

# **Nevada Tuberculosis Prevention, Control And Elimination Program:**

## **Healthcare Facilities Tuberculosis Screening Manual**



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## PURPOSE

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 (NAC and NRS). In order to streamline the process of Tuberculosis screening, the State of Nevada Tuberculosis 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 medical and/or healthcare facilities in Nevada that are required under Nevada law to conduct TB screening and surveillance activities for healthcare workers/employees (HCW) and residents/patients within their facilities. The full law can be found at <http://www.leg.state.nv.us/NAC/NAC-441A.html#NAC441ASec110> and <http://www.leg.state.nv.us/NRS/NRS-449.html#NRS449Sec0151>.

**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.”

Furthermore, a medical facility is defined by NRS 449.0151 to include the following 16 types 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

## What is the definition of Healthcare Worker/Employee as it pertains to the TB laws in NAC and NRS?

In this manual, the term “Healthcare Worker/Employee” (HCW) 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 workers/employees should be included in their facility’s infection control plan, as well as the initial and annual TB Screening activities (pg. 3, MMWR, 2005).

- 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, a HCW/Employee 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.

## TUBERCULOSIS SCREENING VS. TUBERCULOSIS SURVEILLANCE

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

### Tuberculosis Screenings:

“TB screenings” include diagnostic tests that are used to diagnose TB disease. The most common TB screening test is the skin or blood test (TST or IGRA, respectively). The TST or IGRAs are given to a resident/patient upon admittance into a healthcare facility and to a healthcare worker/employee before initial employment activities begin (see page 37 for additional information). Both residents/patients and healthcare workers/employees should receive the TB tests on an annual basis, as well. TB screening activities may also include a medical evaluation, a chest X-ray or other diagnostic testing (NAC 441A.375 & 441A.380).

- There may be instances when TB screening activities do not include an actual TB diagnostic test, but rather methods used 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 for Nevada's TB program and it is recommended that all healthcare facilities conduct their TB Surveillance activities with it. It can be found on pages 22-25 of this manual or at <http://dpbh.nv.gov>.

## 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 action being taken to prevent and control TB disease. The data is reported in the form of morbidity reports or lab results and contain information on disease diagnosis or suspect diagnosis (results may be a positive TB skin test, laboratory results or abnormal chest X-rays). These positive tests are then confidentially sent to the appropriate local health authority (health district or state) for follow up and further investigation.

- When it is determined that an individual does have suspect TB or active TB, the local health authorities provide individual case management and treatment services. They also have the capabilities 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.

Which Nevada law(s) state that a healthcare facility must conduct initial TB screening and TB surveillance activities upon hire/initial employment or admittance?

**Healthcare Workers/Employees**

Below is an abbreviated excerpt of the TB law, **NAC 441A.375** (the law for healthcare workers/employees) that was approved by the Nevada Board of Health in October 2015:

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 health care 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. 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.
4. An employee or independent contractor described in subsection 2 who has a documented history of a positive tuberculosis screening test is exempt from screening with blood or skin tests or chest radiographs unless the employee develops symptoms suggestive of tuberculosis. Such an employee or independent contractor must be evaluated at least annually for signs and symptoms of tuberculosis. An employee or independent contractor 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.
5. 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.



- Active TB case may be treated by a Primary Care 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.
6. 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.

## **Residents/Patients**

Below is an abbreviated excerpt of the TB law, **NAC 441A.380** (the law for residents/patients) that was approved by the Nevada Board of Health in October 2015:

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 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 in respiratory isolation of an Airborne Infection Isolation (AII) room or negative air pressure room.)

The person must be kept in respiratory isolation until a health care provider:

- a. Determines 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 health care 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 person has been on a prescribed course of medical treatment for at least 14 days; and
- b. The health care provider has obtained not less than three consecutive negative sputum AFB smear which were collected on separate days.

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.

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.

- Active TB case may be treated by a Primary Care 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.

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.

## EXCEPTIONS FOR TB ACTIVITIES

Are there exceptions in the Nevada TB law that state individuals can be exempt from TB testing (HCW or Resident/Patient)?

Yes, there are three common exceptions:

1. Upon initial employment or admittance into a healthcare facility, if there is valid written documentation of a one-step TST within the past 12 months - then only the 2<sup>nd</sup> part of the two-step TST is required to be completed.
2. If an individual has a documented past allergic reaction to TST (TB Skin Test), then a blood test (e.g. QFT or T-spot) should be offered in place of the skin test.
3. If an individual has a documented history of past active TB or LTBI (LTBI regardless if treated or untreated).
  - *Signs and Symptoms Questionnaire* must be completed instead (see pages 22-25)
  - Chest X-ray should not be repeated unless individual has signs and symptoms of active TB (or if recommended by clinician)

### **Past BCG Vaccination is not a reason under the law to omit the TB test**

\**Signs and Symptoms Questionnaire* **MUST** still be completed annually for anyone who has is exempt from the annual TB testing. This would include an individual with a positive TB test (whether they were treated or untreated for LTBI) or someone who has been treated for active TB disease.

Are there exceptions in the law that state a healthcare facility can do another TB screening activity besides annual TB testing for HCW and/or Residents/Patients?

Yes, there is an exception that is based on CDC guidance; however, the healthcare facility must annually complete the CDC's *Risk Assessment Worksheet* **AND** be classified as a "Low-Risk" facility under the CDC's *Risk Classification* designations.

Per NAC regarding annual TB testing, the CDC's *Risk Assessment Worksheet* must be kept on file each year (documented) and it must be reviewed and determined to be accurate by the medical director of the facility or a designee thereof. See full 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. 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.

If a healthcare facility is determined to be low-risk after completing the CDC's *Risk Assessment Worksheet*, the facility **MUST** still complete a *Signs and Symptoms Questionnaire* for all individuals (HCW and Residents/Patients) who have tested positive in the past.

**IMPORTANT:** The *Signs and Symptoms Questionnaire* **CANNOT** be solely self-completed. It should be completed by a staff person who has been trained to ask the questions or it can be filled out by the individual (HCW or resident/patient) however, a second designated, trained staff member must review and sign off on it.

## 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?*

If a healthcare facility/group home results in a Low-Risk Classification after completing their annual TB risk assessment, the healthcare facility can elect to not do the annual TB testing for their residents/patients and/or healthcare workers/employees. However, TB screening would still need to be conducted annually for those healthcare workers/employees or residents/patients who have LTBI. The non-testing TB screening activity that must be completed is assessing individuals for signs or symptoms of active TB disease. Healthcare facilities may utilize the *Nevada Tuberculosis Signs and Symptoms Questionnaire* found within this manual (see pages 22-25). A signs and symptoms questionnaire must be completed every year after the individual's positive TB test (documented two-step TST or IGRA blood test).

\*For more information on the CDC's *Risk Assessment Worksheet, Risk Classification Form* or guidelines, please reference the 2005 *MMWR* entitled, "Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Settings, 2005" located on the web at <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5417a1.htm>. The Risk Assessment Worksheet is Appendix B and the Risk Classification Form is Appendix C.

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

1. There is no specific space/questions on the *Risk Assessment Worksheet* for resident/patients. Healthcare Facilities can use this same form for both healthcare workers/employees and resident/patients; a separate form is needed for each of the two groups as well as a new form is required to be completed every year.
2. A healthcare facility's risk classification is going to be either:
  - Low-Risk
  - Medium-Risk
  - Ongoing Transmission
3. A healthcare facility may have more than one risk classification within their facility or network of facilities
  - This means, that more than one *Risk Assessment Worksheet* must be completed annually for each separate facility and/or departments. For example, a large hospital that has isolation rooms, an ER and a lab that manipulates sputum, will need to annually complete a separate Risk Assessment Worksheet for each of these departments.
4. The risk classification may change at any time during the year, and if it does change the healthcare facility should not wait for their annual TB risk assessment, but should assess the risk at that time (i.e., if there is ongoing transmission of TB)
5. All areas of the CDC's *Risk Assessment Worksheet* need to be filled out if the healthcare facility has that service/department
6. Documents must be completed by staff who are authorized to do so:
  - The CDC's *Risk Assessment Worksheet* can only be completed by a "Medical Director of the facility or a designee thereof" (NAC 441A. 375, 3b)

## Nevada Tuberculosis Testing Record Instructions

Complete the *TB Test Record* with the healthcare worker/employee or resident/patient. Ensure all fields are completely filled out and that they are filled out correctly. Once completed, place in healthcare worker/employee or resident/patient file.

If an individual tests positive, use the flowcharts (pages 26-29) of this manual to determine the next steps that must be taken.

The healthcare facility should record the date and include any supporting documentation (as needed) when they refer a healthcare worker/employee and/or resident/patient for a chest X-ray, for education/counseling for LTBI treatment, or are reporting a suspect/active case to the health district.

### Nevada TB Reporting Laws:

- **NAC 441A.325** Compliance with provisions regarding particular communicable diseases. (NRS 441A.120) Notwithstanding any other provision of this chapter, a case or suspected case must be investigated, reported, prevented, suppressed and controlled in a manner consistent with the provisions of this chapter which are applicable to the particular communicable disease.
- **NAC 441A.350** Healthcare provider to report certain cases and suspected cases within 24 hours of discovery. (NRS 441A.120) 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 fails to submit to medical treatment or who
  - Fails to submit to medical treatment or who discontinues or fails to complete an effective course of medical treatment prescribed by a health care provider in accordance with the recommendations, guidance and publications adopted by reference pursuant to NAC 441A.200; or
  - is a child less than 5 years of age, regardless of whether the child has received a bacillus Calmette-Guerin (BCG) vaccination, who has shown a positive reaction to the Mantoux tuberculin skin test or other recognized diagnostic test

***(New LTBI Reporting Requirement!)* Effective October, 2015.**



## Nevada Tuberculosis Testing Record: Resident/Patient

The Nevada Administrative Code (NAC) regarding testing for Tuberculosis 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 (2b)** 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 2, 3**). If the individual has a valid documented 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 Tuberculosis (TB) or Latent Tuberculosis Infection (LTBI regardless of treated or untreated), the facility should perform TB screening activities that includes 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 clinician (p. 51, [www.cdc.gov/mmwr/pdf/rr/rr5417.pdf](http://www.cdc.gov/mmwr/pdf/rr/rr5417.pdf)). 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, it is the facility or home's shall ensure that counseling and preventative treatment are offered to each person (**NAC 441A.380, 7**).

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 two-step 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: <input type="checkbox"/> Left Arm <input type="checkbox"/> Right Arm Date Test Read (mm/dd/yyyy): _____ Interpretation: <input type="checkbox"/> Negative <input type="checkbox"/> Positive	Test Given by (Name of Individual/Facility): _____ Test Read by (Name of Individual/Facility): _____ Measurement of Induration: (mm) _____
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### SECOND STEP OF THE TWO-STEP TB SKIN TEST:

Date Test Given (mm/dd/yyyy): _____ Site: <input type="checkbox"/> Left Arm <input type="checkbox"/> Right Arm  Date Test Read (mm/dd/yyyy): _____ Interpretation: <input type="checkbox"/> Negative <input type="checkbox"/> Positive	Test Given by (Name of Individual/Facility): _____ Test Read by (Name of Individual/Facility): _____ Measurement of Induration: (mm) _____  Induration Guide: <a href="http://www.cdc.gov/tb/publications/LTBI/diagnosis.htm">www.cdc.gov/tb/publications/LTBI/diagnosis.htm</a>
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### 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: <input type="checkbox"/> Negative <input type="checkbox"/> Positive
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### CHEST X-RAY (CXR):

(The CXR should only be performed if 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: <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal  If Abnormal, Date Referred for Medical Evaluation (mm/dd/yyyy): _____
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### LTBI OR ACTIVE TB DIAGNOSIS:

LTBI: Date resident/patient was referred for and provided LTBI education/information by healthcare facility (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. (sent to LHA via Nevada's *Confidential Morbidity Report*, see pages 49-50, Appendix B of the *Healthcare Facilities TB Screening Manual*)

(mm/dd/yyyy): \_\_\_\_\_

**Last Name** \_\_\_\_\_ **First Name** \_\_\_\_\_ **DOB:** \_\_\_\_\_

## Nevada Tuberculosis Testing Record: Healthcare Worker/Employee

Prior to employment the healthcare worker/employee must complete a Tuberculosis (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.375 (3b, 4)**. If the individual has a valid documented reaction to the TB skin test, they need to instead be offered a blood test.

Counseling and preventive treatment must be offered to a person with a positive tuberculosis screening test (**NAC 441A.375, 5**).

If the healthcare worker/employee has a previously documented positive TB screening test or a documented diagnosis of TB or LTBI (LTBI that was 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](http://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 worker/employee who is a suspect case for Tuberculosis (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 workers/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 worker/employee in a healthcare facility must have a physical examination before initial employment and a completed two-step TB test.

Name: \_\_\_\_\_ Date of Birth: \_\_\_\_\_  
(Please Print)

Healthcare Worker/Employee's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Authorized Medical Screener's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Authorized Medical Screener's Name: \_\_\_\_\_

## Nevada Tuberculosis Testing Record: Healthcare Worker/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](http://www.cdc.gov/tb/publications/LTBI/diagnosis.htm)

### BLOOD TEST (IGRA):

Type of IGRA (T-spot or QFT): \_\_\_\_\_

Date Results Reported to Facility-by Lab or HCW  
(mm/dd/yyyy): \_\_\_\_\_

Date Blood Drawn (mm/dd/yyyy): \_\_\_\_\_

Blood Drawn by (Name of Individual/Facility): \_\_\_\_\_

Results Reported to (Department Name and Individual): \_\_\_\_\_

Interpretation:  Negative  Positive

### CHEST X-RAY (CXR):

(The CXR should only be performed if 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 healthcare worker/employee was referred for and provided LTBI education/information by healthcare facility

(mm/dd/yyyy): \_\_\_\_\_

Active TB: Date local health district/TB clinic was notified of suspect or active TB case pursuant to NAC 441.325 and NAC 441A.350. (sent to LHA via Nevada's *Confidential Morbidity Report-Appendix B of the Healthcare Facilities TB Screening Manual*)

(mm/dd/yyyy): \_\_\_\_\_

**Last Name** \_\_\_\_\_ **First Name** \_\_\_\_\_ **DOB:** \_\_\_\_\_

## NEVADA TB SIGNS AND SYMPTOMS QUESTIONNAIRE INSTRUCTIONS

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 been trained to ask the questions is completing the form; or
2. Filled out by the individual (HCW/employee or resident/patient); however, a second designated, trained staff member must review and sign off.

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

# Nevada Tuberculosis Signs and Symptoms Questionnaire

## (Resident/Patient)

Last Name \_\_\_\_\_ First Name \_\_\_\_\_ DOB: \_\_\_\_\_ Age: \_\_\_\_\_

Interpreter needed  Yes  No

Language \_\_\_\_\_ Interpreter Name and Number \_\_\_\_\_

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

<input type="checkbox"/> Yes <input type="checkbox"/> No	_____
<b>9. Is the patient currently on any current medications</b>  <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>Comments:</b> _____ _____ _____
<b>10. Does the individual have the following risk factors? (check box for YES)</b>  <input type="checkbox"/> Been homeless or lived/worked in a shelter <input type="checkbox"/> Lived/worked in a nursing home <input type="checkbox"/> Been an inmate or worked in a jail/prison <input type="checkbox"/> Worked in the healthcare field <input type="checkbox"/> Alcohol use, recreational drug use, smokes <input type="checkbox"/> Consumed unpasteurized milk products <input type="checkbox"/> <b>NONE</b>	<b>Comments:</b> _____ _____ _____ _____ _____ _____ _____ _____
<b>11. Does the individual have any of the following symptoms? (check box for YES)</b>  <input type="checkbox"/> Cough > three weeks <input type="checkbox"/> Fevers <input type="checkbox"/> Night Sweats <input type="checkbox"/> Fatigue <input type="checkbox"/> Loss of Appetite <input type="checkbox"/> Other _____ <input type="checkbox"/> Loss of Weight Usual Average Weight: _____ Weight Today: _____ <input type="checkbox"/> <b>NONE</b>	<b>Specify any YES answers:</b> _____ _____ _____ _____ _____ _____ _____
<p>I understand I am completing this <i>Signs and Symptoms Questionnaire</i> (in place of a TB skin test or blood test) to comply with <b>NAC 441A.380, 2</b> 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.”</p> <p>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 <b>NAC 441A.380, 5</b>. 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.</p> <p>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 <b>NAC 441A.355</b>.</p> <p>Resident or Patient Signature: _____ Date: _____  (or Authorized Representative’s Signature)</p> <p>Authorized Medical Screener’s Signature: _____ Date: _____</p> <p>Authorized Medical Screener’s Name: _____</p>	

# Nevada Tuberculosis Signs and Symptoms Questionnaire

## (Healthcare Worker/Employee)

Last Name \_\_\_\_\_ First Name \_\_\_\_\_

DOB: \_\_\_\_\_ Age: \_\_\_\_\_

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



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

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, 6** 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 Worker/Employee’s Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Authorized Medical Screener’s Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Authorized Medical Screener’s Name: \_\_\_\_\_

# Resident/Patient Tuberculosis 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 1<sup>st</sup> step of TST in prior 12 months, proceed to “**2<sup>nd</sup> 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 23-25 of 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

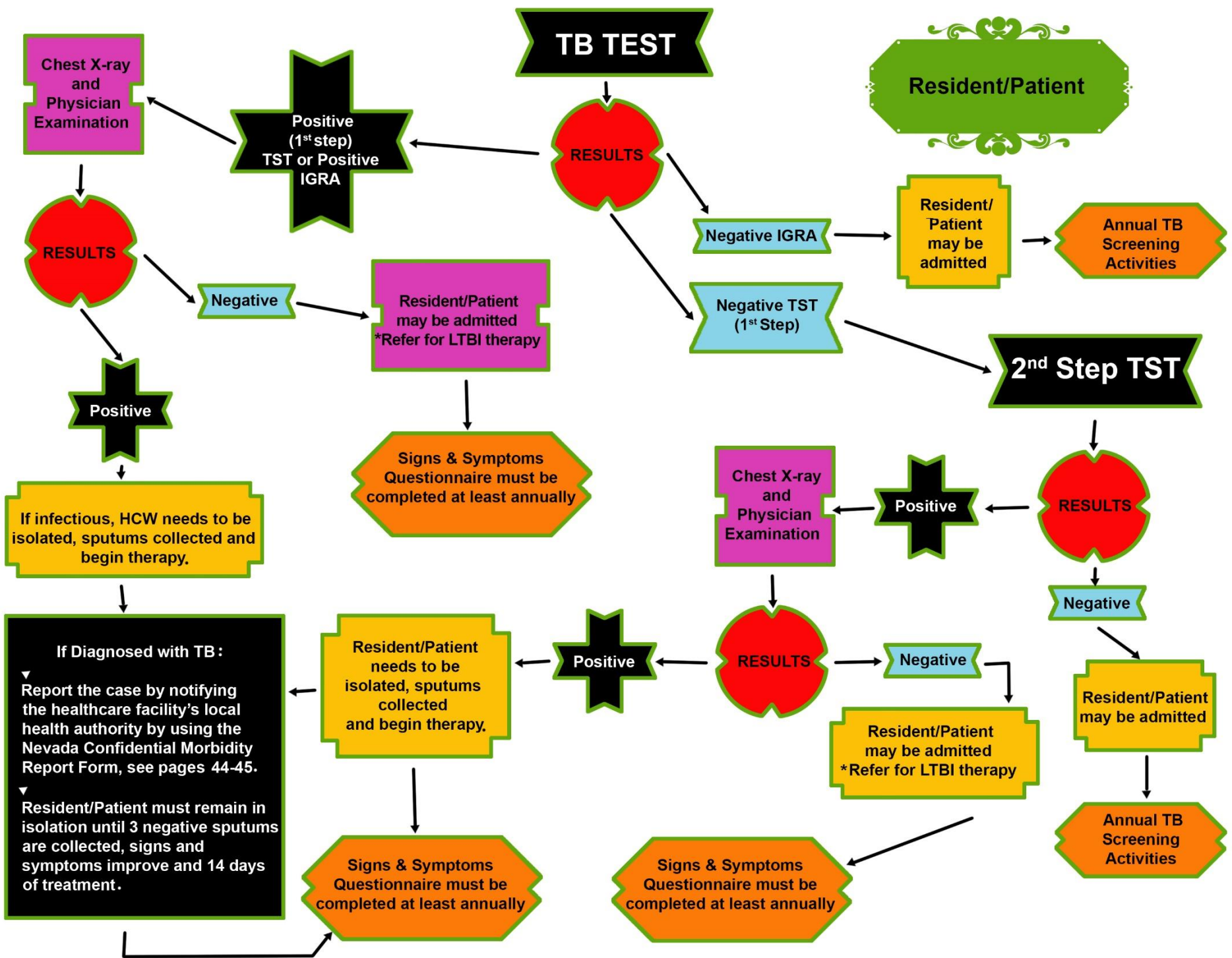
### Testing/Retesting Frequency

- 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 Signs and Symptoms Questionnaire, unless there are reported signs or symptoms of active disease, or it is recommended by a clinician.



# HealthCare Worker/Employee (HCW) Tuberculosis 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 Workers/Employees (HCW) 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 Worker/Employee (HCW)

(If HCW/Employee has documented 1<sup>st</sup> step of TST in prior 12 months, proceed to "2<sup>nd</sup> Step TST" below)

\*If HCW/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 HCW's start date

\*If HCW/Employee has valid documentation of past positive TB test, use the "Nevada Signs and Symptoms Questionnaire" to rule out active TB (pages 22-25 of 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

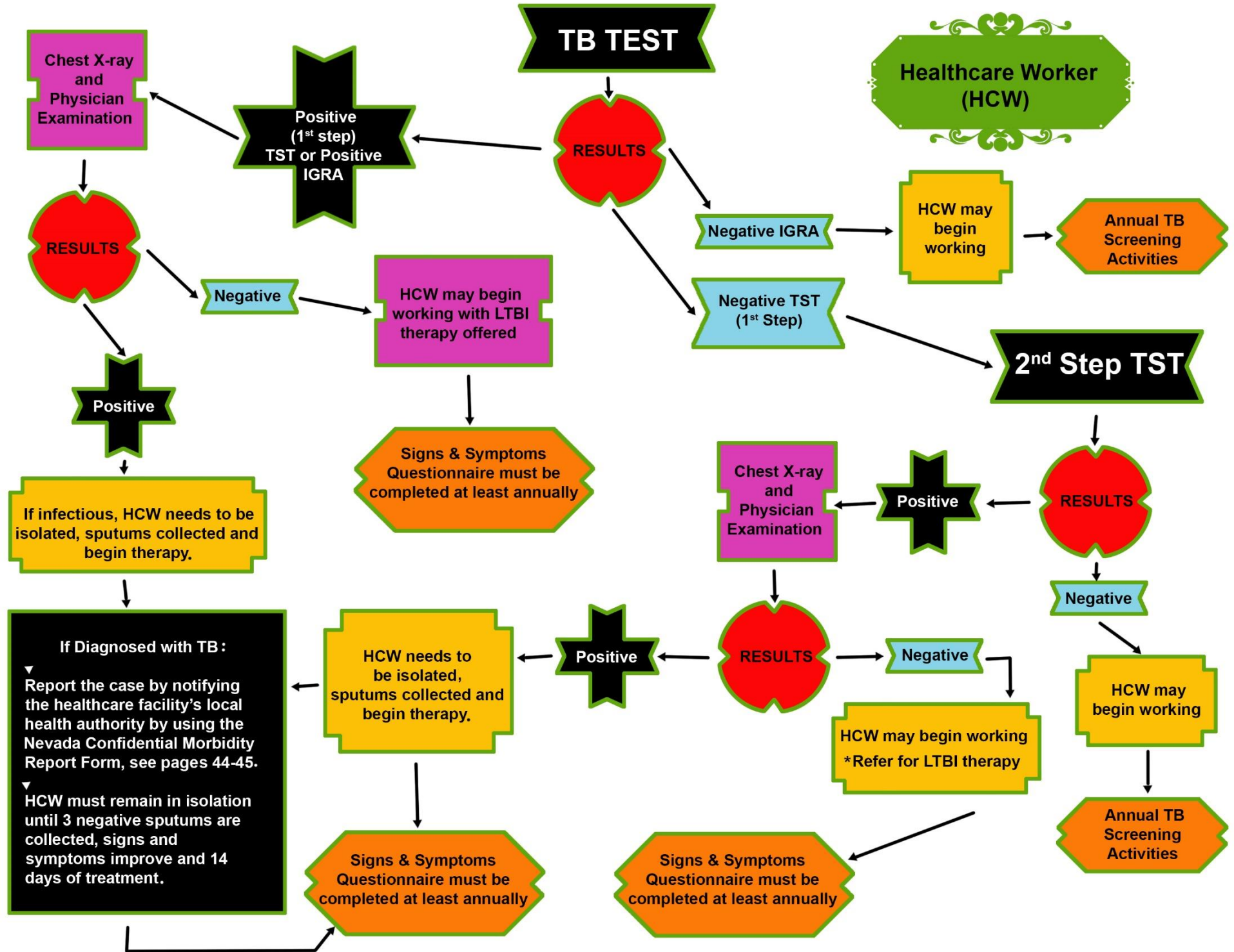
### Testing/Retesting Frequency

- 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 Signs and Symptoms Questionnaire, unless there are reported signs or symptoms of active disease, or it is recommended by a clinician.



## COMMON TB ACRONYMS

(Taken from the Centers for Disease Control and Prevention website and publications, 2013,  
[http://www.cdc.gov/tb/.](http://www.cdc.gov/tb/))

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

---

AII	Airborne infection isolation
BCG	Bacille Calmette-Guérin
CDC	Centers for Disease Control and Prevention
CXR	Chest radiograph (chest X-ray)
HCW	Healthcare worker (i.e. employee)
IGRA	Interferon gamma release assay
LTBI	Latent tuberculosis infection
M. tb	<i>Mycobacterium tuberculosis</i>
MDR-TB	Multidrug-resistant tuberculosis
MIRU	Mycobacterial interspersed repetitive units
MOTT	Mycobacterium other than tuberculosis
NAA	Nucleic acid amplification
PPD	Purified protein derivative
QFT	QuantiFERON®-TB test
RIF	Rifampin
TB	Tuberculosis
TST	Tuberculin skin test

# TB TERMINOLOGY

(Taken from the Centers for Disease Control and Prevention website and publications, 2013,  
[http://www.cdc.gov/tb/.](http://www.cdc.gov/tb/))

## **Tuberculosis (TB)**

Tuberculosis is a condition caused by *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.

---

## **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)

## **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.

**Healthcare Facility**

A place where healthcare is delivered.

**Healthcare Facility TB Risk Assessment**

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 Healthcare Facility TB Risk Assessment determines the types of administrative and environmental controls and respiratory protection needed for a setting.

**Healthcare Workers (HCW)/Employee**

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 Workers 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 5 of this document for a list of possible groups that could be defined as Healthcare Workers and could be included in TB surveillance/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 5 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.

**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. 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 when an individual begins work (or within 30 days of starting employment activities) 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. See also TB screening.

This initial TB test (baseline TB test upon hire) could also be the 2<sup>nd</sup> step of a 2 step TST or it could be a repeat of the 2<sup>nd</sup> step of the 2 step TST.

## **Initial Employment**

See information on page 37 of the Frequently Asked Questions section of this manual

## **Interferon Gamma Release Assay (IGRA)**

A test that detects the presence of *M. tuberculosis* infection by measuring the immune response to the TB bacteria in the blood. There are two commercially available IGRAs: QuantiFERON-TB and T-Spot.

## **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.

## **Mantoux Tuberculin Skin Test**

See Tuberculin Skin Test

## **Medical Director**

The term Medical Director is defined in NAC 449.5505 as, “a physician who is licensed to practice medicine in this State.”

## **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: INH and RIF.

**Mycobacterium Tuberculosis (*M. tuberculosis* or *M. tb*)**

A type of tuberculosis mycobacteria; a gram-positive bacterium that causes tuberculosis. Sometimes called the tubercle bacillus.

**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.

**Pulmonary TB**

Active TB disease that occurs in the lung, usually producing a cough that lasts  $\geq 3$  weeks.

**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 a HCW 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 phlegm. To do this test, lab workers smear the phlegm on a glass slide, stain the slide with a special stain, and look for any TB bacteria on the slide. This test usually takes 1 day to get 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.

## **Suspected or confirmed infectious or potentially infectious TB disease**

Means any of the following: 1) A patient with a smear positive for 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, bronchioalveolar 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 these 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 for 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).

## **TB Blood Test**

See IGRA

## **TB Disease – (active TB)**

The *M. tuberculosis* bacteria is present in the body and the individual has signs/symptoms of being infectious. While individual is infectious they can spread the *M. tuberculosis* bacteria to others.

**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, 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” 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, a second step of a two-step TST should be administered 1–3 weeks after the first TST result was read. If the second TST result is positive, it probably represents a boosted reaction, indicating infection most likely occurred in the past and not recently. If the second TST result is also negative, the person is classified as not infected.

**Upon Hire**

See information on page 37 of the Frequently Asked Questions section of this manual.

## FREQUENTLY ASKED QUESTIONS (FAQS)

For additional information and guidance on the Tuberculosis topics of 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 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], <http://www.cdc.gov/mmwr>.

Please note, the questions/answers listed below are either recommendations of the Centers for Disease Control and Prevention from the *MMWR* 2005 listed above or are requirements by the Nevada TB program based on the laws in the Nevada Administrative Code (NAC) and Nevada Revised Statutes (NRS).

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### **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 is the government bureau for the state of Nevada that licenses medical and other health facilities in Nevada in accordance with NRS (Nevada Revised Statutes) 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. The Bureau also conducts complaint investigations for all licensed and/or certified facilities. ([http://health.nv.gov/HCQC\\_HealthFacilities.htm](http://health.nv.gov/HCQC_HealthFacilities.htm))

### **2. What does the word “annual” mean in annual TB screenings?**

The word “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 10<sup>th</sup>, would be required to complete their annual retest (both the administration of the test and results reported) on or before July 31<sup>st</sup> of the following year.

### **3. What does the term “initial employment” or “upon hire” mean in regards to TB screening activities for healthcare workers/employees 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 worker/employee must have the TB screening test administered and results reported of non-active TB disease before the healthcare worker/employee may start any employment activities. The specific language can be found within the October 2015 Revised Statutes under NAC 441A.375 (3).

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

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 agency's Medical Director 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.**

- An individual stating that they are allergic to the TB skin test, must still do a TB test and should be presented with a blood test option. An individual that says they have had a BCG vaccine before will still need to either show a documented history of their TB results and then do the *Signs & Symptoms Questionnaire* OR they will have to do the skin or blood test again if they have no records of a past positive result.

**5. What does the term “documentation history” mean in related to TB?**

The definition of “documentation 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 positive TB skin test or blood test results and all abnormal associated chest X-rays.

- The language in the **NAC 441A**, regarding the phrase “documented history” means that all residents, patients, inmates and healthcare workers/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 or the *Signs and Symptoms Questionnaire*. The individual should also provide the chest X-ray that was completed at the time the positive TB test was acknowledged. If the individual has had treatment in the past for TB, they need to provide the healthcare or correctional facility those records as well.
- Furthermore, “documented history” could include past signs and symptoms questionnaires, positive or negative TB skin test records, blood or lab records, chest X-rays and treatment records (if they had treatment).

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

CDC guidelines state that a chest X-ray should be completed “within a reasonable time frame, such as 6 months” (page 10 of MMWR December 30, 2005). The CDC guidelines clarifies in the FAQs section of the MMWR, 2005 (page 3) that the reasonable time frame of 6 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 in-place regarding a shorter time span that a chest X-ray is valid for 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 workers/employees or residents/patients to rule out active TB. Refer to the CDC guidelines on the correct usage of chest X-rays as a TB screening activity. (*MMWR* 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 before beginning work or being admitted into the facility?**

Unless the individual has documentation of the positive TST result or previous treatment, they should receive baseline two-step testing before starting duties. If documentation is available of a positive TST result, that result can be considered as the baseline TST result for the HCW at the new setting, and additional testing is not needed. (*MMWR* 2005)

**9. Should healthcare workers/employees transferring from one healthcare facility to another, do another two-step TB test?**

Another two-step TB test is usually not needed when a healthcare worker/employee transfers from one facility to another. However a retest of the 2<sup>nd</sup> step of the TST is required, or if the 2<sup>nd</sup> step has not been completed it must be done. 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.

For more information see “Use of Risk Classification to Determine Need for TB Screening and Frequency of Screening HCW,” *MMWR*, December 30, 2005 or the chart on page 43 of this manual.

**10. Do healthcare workers/employees that work in a personal care/in-home setting, have to receive the two-step TB test?**

Yes, all healthcare workers/employees who do not have a previously documented positive TST result or were treated LTBI/TB disease should receive two-step baseline skin testing in settings that have elected to use TST for screening. 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.

For more information see “Use of Risk Classification to Determine Need for TB Screening and Frequency of Screening HCW,” *MMWR*, December 30, 2005 or the chart on page 43 of this manual.

**11. What is the bacille Calmette-Guérin (BCG) vaccine?**

BCG is the most commonly used vaccine in the world and is used to delay the onset of TB 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  $\geq 20$  mm of induration are not usually caused by BCG. (*MMWR* 2005)

**12. 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 (Quantiferon or T-Spot) should be used instead.

**13. 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 HCW and others who will receive serial TST (e.g., residents or staff of correctional facilities or LTCFs). The HCW should have a single TST or BAMT upon returning to work and should then resume a routine testing schedule on the next normal TST anniversary date. (*MMWR* 2005)

**14. 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 4–6 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)

**15. Can a healthcare worker/employee or patient read and report their own TST results?**

HCW 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)

**16. 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. (*MMWR* 2005)



### **17. What is the preferred treatment regimen for LTBI?**

Nine months of daily INH is the preferred treatment regimen for patients who have LTBI. The 6-month regimen of INH or the 4-month regimen of rifampin are also acceptable alternatives. (*MMWR* 2005) Additionally, in 2011 the CDC approved a new 12 week treatment regimen that may be an option for some LTBI cases. (*MMWR*, December 9, 2011)

### **18. 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 persons who might have suspected or confirmed infectious TB disease from other parts of the setting. Not all negative-pressure rooms are AII rooms, because they might not have the required air flow or differential pressure of an AII room. For a hospital with 120 beds, a minimum of one AII room is needed. (*MMWR* 2005)

### **19. What is a fit test and who does fit testing?**

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. Fit testing should be performed during the initial respiratory-protection program training and periodically thereafter, based on the healthcare facility TB risk assessment for the setting and in accordance with applicable federal, state, or local regulations. 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)

### **20. Should a healthcare worker/employee perform a user-seal check (“fit check”) on a respirator before each use when encountering an individual who is suspect, for or actively, has TB?**

Yes, performing a user-seal check on respirators before each use is essential to minimize contaminant leakage into the face piece. 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 HCW who provide care in the homes of patients with suspected or confirmed infectious TB disease is at least an N95 respirator. (*MMWR* 2005)

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

This person should complete one baseline TST upon hire (before the HCW begins assigned duties). The documented negative TST result within the previous 12 months should be considered the first step of the baseline two-step TST. If the HCW does not have documentation of any TST result, the HCW 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). (*MMWR* 2005) See CDC table below regarding scenarios and further information.

**22. 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 “Active TB Surveillance” (**NAC 441A.375, 6**); however, minimally it must be used when a healthcare worker/employee has tested positive for TB or for those with a documented history of a past positive TB test/past LTBI 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.

## SCENARIOS FOR TWO-STEP TUBERCULIN SKIN TESTS (TSTs) WITH NEW HIRES/EMPLOYEES

Taken from the 2005 *MMWR*, page 29 of the “Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Settings, 2005” found on-line at <http://www.cdc.gov/mmwr/pdf/rr/rr5417.pdf>.

### BOX 1. Indications for two-step tuberculin skin tests (TSTs)

Situations	Recommended Testing
<ul style="list-style-type: none"> <li>• No previous TST result</li> <li>• Previous negative TST result (documented or not) &gt; 12 months before new employment</li> <li>• Previous documented negative TST result ≤ 12 months before new employment</li> <li>• ≥ 2 previous documented negative TSTs but most recent TST &gt; 12 months before new employment</li> <li>• Previous documented positive TST result</li> <li>• Previous undocumented positive TST result*</li> <li>• Previous BCG<sup>†</sup> vaccination</li> <li>• Programs that use serial BAMT,<sup>§</sup> including QFT<sup>¶</sup> (or the previous version QFT)</li> </ul>	<ul style="list-style-type: none"> <li>• Two-step baseline TSTs</li> <li>• Two-step baseline TSTs</li> <li>• Single TST needed for baseline testing; this test will be the second step</li> <li>• Single TST; two-step testing is not necessary (result would have already boosted)</li> <li>• No TST</li> <li>• Two-step baseline TST(s)</li> <li>• Two-step baseline TST(s)</li> <li>• See Supplement, Use of QFT-G<sup>**</sup> for Diagnosing <i>M. tuberculosis</i> Infections in Health-Care Workers (HCWs)</li> </ul>

\* For newly hired health-care workers and other persons who will be tested on a routine basis (e.g., residents or staff of correctional or long-term-care facilities), a previous TST is not a contraindication to a subsequent TST, unless the test was associated with severe ulceration or anaphylactic shock, which are substantially rare adverse events. If the previous positive TST result is not documented, administer two-step TSTs or offer BAMT. **SOURCES:** Aventis Pasteur. Tuberculin purified protein derivative (Mantoux) Tubersol<sup>®</sup> diagnostic antigen. Toronto, Ontario, Canada: Aventis Pasteur; 2001. Parkdale Pharmaceuticals. APLISOL (Tuberculin purified protein derivative, diluted [stabilized solution]). Diagnostic antigen for intradermal injection only. Rochester, MI: Parkdale Pharmaceuticals; 2002. Froeschle JE, Ruben FL, Bloh AM. Immediate hypersensitivity reactions after use of tuberculin skin testing. *Clin Infect Dis* 2002;34:E12–3.

<sup>†</sup> Bacille Calmette-Guérin.

<sup>§</sup> Blood assay for *Mycobacterium tuberculosis*.

<sup>¶</sup> QuantiFERON<sup>®</sup>-TB test.

\*\* QuantiFERON<sup>®</sup>-TB Gold test.

## TWO-STEP TB SKIN TEST (3 VS. 4 VISIT APPROACH)

The two-step TB skin tests (TST) have two different approaches. Either one is acceptable to the Nevada Division of Public and Behavioral Health's TB program and the Centers for Disease Control and Prevention (CDC).

Note: The two-step test is NOT the usual TST in which an individual receives an injection of PPD (purified protein derivative) and the test area is observed at a specific time frame, only once. 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.

### **Common Questions when administering/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?**

A. 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. 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?**

A. Information provided by the CDC can be found on page 46 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  $\geq 10$  mm be accepted 7 days after the TST was placed?**

A. 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  $\geq 15$  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], <http://www.cdc.gov/mmwr>.

## **The Three Visit Approach**

### *Visit 1, Day 1*

The first skin test is applied 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*

A second skin test is applied on individuals whose first test was negative at 7 days.

### *Visit 3, Day 9 or 10*

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 TST antigen is applied under the skin.

### *Visit 2, Day 3*

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*

A second TST skin test is applied to those individuals in whom the TST skin test is negative.

### *Visit 4, Day 9*

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, they still can be tested with TST after a 3-5 year period after 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 workers/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**

<b>Positive IGRA result or a TST reaction of 5 or more millimeters of induration is considered positive in</b>	<b>Positive IGRA result or a TST reaction of 10 or more millimeters of induration is considered positive in</b>
<ul style="list-style-type: none"> <li>• HIV-infected persons</li> <li>• Recent contacts of a TB case</li> <li>• Persons with fibrotic changes on chest radiograph consistent with old TB</li> <li>• Organ transplant recipients</li> <li>• Persons who are immunosuppressed for other reasons (e.g., taking the equivalent of &gt;15 mg/day of prednisone for 1 month or longer, taking TNF-<math>\alpha</math> antagonists)</li> </ul>	<ul style="list-style-type: none"> <li>• Recent immigrants (&lt; 5 years) from high-prevalence countries</li> <li>• Injection drug users</li> <li>• Residents and employees of high-risk congregate settings (e.g., correctional facilities, nursing homes, homeless shelters, hospitals, and other health care facilities)</li> <li>• Mycobacteriology laboratory personnel</li> <li>• Children under 4 years of age, or children and adolescents exposed to adults in high-risk categories</li> </ul>
<b>Positive IGRA result or a TST Reaction of 15 or more millimeters of induration is considered positive in</b>	
<ul style="list-style-type: none"> <li>• Persons with no known risk factors for TB*</li> </ul> <p>* 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.</p>	
<b>Special Considerations</b>	
<p>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.</p> <ul style="list-style-type: none"> <li>• History of BCG vaccine is NOT a contraindication for tuberculin skin testing</li> <li>• TST reactivity caused by BCG vaccine generally wanes with time</li> <li>• If more than 5 years have elapsed since administration of BCG vaccine, a positive TST reaction is most likely a result of <i>M. tuberculosis</i> infection</li> </ul> <p>Persons who are HIV infected have a much greater risk for progression to TB disease if they have LTBI.</p> <ul style="list-style-type: none"> <li>• Individuals with HIV infection may be unable to mount an immune response to the TST and may have false-negative TST results</li> <li>• Usefulness of anergy testing in TST-negative persons who are HIV infected has not been demonstrated</li> </ul> <p>Persons with a positive TST result who are contacts of an individual with infectious TB should be treated regardless of age.</p> <ul style="list-style-type: none"> <li>• Some TST-negative persons should also be considered for treatment (i.e., young children, immunosuppressed)</li> <li>• 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</li> </ul>	

Information taken from Center 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>.

## 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 reference the following two websites: Chapter 441A – Infectious diseases; toxic agents. NAC 441A. (Revised Date: 2012, January). Retrieved from <http://www.leg.state.nv.us/Nac/NAC-441A>, and Updated TB Laws on the Nevada Division of Public and Behavioral Health’s website at <http://dphh.nv.gov/Programs/TB/dta/Statutes/Tuberculosis> (TB)-\_Statutes/.

NAC	TITLE
<b>GENERAL PROVISIONS – Definitions</b>	
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
<b>REPORTING OF COMMUNICABLE DISEASES</b>	
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 ( <b>Bolded laws below are solely Tuberculosis laws</b> )	
NAC 441A.325	Compliance with provisions regarding particular communicable diseases
<b>NAC 441A.350</b>	Healthcare provider to report certain cases and suspected cases within 24 hours of discovery
<b>NAC 441A.352</b>	Registered pharmacist and intern pharmacist to report suspected cases
<b>NAC 441A.355</b>	Active tuberculosis: Duties and powers of health authority
<b>NAC 441A.360</b>	Cases & suspected cases: Prohibited acts; duties; discharge from medical supervision
<b>NAC 441A.365</b>	Contacts: Compliance with regulations; medical evaluation; prohibited acts
<b>NAC 441A.370</b>	Correctional facilities: Testing and surveillance of employees and inmates; investigation for contacts; course of preventive treatment for person with tuberculosis infection; documentation
<b>NAC 441A.375</b>	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
<b>NAC 441A.380</b>	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
<b>NAC 441A.385</b>	Care of medically indigent patient in State Tuberculosis Control Program; payment of cost
<b>NAC 441A.390</b>	Treatment of case or suspected case by healthcare provider



## APPENDIX B: STATE OF NEVADA CONFIDENTIAL MORBIDITY REPORT FORM

**State of Nevada**  
**Confidential Morbidity Report Form** Updated June 2015



<b>Provider</b>	Attending Physician		Physician Phone	Physician Fax	
	Person Reporting / Job Title		Reporter Phone	Reporter Fax	
	Facility Name		Facility Phone	Report Date	
<b>Patient</b>	Name		Gender <input type="checkbox"/> Female <input type="checkbox"/> Male	Race <input type="checkbox"/> White <input type="checkbox"/> Black <input type="checkbox"/> Asian <input type="checkbox"/> Native American <input checked="" type="checkbox"/> Pacific Islander <input type="checkbox"/> Other	
	Address		County	Transgender <input type="checkbox"/> No <input type="checkbox"/> Yes, MF <input type="checkbox"/> Yes, FM	
	City	State	Zip	Pregnant <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	
	Date of Birth / Age		Parent or Guardian Name	Pregnancy EDC	Primary Language Spoken
	Home Phone		Occupation / Employer / School	Marital Status <input type="checkbox"/> Single <input type="checkbox"/> Married <input type="checkbox"/> Widowed <input type="checkbox"/> Separated <input checked="" type="checkbox"/> Divorced <input checked="" type="checkbox"/> Unknown	Birth Country and Arrival Date
	Social Security Number		Medical Record Number		Incarcerated <input type="checkbox"/> No <input type="checkbox"/> Yes
<b>Disease</b>	Disease or Condition Name		Admission Date	Deceased <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	
	Onset Date	Diagnosis Date	Discharge Date	Date of Death	
	Symptoms				
	Was laboratory testing ordered? <input type="checkbox"/> No <i>If yes, attach the results or provide the laboratory name if the results are unavailable</i> <input type="checkbox"/> Yes				
Was the patient treated? <input type="checkbox"/> No <i>If yes, provide the treatment details (drug name, dosage, duration, dates etc.)</i> <input type="checkbox"/> Yes					
<b>Comments</b>					

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

**State of Nevada  
Confidential Morbidity Report Form Instructions**

Updated June 2015



**WASHOE COUNTY  
HEALTH DISTRICT**  
EXPANDING QUALITY OF LIFE

**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

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*  
If the patient currently incarcerated, list the facility in the comments section

**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.

**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

*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 birth date 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

*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, the date of death. If known, list the cause of death under comments

*Medical Record Number*  
A patient identifier unique to the facility or office  
*Gender / Transgender*  
The gender of the patient, and transgender information if applicable  
*Pregnant / Pregnancy EDC*  
The pregnancy status of female patients 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

*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	Leptospirosis
Amebiasis	Listeriosis
Animal bite from a rabies-susceptible species*	Lyme Disease
Anthrax	Lymphogranuloma venereum
Arsenic:	Malaria
Exposures and Elevated Levels	Measles (rubeola)†
Botulism*†	Meningitis (specify type)
Brucellosis	Meningococcal Disease*
Campylobacteriosis	Mercury:
CD4 lymphocyte counts <500/µL	Exposures and Elevated Levels‡
Chancroid	Mumps
Chlamydia	Outbreaks of Communicable Disease*†
Cholera	Outbreaks of Foodborne Disease*†
Coccidioidomycosis	Pertussis
Cryptosporidiosis	Plague*†
Diphtheria†	Poliomyelitis
Drowning‡	Psittacosis
Drug-Resistant <i>Streptococcus pneumoniae</i>	Q Fever
Invasive Disease	Rabies (human or animal)*†
Ehrlichiosis/ anaplasmosis	Relapsing Fever
<i>E. coli</i> O157:H7	Respiratory Syncytial Virus (RSV)
Encephalitis	Rotavirus
Exposures of Large Groups of People‡	Rubella (including congenital)†
Extraordinary occurrence of illness (e.g. Smallpox, Dengue, SARS)*†	Salmonellosis
Giardiasis	Severe Reaction to Immunization
Gonorrhea	Shigellosis
Granuloma inguinale	Spotted Fever
Group A	Rickettsioses
Streptococcal Invasive Disease	Syphilis (including congenital)
Haemophilus influenzae (invasive)	Tetanus
Hansen's Disease (leprosy)	Toxic Shock Syndrome
Hantavirus	Trichinosis
Hemolytic-uremic syndrome (HUS)	Tuberculosis†
Hepatitis A, B, C, delta, unspecified	Latent Tuberculosis <5 years age
HIV infection	Tularemia
Influenza	Typhoid Fever
Lead:	Vancomycin-intermediate <i>Staphylococcus aureus</i> (VISA) and Vancomycin-resistant <i>Staphylococcus aureus</i> (VRSA)
Exposures and Elevated Levels‡	Infection
Legionellosis	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/](http://dpbh.nv.gov/Programs/TB/dta/Forms/Tuberculosis (TB) - Forms/)

**For additional information regarding Nevada’s TB program, contact:**

State of Nevada Tuberculosis Controller  
Office of Public Health Informatics and Epidemiology  
Division of Public and Behavioral Health  
4126 Technology Way, Suite 200  
Carson City, NV 89706  
Phone: (775) 684-5936  
<http://dpbh.nv.gov/Programs/TB/Tuberculosis>

**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, 5U52PS004681-02, 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 Informatics and Epidemiology. Division of Public and Behavioral Health. *Healthcare Facilities Tuberculosis Screening Manual*. July 2016. Carson City, Nevada.

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