Diagnosis of Latent TB Infection. Retrieved from http://www.cdc.gov/tb/publications/LTBI/diagnosis.htm

Centers for Disease Control and Prevention. (Updated: 2016). Treatment Regimens for Latent TB Infection (LTBI). Retrieved from https://www.cdc.gov/tb/topic/treatment/ltbi.htm

Centers for Disease Control and Prevention. (2018, June 28). Updated Recommendations for Treatment of Latent TB Infection and Resources. Retrieved from https://www.cdc.gov/nchhstp/newsroom/2018/treatment-of-latent-TB-infection.html

Centers for Disease Control and Prevention. (2013, April 3). Latent Tuberculosis Infection: A Guide for Primary Health Care Providers: List of Abbreviations. Retrieved from http://www.cdc.gov/tb/publications/LTBI/abbreviationslist.htm

CDC Recommendations for HCP TB Screening Activities

Centers for Disease Control and Prevention. (2005, December 30). *Morbidity and Mortality Weekly Report (MMWR): Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Settings, 2005*. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5417a1.htm

Sosa LE, Njie GJ, Lobato MN, et al. (2019, May 17). *Tuberculosis Screening, Testing, and Treatment of U.S. Health Care Personnel: Recommendations from the National Tuberculosis Controllers Association and CDC, 2019*. MMWR Morb Mortal Wkly Rep 2019;68:439–443. Retrieved from: https://www.cdc.gov/mmwr/volumes/68/wr/pdfs/mm6819a3-H.pdf

Centers for Disease Control and Prevention. (2006, July 7). *Morbidity and Mortality Weekly Report (MMWR): Prevention and Control of Tuberculosis in Correctional and Detention Facilities: Recommendations from CDC*. Retrieved from http://www.cdc.gov/tb/publications/guidelines/Correctional.htm

TB Related Laws

Centers for Disease Control and Prevention. (2012, September 1). Menu of Suggested Provisions for State Tuberculosis Prevention and Control Laws: Definitions for Consideration. Retrieved from http://www.cdc.gov/tb/programs/Laws/menu/definitions.htm

Chapter 441A – Infectious diseases; toxic agents. NAC 441A. (Revised Date: 2017, December). Retrieved from: https://www.leg.state.nv.us/NAC/NAC-441A.html

Chapter 441A – Infectious diseases; toxic agents. NRS 441A. (n.d.). Retrieved from http://www.leg.state.nv.us/NRS/NRS-441A.html

APPENDIX A:

NEVADA TB LAWS

The specific laws listed below are the tuberculosis related definitions and testing, reporting and surveillance activities providers/healthcare facilities and/or correctional facilities are mandated to conduct per the Nevada Administrative Code (NAC).

For more detailed information, please see the following two websites: Chapter 441A – Infectious diseases; toxic agents. NAC 441A. (Revised Date: December 2017). Retrieved from https://www.leg.state.nv.us/NAC/NAC-441A.html#NAC441A and Updated June 2019 TB Laws on the Nevada Division of Public and Behavioral Health's website at http://dpbh.nv.gov/Programs/TB/dta/Statutes/Tuberculosis (TB)-_Statutes/.

NAC	TITLE
GENERAL PROVISIONS – Definitions	
NAC 441A.015	"Active tuberculosis" defined
NAC 441A.035	"Case" defined
NAC 441A.037	"Centers for Disease Control and Prevention" defined
NAC 441A.040	"Communicable disease" defined
NAC 441A.045	"Contact" defined
NAC 441A.050	"Contact isolation" defined
NAC 441A.052	"Contact precautions" defined
NAC 441A.055	"Correctional facility" defined
NAC 441A.060	"Disease specific precautions" defined
NAC 441A.165	"Respiratory isolation" defined
NAC 441A.175	"Strict isolation" defined
NAC 441A.180	"Suspected case" defined
NAC 441A.181	"Suspected outbreak" defined
NAC 441A.185	"Tuberculosis" defined
NAC 441A.190	"Tuberculosis Infection" defined
NAC 441A.192	"Tuberculosis screening test" defined
NAC 441A.195	"Universal precautions" defined
NAC 441A.200	List of adopted recommendations, guidelines and publications; review of revision or amendment of adopted recommendation, guideline or publication
REPORTING OF COMMUNICABLE DISEASES	
NAC 441A.225	General requirements for certain reports to health authority and rabies control authority; establishment of after-hours reporting system
NAC 441A.230	Duty of healthcare provider to report case or suspected case; content of report
NAC 441A.235	Duty of director or other person in charge of medical laboratory to report findings of communicable disease, causative agent of communicable disease or immune response to causative agent; contents of report; submission of certain microbiologic cultures, subcultures, or other specimen or clinical material; reportable level of CD4 lymphocyte counts
NAC 441A.240	Duty of director or other person in charge of medical facility to report communicable disease; report by infection preventionist; adoption of administrative procedures for reporting

DUTIES AND POWERS RELATING TO THE PRESENCE OF COMMUNICABLE DISEASES	
NAC 441A.280	Duty of persons to cooperate with health authority during investigations and carrying out of measures for prevention, suppression and control of communicable diseases
INVESTIGATING, REPORTING, PREVENTING, SUPPRESSING AND CONTROLLING PARTICULAR COMMUNICABLE DISEASES **(Bolded laws below are solely Tuberculosis laws)**	
NAC 441A.325	Compliance with provisions regarding particular communicable diseases
NAC 441A.350	Healthcare provider to report certain cases and suspected cases within 24 hours of discovery
NAC 441A.352	Registered pharmacist and intern pharmacist to report suspected cases
NAC 441A.355	Active tuberculosis: Duties and powers of health authority
NAC 441A.360	Cases & suspected cases: Prohibited acts; duties; discharge from medical supervision
NAC 441A.365	Contacts: Compliance with regulations; medical evaluation; prohibited acts
NAC 441A.370	Correctional facilities: Testing and surveillance of employees and inmates; investigation for contacts; course of preventive treatment for person with tuberculosis infection; documentation
NAC 441A.375	Medical facilities, facilities for the dependent, homes for individual residential care and outpatient facilities: Management of cases and suspected cases; surveillance and testing of employees; counseling and preventive treatment
NAC 441A.380	Admission of persons to certain medical facilities, facilities for the dependent or homes for individual residential care: Testing; respiratory isolation; medical treatment; counseling and preventive treatment; documentation
NAC 441A.385	Care of medically indigent patient in State Tuberculosis Control Program; payment of cost
NAC 441A.390	Treatment of case or suspected case by healthcare provider

APPENDIX B (1):
LATENT TUBERCULOSIS INFECTION (LTBI) CONFIDENTIAL REPORT FORM

Latent Tuberculosis Infection (LTBI)
State of Nevada *Confidential Report Form*

Provider

Reporting Provider	Provider Phone	Provider Fax
Facility Name & Address	Provider Email	Date Reported

Please complete the below fields and check the boxes as completely as possible.

Patient

Patient Name		Date of Birth	Race ☐White ☐Black ☐Asian ☐Native American ☐Pacific Islander ☐Other:
Address		Gender at Birth ☐ Female ☐ Male	
City	State	Zip	
Phone	Medical Record No.	Primary Language	Ethnicity: ☐ Hispanic ☐ Non-Hispanic ☐ Unknown
Country of Birth	Date Entry into U.S.	Experienced in past year ☐ Homelessness ☐ Incarceration	

Risk Factors/Reason

Risk Factors / Reason for Tuberculosis Screening *(check all that apply)*:

- ☐TB symptoms/signs; evaluating for TB disease
- ☐Close Contact to a person with active TB disease within past 2 years*
- ☐Non-U.S.-born *(excluding Australia, Canada, New Zealand, and Western Europe)*
- ☐Visit outside the U.S. > 1 month within past 5 years *(excluding Australia, Canada, New Zealand, and Western Europe)*
- ☐Immunosuppression, current or planned *(HIV infection, organ transplant recipient, treatment with αTNF antagonist, steroids)*
- ☐Co-morbidities which increase the risk of progression of LTBI to active TB disease: *diabetes, malignancy, pulmonary disease, silicosis, end-stage renal disease, intestinal bypass/gastrectomy, chronic malabsorption, body mass index ≤ 20*
- ☐Healthcare personnel TB screening
- ☐Resident or personnel TB screening in a congregate setting *(correctional facilities, homeless shelters, long-term care, home for individual residential care, inpatient substance abuse facilities)*

Diagnostic

☐ **IGRA (Blood) Test** (QuantiFERON/T-Spot) ☐ **Tuberculin Skin Test**	**Test Date**	**Result** ☐ Positive ☐ Negative ☐ Size (TST): _____mm	Was the Patient Provided Results ☐ Yes ☐ If *No*, Reason: _____
☐ **Chest X-Ray** (CXR)	**CXR Date**	**Result** ☐ Normal ☐ Abnormal	Was the Patient Provided Results ☐ Yes ☐ If *No*, Reason: _____

Treatment

Treatment Plan *(check one)* ☐ **Treatment (on-site).** ***Please see and complete the opposite side.*** (Patient has a planned LTBI therapy start date.) **LTBI Treatment Regimen:** (check one below) ☐ **12 weeks Isoniazid/Rifapentine (3HP)** ☐ **4 mo. Rifampin (4 RIF)** ☐ **9 mo. Isoniazid (INH)** ☐ **6 mo. Isoniazid (INH)**	☐**Refer for Evaluation and Treatment** **Where Referred:** _____	**Treatment Status:** ☐ Completed ☐ Declined ☐ Other, *Reason:* _____

*If the contact is suspected of exposure to multidrug-resistant TB, please contact your local health department or state Tuberculosis program for treatment consultation.

Fax: ☐ **Completed Form** ☐ **IGRA Lab/TST** ☐ **Chest X-ray Report**

To: Carson City (775) 887-2138 — Washoe County (775) 328-3764
Clark County (702) 759-1454 — Rest of State (775) 684-5999

An optional assistance form is available: "LTBI Treatment Flowsheet: Dose, Symptom Monitoring, Completion"

Created January 2020 1

Form located on the Division of Public and Behavioral Health Website at
http://dpbh.nv.gov/Programs/TB/dta/Forms/Tuberculosis_(TB)_-_Forms/

Appendix B (2):
Treatment Flowsheet - Latent Tuberculosis Infection (LTBI)

Latent Tuberculosis (LTBI) Treatment Flowsheet: Dose, Symptom Monitoring, Completion

Reporting Provider: Please utilize this *optional flowsheet* to assist in treatment and communication with the local health department Tuberculosis program. Please fill out as completely as applicable and return the completed form via fax to your local health department Tuberculosis program.

Patient Last name:	Patient First name:	Patient DOB:	Provider: Name and Phone	
LTBI Initial Treatment: *Please ☑ appropriate boxes*	☐ 12 wk. Isoniazid/Rifapentine **(3HP)**		☐ 4 mo. Rifampin **(4 RIF)**	☐ 9 mo. Isoniazid **(INH)**
Baseline laboratories* ordered: ☐ No ☐ Yes, reason:				
Date LTBI medication(s) ordered:_____			Baseline Weight & Height **Weight:** kgs **Height:** ft/in	

LTBI REGIMENS** Monitoring throughout therapy for adherence and adverse effects is highly recommended.

3HP† Isoniazid & Rifapentine (12 doses total, 1x weekly)	**Isoniazid (H or INH):** 15 mg/kg ≥ 12 years (25 mg/kg for ages 2-11 years); *max dose 900 mg*; ≥50 kg =900mg (available:100 mg and 300 mg tabs)		Initial Rx: 4 doses, 1 month **Monitoring Month 1**	**Month 2**	**Month 3**	☐ **LTBI Completed**
	Medications must be taken together					
	Rifapentine (P or RPT): all ages, dose dependent on *weight*: *10-14 kg* = 300 mg; *14.1–25 kg* = 450 mg; *25.1-32 kg* = 600 mg; *32.1–49.9 kg* = 750 mg; ≥ *50 kg*= 900 mg; *max dose 900 mg* (available: 150 mg tabs)		☐ Confirmed weeks 1,2,3,4 adherence ☐ No adverse effects reported ☐ *Yes, adverse effects reported* ☐ *Yes, Labs ordered* ☐ Rx for next month (4 doses)	☐ Confirmed weeks 1,2,3,4 adherence ☐ No adverse effects reported ☐ *Yes, adverse effects reported* ☐ *Yes, Labs ordered* ☐ Rx for next month (4 doses)	☐ Confirmed weeks 1,2,3,4 adherence ☐ No adverse effects reported ☐ *Yes, adverse effects reported* ☐ *Yes, Labs ordered* ☐ Rx for next month (4 doses)	☐ **LTBI Completion Card to patient** ☐ **Not completed/ reason:** __Moved __Lost __Adverse event __Other
4 RIF Rifampin (120 doses total, daily)	**Rifampin (RIF or R):** 10 mg/kg adults; 15-20 mg/kg children; *max dose 600 mg* (available:150 mg & 300 mg tabs)	**Monitoring Month 1**	**Month 2**	**Month 3**	**Month 4**	
		☐ Confirmed weeks 1,2,3,4 adherence ☐ No adverse effects reported ☐ Rx for next month (30 days)	☐ Confirmed weeks 1,2,3,4 adherence ☐ No adverse effects reported ☐ Rx for next month (30 days)	☐ Confirmed weeks 1,2,3,4 adherence ☐ No adverse effects reported ☐ Rx for next month (30 days)	☐ Confirmed weeks 1,2,3,4 adherence ☐ No adverse effects reported ☐ Rx for next month (30 days)	
INH‡ 9 months (270 doses total, daily)	**Isoniazid (INH or H):** 5 mg/kg adults; 10-20 mg/kg children; *max dose 300 mg* (available:100 mg and 300 mg tabs)	**Monitoring: Months 1 – 9, for *each* month** ☐ Confirmed 30 daily doses _____ ☐ Assess for adverse effects _____ ☐ Assess for Labs orders _____ ☐ Rx for next month (30 days) _____				
Vit B6~ Pyridoxine	**Pyridoxine (B6):** Supplementation with B6 10-50mg/day during treatment is a consideration for certain individuals taking INH or 3HP.					

*Baseline laboratory testing can be found at the Centers for Disease Control and Prevention's *Latent Tuberculosis Infection: A Guide for Primary Health Care Providers*, updated March 2019, available at https://www.cdc.gov/tb/publications/ltbi/treatment.htm .

** LTBI medication regimens adapted from the Centers for Disease Control and Prevention's *Latent Tuberculosis Infection: A Guide for Primary Health Care Providers*, updated March 2019, retrieved from https://www.cdc.gov/tb/publications/ltbi/treatment.htm .

†Short course 3HP Isoniazid/rifapentine regimen is highly recommended and the updated 2018 recommendations can be found in *Update of Recommendations for Use of Once-Weekly Isoniazid-Rifapentine Regimen to Treat Latent Mycobacterium tuberculosis Infection*, available at https://www.cdc.gov/mmwr/volumes/67/wr/mm6725a5.htm?s_cid=mm6725a5_w

‡Alternative INH regimen available, see referenced CDC guide, https://www.cdc.gov/tb/publications/ltbi/treatment.htm .

~Please see CDC recommendations https://www.cdc.gov/tb/publications/ltbi/treatment.htm

FAX TO: Carson City (775) 887-2138 Washoe County (775) 328-3764
Clark County (702) 759-1454 Rest of State (775) 684-5999

Created January 2020 1

Form located on the Division of Public and Behavioral Health Website at http://dpbh.nv.gov/Programs/TB/dta/Forms/Tuberculosis_(TB)_-_Forms/

STATE OF NEVADA CONFIDENTIAL MORBIDITY REPORT FORM

State of Nevada
Confidential Morbidity Report Form Updated December 2019

Provider

Attending Physician	Physician Phone	Physician Fax
Person Reporting / Job Title	Reporter Phone	Reporter Fax
Facility Name	Facility Phone	Report Date

Patient

Name			Gender ☐ Female ☐ Male ☐ Nonbinary	Race ☐ White ☐ Black ☐ Asian ☐ American Indian ☐ Pacific Islander ☐ Other
Address		County	Sex assigned at birth ☐ Female ☐ Male	
City	State	Zip	Pregnant ☐ No ☐ Yes	Ethnicity ☐ Hispanic ☐ Non-Hispanic
Date of Birth / Age	Parent or Guardian Name		Pregnancy EDC	Primary Language Spoken
Home Phone	Occupation / Employer / School		Marital Status ☐ Single ☐ Married ☐ Widowed ☐ Separated ☐ Divorced ☐ Unknown	Birth Country and Arrival Date
Social Security Number	Medical Record Number			Incarcerated ☐ No ☐ Yes

Disease

Disease or Condition Name		Admission Date	Deceased ☐ No ☐ Yes
Onset Date	Diagnosis Date	Discharge Date	Date of Death
Symptoms			
Was laboratory testing ordered? ☐ No ☐ Yes	*If yes, attach the results or provide the laboratory name if the results are unavailable*		
Was the patient treated? ☐ No ☐ Yes	*If yes, provide the treatment details (drug name, dosage, duration, dates etc.)*		

Comments

Fax Completed Forms To: Carson City: (775) 887-2138 Washoe County: (775) 328-3764 Clark County: (702) 759-1454 Rest of State: (775) 684-5999

Form located on the Division of Public and Behavioral Health Website at http://dpbh.nv.gov/Programs/TB/dta/Forms/Tuberculosis_(TB)_-_Forms/

State of Nevada
Confidential Morbidity Report Form Instructions

Updated Dec 2019

Disease Reporting

The Nevada Administrative Code Chapter 441A requires reports of specified diseases, foodborne illness outbreaks and extraordinary occurrences of illness be made to the local Health Authority. The purpose of disease reporting is to recognize trends in diseases of public health importance and to intervene in outbreak or epidemic situations. Physicians, veterinarians, dentists, chiropractors, registered nurses, directors of medical facilities, medical laboratories, blood banks, school authorities, college administrators, directors of child care facilities, nursing homes and correctional institutions are required to report. Failure to report is a misdemeanor and may be subject to an administrative fine of $1,000 for each violation.

HIPAA and Public Health Reporting

HIPAA laws were developed so as not to interfere with the ability of local public health authorities to collect information. According to 45 CFR 160.204(b): "Nothing in this part shall be construed to invalidate or limit the authority, power, or procedures established under any law providing for the reporting of disease or injury, child abuse, birth, or death, public health surveillance, or public health investigation or intervention."

Instructions for Completing the Morbidity Report Form

Provider Information

Attending Physician/Phone/Fax
The physician primarily responsible for the care of this patient

Person Reporting/Phone/Fax
Provide if different than attending physician

Facility Name/Phone
List the location for facilities with multiple locations.

Report Date
The date that this report is submitted

Patient Information

Sufficient information must be provided to allow the patient to be contacted. If insufficient information is provided, you will be contacted to provide that information. Attaching a patient face sheet to this report is an acceptable method of providing the patient demographic information.

Address/County/City/State/Zip
The home address of the patient, including the county

Date of Birth / Age
The patient's date of birth or age if birthdate is unknown.

Parent or Guardian Name
For patients under the age of 18, the name of the person(s) responsible for the patient

Phone
The home phone of the patient

Occupation / Employer / School
The occupation or employer of the patient, or the name of the school attended for students

Social Security Number
This information greatly assists in the investigation of cases, allowing easier access to laboratory and medical records.

Medical Record Number
A patient identifier unique to the facility or office

Gender / Sex Assigned at Birth
The current gender of the patient and the sex assigned at birth

Pregnant / Pregnancy EDC
The pregnancy status of the patient and their estimated date of confinement (projected delivery date)

Marital Status
The marital status of the patient

Race / Ethnicity
Race and ethnicity categories have been chosen to match those used by the Centers for Disease Control and Prevention

Primary Language Spoken
Providing this information makes it easier to contact non-English-speaking patients and arrange for translators

Birth Country and Arrival Date
If the patient was not born in the United States, provide the patient's country of origin and date of arrival in the US.

Incarcerated
The incarceration status of the patient. If the patient is currently incarcerated, list the facility in the comments section

Disease Information

Disease or Condition Name
This form should be used for all legally reportable diseases in the state of Nevada

Onset Date
The date of the first symptom experienced by the patient

Diagnosis Date
The date that this disease was diagnosed. For reports of suspect illness, enter the date the illness was suspected.

Date Admitted/Discharged
For any patients admitted to a hospital, the date of admission and discharge (if the patient has been discharged)

Deceased / Date of Death
If the patient has died, list the date of death. If known, list the cause of death under comments.

Symptoms
All relevant symptoms

Laboratory Testing
If laboratory testing has been ordered, please attach the laboratory results to this form. If relevant tests are pending, list them in the comments section, as well as the name of the laboratory performing the testing

Treatment
Treatment information is necessary for the reporting of sexually-transmitted diseases, and helpful in the investigation of other illnesses. If this field is left blank, you will be contacted to provide this information

Comments

Provide any additional information that may be useful in the investigation or to explain answers given elsewhere on this form

Contact Information

Carson City Health & Human Services
900 E. Long St.
Carson City, NV 89706
http://gethealthycarsoncity.org
Phone: (775) 887-2190
After-Hours Phone: (775) 887-2190
Confidential Fax (775) 887-2138

Nevada Division of Public and Behavioral Health
4150 Technology Way
Carson City, Nevada 89706
http://health.nv.gov
Phone: (775) 684-5911 (24 Hours)
Confidential Fax: (775) 684-5999
After Hours Duty Officer: (775) 400-0333

Southern Nevada Health District
PO Box 3902
Las Vegas, NV 89127
http://www.snhd.info
Confidential Fax: (702) 759-1414

Epidemiology
Phone: (702) 759-1300 (24 hours)
Confidential Fax: (702) 759-1414

STDs, HIV, and AIDS
Phone: (702) 759-0727
Confidential Fax: (702) 759-1454

Tuberculosis
Phone: (702) 759-1015
Confidential Fax: (702) 759-1435

Washoe County Health District
1001 E. Ninth St., Building B
P. O. Box 11130
Reno, Nevada 89520-0027
http://www.washoecounty.us/health/
Phone: (775) 328-2447 (24 hours)
Confidential Fax: (775) 328-3764

Animal Control Contact Information
Click Link for Contact Sheet

How To Report

Completed reports can be faxed to the numbers listed on the front of this form. Diseases requiring immediate investigation and/or prophylaxis (e.g., invasive meningococcal disease, plague) should be also reported by telephone to the appropriate health jurisdiction.

Nevada Reportable Diseases

AIDS
Amebiasis
Animal bite from a rabies-susceptible species*
Anthrax
Arsenic: Exposures and Elevated Levels
Botulism*†
Brucellosis
Campylobacteriosis
CD4 lymphocyte counts <500/µL
Chancroid
Chlamydia
Cholera
Coccidioidomycosis
Cryptosporidiosis
Diphtheria†
Drowning‡
Drug-Resistant *Streptococcus pneumoniae* Invasive Disease
Ehrlichosis/ anaplasmosis
E. coli 0157:H7
Encephalitis
Exposures of Large Groups of People‡
Extraordinary occurrence of illness (e.g. Smallpox, Dengue, SARS)*†
Giardiasis
Gonorrhea
Granuloma inguinale
Group A Streptococcal Invasive Disease
Haemophilus influenzae (invasive)
Hansen's Disease (leprosy)
Hantavirus
Hemolytic-uremic syndrome (HUS)
Hepatitis A, B, C, delta, unspecified
HIV infection
Influenza
Lead: Exposures and Elevated Levels
Legionellosis
Leptospirosis
Listeriosis
Lyme Disease
Lymphogranuloma venereum
Malaria
Measles (rubeola)†
Meningitis (specify type)
Meningococcal Disease*
Mercury: Exposures and Elevated Levels‡
Mumps
Outbreaks of Communicable Disease*†
Outbreaks of Foodborne Disease*†
Pertussis
Plague*†
Poliomyelitis†
Psittacosis
Q Fever
Rabies (human or animal)*†
Relapsing Fever
Respiratory Syncytial Virus (RSV)
Rotavirus
Rubella (including congenital)†
Salmonellosis
Severe Reaction to Immunization
Shigellosis
Spotted Fever Rickettsioses
Syphilis (including congenital)
Tetanus
Toxic Shock Syndrome
Trichinosis
Tuberculosis† Latent Tuberculosis <5 years age
Tularemia
Typhoid Fever
Vancomycin-intermediate *Staphylococcus aureus* (VISA) and Vancomycin-resistant *Staphylococcus aureus* (VRSA) Infection
Vibriosis, Non-Cholera
Viral Hemorrhagic Fever
West Nile Virus
Yellow Fever
Yersiniosis

** Must be reported immediately*
† Must be reported when suspect
‡ Reportable in Clark County Only
All cases, suspect cases, and carriers must be reported within 24 hours

Form located on the Division of Public and Behavioral Health Website at http://dpbh.nv.gov/Programs/TB/dta/Forms/Tuberculosis_(TB)_-_Forms/

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Carson City, NV 89706
Phone: (775) 684-5936
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DPBH TB Webpages:
http://dpbh.nv.gov/Programs/TB

Acknowledgments

Funding Source:

National Center for HIV, Viral Hepatitis, STDs and TB Prevention (PS). The publication was supported by the Tuberculosis Elimination and Laboratory Program Grant, NU52PS004681, funded by the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services.

Recommended Citation for External Use:

Office of Public Health Investigations and Epidemiology. Division of Public and Behavioral Health. *Healthcare Facilities Tuberculosis Screening Manual.* July 2016 (Revised January 2020). Carson City, Nevada.