

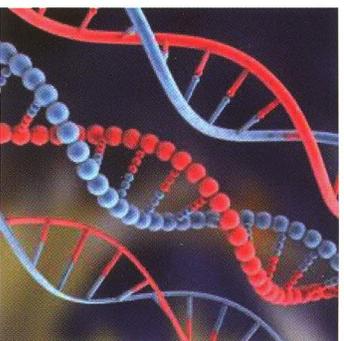
## NUCLEIC ACID AMPLIFICATION TESTING

The Centers for Disease Control recommends that all patients with tuberculosis as part of their differential diagnosis be tested with a NAAT so that a **diagnosis can be obtained within 1-2 days, rather than the 1-2 weeks** required for culture confirmation.

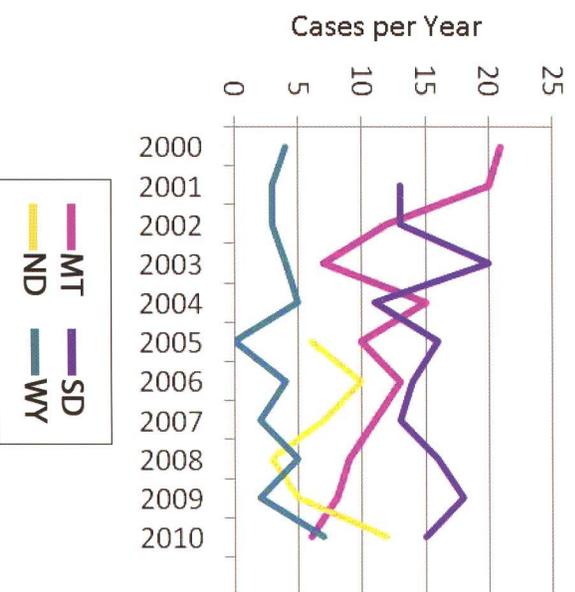
All clinicians and public health tuberculosis programs in the four state region of Montana, North Dakota, South Dakota and Wyoming have access to NAA testing for tuberculosis through their state public health laboratories. These state laboratories also have direct access to molecular testing for rifampin resistance, a marker of multi-drug resistant TB (MDR-TB).

Populations most likely to be at risk for TB infection in the region may include:

- Foreign born
- American Indian
- People 65 or older
- Homeless
- People who have alcohol problems



One of the Healthy People 2010 goals called for TB elimination from this country, yet the U.S. is still far from that goal. The chart below shows the number of TB cases diagnosed in each state in the region for the last ten years. Although Montana, North Dakota, South Dakota and Wyoming are considered to be low incidence states for tuberculosis, it is still important to rapidly diagnose cases for both patient management and public health disease control activities.



number of TB cases diagnosed in each state in the region for the last ten years. Although Montana, North Dakota, South Dakota and Wyoming are considered to be low incidence states for tuberculosis, it is still important to rapidly diagnose cases for both patient management and public health disease control activities.

It is important to identify patients at risk for tuberculosis and who are good candidates for rapid NAA testing. To improve the NAAT's positive predictive value (PPV) by testing only patients that are suspected of having TB, specific patient information will be solicited. Please consider the following questions when determining if a patient would benefit from TB NAA testing:

- Is the patient hospitalized and in airborne or AFB isolation?
- Does the patient have a chest xray suggestive of TB (e.g., infiltrates or cavitary lesions)?
- Does the patient have a positive TB skin test (TST) or IGRAs (e.g., QFT-Gold)?
- Is the patient linked to a known case of TB?
- Does the patient exhibit at least two of the following signs and symptoms?
  - Persistent Cough
  - Purulent/Bloody Sputum
  - Shortness of Breath
  - Chest Pain
  - Fatigue/Malaise
  - Unexplained Weight Loss
  - Night Sweats
  - Fever/Chills
- If the patient has been diagnosed with pneumonia, has he/she been treated but is still not improving?

Your state Public Health Laboratory and TB Program can help you determine if TB NAAT is appropriate, and if other testing may be indicated. Please feel free to contact them with questions. Contact information is available on the back of this brochure.

## SPECIMEN REQUIREMENTS

- **Sputum**—Collect a minimum of 5 ml of sputum, brought up from the lungs after a productive cough or nebulization.
- **Bronchial Washings**—Collect a minimum of 5 ml of specimen.
- **Other Specimen Sources**—NAAT verification studies have been conducted on additional non-respiratory sources. Contact your Public Health Laboratory to see if the specimen source has been verified.

## SUBMISSION REQUIREMENTS

1. Use a sterile screw-capped container. Containers for transport are available from your Public Health Laboratory.
2. Screw lid onto specimen container tightly so specimen does not leak.
3. Label transport container with patient name, a second identifier (e.g., DOB or MR#), and collection date.
4. Place each specimen container in an individual biohazard zip lock bag containing absorbent material and seal bag tightly.
5. If specimen is held prior to transport, maintain at 2–8 °C.

6. Transport respiratory specimens in a cold condition by either mail or courier to your Public Health Laboratory.

7. Specimens from other sources may be shipped at ambient temperatures.

**Do not batch specimens for shipment. It is important to submit specimens as quickly as possible, so that NAAT results can be rapidly available.**

**If you have any questions or need to order transport containers, please contact your Public Health Laboratory.**



Wyoming  
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### website

[www.health.wyo.gov/PHSD/lab/index.html](http://www.health.wyo.gov/PHSD/lab/index.html)

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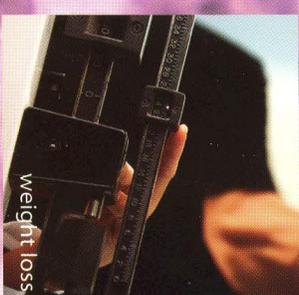
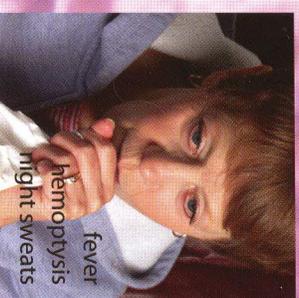
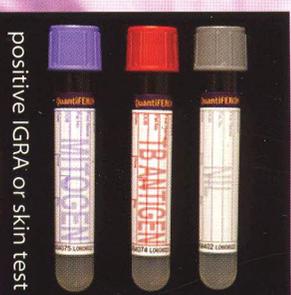
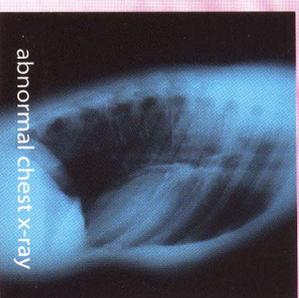
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# THINKING TB?



# THINK NAAT

for earlier diagnosis of TB suspects

The Centers for Disease Control and Prevention (CDC) recommends that Nucleic Acid Amplification Testing (NAAT) be performed on all patients when tuberculosis is part of their differential diagnosis.