Standards of Performance for the Prevention and Control of Tuberculosis

Texas Department of State Health Services
Tuberculosis Program

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Section One
Introduction

Providing tuberculosis (TB) services is a key element in the control and management of TB in the State of Texas. To improve delivery of services, establish realistic goals and objectives, and generate outcomes commensurate with the investment of resources, these standards of performance have been developed for consistent TB prevention and control practices in each local and regional health department TB program. The standards of performance outline expectations of the Texas Department of State Health Services (DSHS) for TB prevention and control programs in the following areas:

- Overall planning and policy
- Management of TB cases and suspects with emphasis on provision of directly observed therapy (DOT)
- Management of contacts to known or suspected cases of tuberculosis
- Management of patients on treatment for latent TB infection (LTBI)
- Surveillance to identify unreported individuals with latent TB infection and TB disease as well as reporting of all TB cases, suspects and contacts
- Infection control procedures
- Targeted testing of high risk groups
- Professional education and training for new TB staff and continuing education for current staff
- Patient and provider communication as it relates to limited English proficient (LEP) clients
- Quality assurance

Entities with contracts from DSHS must operate under the DSHS subrecipient general provisions (E29-12425), the specific scope of work written by DSHS, and the entity's work plan, which describes how that entity will accomplish the objectives listed in the application and scope of work. Work plans should define new and continued effective approaches to control and eliminate TB and meet or exceed the standards described in this document.

The work plan must name a person responsible for TB program management and for quality assurance. This may be the same person. The DSHS central office TB Program must be notified immediately with the name of a replacement or acting TB program manager.

The DSHS central office TB Program may be contacted by phone at (512) 458-7447 or by fax at (512) 458-7787.

Section Two
Overall Planning and Policy

A. The policies and procedures that are used to carry out the local health jurisdiction's TB prevention and control strategies shall be written and available to staff responsible for TB prevention and control activities. Regional health departments shall also develop procedures, as necessary, to comply with DSHS policies related to TB prevention and control.
B. TB prevention and control policies and procedures should be reviewed at least once every three years and revised as appropriate to conform to national and state recommendations and to best practices.
C. To facilitate patient adherence to TB treatment, TB prevention and control programs should maintain a written list of community resources that can assist TB patients with food, shelter, social services, and other medical services. Patients should be referred to appropriate community resources as needed.
D. TB Programs should develop procedures to coordinate TB care with the care for other conditions. If the patient does not already have a primary medical provider or medical home, the program should facilitate establishment of a medical home as appropriate.

Section Three
Management of TB Cases and Suspects

A. A complete medical evaluation must be obtained on all patients suspected of having TB disease. A complete medical evaluation and assessment for TB includes medical history (symptoms, prior TB treatment, risk factors for TB, and history of exposure); physical examination; Mantoux tuberculin skin test (TST) or interferon-gamma release assay (IGRA) (e.g., QuantiFERON-Gold test); chest x-ray; and appropriate bacteriologic (smear, culture, drug susceptibility) and/or histologic examinations. If a patient is reported to the health department with laboratory culture results indicating the presence of *Mycobacterium tuberculosis* complex, a TST result would not change the diagnosis and may be waived.

B. A signed consent form is to be placed in the patient's medical record. If the patient consented to treatment in one health jurisdiction and has moved to a second health jurisdiction, the receiving health jurisdiction must obtain the patient's consent to continue providing TB services and treatment. Suspects must be evaluated and dispositioned (reclassified) within 90 days of the initial report.

C. For patients whose TB care will be shared by both a private medical provider and a local or regional health department, there must be a clear understanding between the public and private providers of which provider will perform the various tasks related to the TB treatment care plan. A written agreement that describes the specific roles and responsibilities of each provider is preferred.

D. Sputum Collection
   1. Patient education about collection of sputum and packaging for mailing, if the patient will mail in specimens, shall be given prior to collection. The health care worker shall observe the collection of at least the initial sputum obtained by the health department and document the observation of this collection in the medical record.
   2. For patients who are able to produce natural or induced sputum
      a. Obtain three sputum specimens, 8 to 24 hours apart, prior to or at the initiation of therapy for the determination of smear and culture. At least one of the samples should be collected early in the morning. Ship specimens according to laboratory guidelines.
      b. At least every two weeks, collect three sputum specimens (of which at least one should be collected early in the morning) for the determination of smears only until three consecutive smears are negative.
      c. Monthly, collect at least one sputum specimen for the determination of culture until all specimens collected for 2 consecutive months are culture negative. Monthly sputum must be collected from patients with isolates resistant to both isoniazid and rifampin (MDR-TB) throughout the treatment course.
      d. Collect at least one further sputum collection at completion of therapy, if possible.

E. HIV Screening
   1. Routine human immunodeficiency virus (HIV) screening shall be performed for all persons older than 14 years of age with newly diagnosed or suspected TB disease unless the patient already knows that he or she is HIV infected or there is a documented negative HIV test result from a specimen collected within the last 14 days. Routine HIV screening is recommended for all persons 14 years of age or younger with newly diagnosed or suspected TB disease unless the patient already knows that he or she is HIV infected or there is a documented negative HIV test result from a specimen collected within the last 14 days.

2. Patient information about HIV testing shall be presented in the same manner as information about other routine tests. The patient may decline to be tested for HIV, but should be educated about the importance of knowledge about their HIV status to the medical management of their TB disease.
3. Separate written consent and prevention counseling for HIV testing is no longer required.
4. Newly positive HIV test results shall be reported to the appropriate HIV/STD program. The patient shall be informed of newly positive HIV test results in person by a health care worker who is trained in post-test counseling. For patients with TB disease who are also infected with HIV, a CD4 count should be obtained.

F. Patients coming to health department clinics with symptoms of pulmonary, pleural, or laryngeal TB must wear a surgical mask and/or be placed in airborne infection isolation at each clinic visit until the patient has met the following three (3) criteria for non-infectiousness and the patient has negligible likelihood of multidrug-resistant TB (no known exposure to multidrug-resistant TB and no history of prior episodes of TB with poor compliance during treatment):
   1. Received standard multidrug anti-tuberculosis treatment by DOT for two weeks;
   2. Has demonstrated clinical or radiographic improvement; and
   3. Has three consecutive negative sputum smear results collected 8 to 24 hours apart with at least one specimen being collected early in the morning. If sputum culture results become negative before the smear results, then three consecutive negative culture results satisfy the criteria for non-infectiousness.

G. Home isolation for infectious patients is possible if the following criteria are met:
   1. A specific plan exists for follow-up care with the local TB-control program;
   2. The patient has been started on a standard multidrug antituberculosis treatment regimen, and DOT has been arranged;
   3. No infants or children aged less than 4 years or persons with immunocompromising conditions are present in the household;
   4. All immunocompetent household members have been previously exposed to the patient;
   5. The patient is willing to refrain from travel outside of the home except for health-care-associated visits until the patient has three consecutive negative sputum smear results.

H. A complete bacteriologic work up, including drug susceptibility tests for isoniazid, rifampin and ethambutol on initial isolates, must be ordered. Extended drug susceptibility testing shall be performed on all isolates with resistance to any first line agent. Assure that at least one specimen from cases with a positive culture is sent to the DSHS Austin lab for genotyping.

I. For all adult patients, baseline laboratory tests for aspartate aminotransferase (AST), alanine aminotransferase (ALT), bilirubin, alkaline phosphatase, serum creatinine, and a complete blood count including platelets must be performed prior to starting treatment. These baseline laboratory tests are not routinely performed for patients under 18 years of age unless there is a history of liver or kidney disease. All patients with a history of liver disease, symptoms of liver disease, baseline liver function tests above the upper limit of normal, or risk factors for liver disease should receive screening for viral or other causes of hepatitis. The frequency for continued monitoring of liver function test results will depend on the level of the baseline tests and the presence or absence of symptoms of hepatitis. As long as a patient is taking ethambutol, use a Snellen chart to screen for baseline and monthly visual acuity and use Ishihara plates to screen for red/green color discrimination at baseline and monthly. For patients who will take amikacin, capreomycin, kanamycin or streptomycin, baseline

audiometry measurements must be made and a screen performed for balance when standing and walking. Questions regarding auditory or vestibular symptoms should be performed monthly. An audiogram and vestibular testing should be repeated if there are symptoms of eighth nerve toxicity. Renal function shall be evaluated at least monthly with a serum creatinine while the patient is on amikacin, capreomycin, kanamycin or streptomycin. Additional tests may be ordered as recommended by the physician in accordance with the joint TB treatment guidelines of the American Thoracic Society (ATS), Centers for Disease Control and Prevention (CDC), and Infectious Diseases Society of American (IDSA).

J. A complete treatment and case management plan must be developed and initiated according to ATS/CDC/IDSA guidelines and recommendations of DSHS. The initial phase is to include four TB drugs: isoniazid (INH), rifampin (RIF), pyrazinamide (PZA), and ethambutol (EMB). These drugs are to be continued until drug susceptibility results are reported and evaluated by the case manager and physician. If any first line drug (INH, RIF, PZA, or EMB) is contraindicated for the patient, the reasons for contraindication must be documented in the medical record. The initial treatment plan should be developed within one week of diagnosis (i.e. within one week of initiation of therapy for a person suspected to have TB or within one week of identification of a person's having a positive culture). The plan must include the following:
   1. Use of DOT for all cases and suspects until the recommended course of therapy is completed. If DOT is not used, then the rationale for not using DOT is to be documented in the patient's medical record.
   2. Educating patients about adverse reactions to drugs, recurrence of symptoms, adherence with treatment and consequences of non-adherence (court-ordered management);
   3. Referring patients for other medical and social services as necessary;
   4. As appropriate, coordinating TB care with care offered by patient's primary medical provider (medical home) for other medical conditions;
   5. Use of incentives or enablers when indicated to assure adherence to DOT;
   6. A licensed nurse, physician or physician assistant will monitor patients at least monthly for response to therapy and adverse drug reactions. Additional review of the progress of the patient should be conducted according to local or regional health department procedures.

K. A consultation must be requested from a DSHS recognized expert physician consultant within three days of laboratory notification for all TB cases whose *Mycobacterium tuberculosis* organisms are resistant to isoniazid and/or rifampin. A list of recognized expert physician consultants is available from the DSHS central office TB Program. Written documentation that the consultation occurred and that the consultant's recommendations were followed or a justification for deviations from the advice of the consultant shall be maintained in the patient's record.

L. Consultation from a recognized expert physician is encouraged for cases less than 15 years of age or with HIV infection. A consult from a recognized expert physician must be obtained to resume treatment after interruptions of more than 2 weeks in the initiation phase of therapy or more than 2 months in the continuation phase. A list of recognized expert physician consultants is available from the DSHS central office TB Program.

M. All TB suspects and cases must be reported within one working day to the local health authority, or if there is no local health authority, to the DSHS Health Service Region director. [Texas Administrative Code, Title 25, Part 1, Chapter 97, Subchapter A §97.2 - §97.6].

Reports of TB cases and suspects should be sent at least weekly to the DSHS central office TB Program in Austin though a DSHS approved electronic reporting system or on the TB-400 A&B forms.

N. All TB cases and suspects must receive a written control order at the beginning of treatment. This control order shall contain at least as much information as the "Order to Implement and Carry Out Measures for a Client with Tuberculosis" (TB-410). An appropriately executed control order is to be placed in the patient's medical record. (If the patient received a control order in one health jurisdiction and has moved to a second health jurisdiction, the receiving health jurisdiction must issue a second control order and place a copy of the signed control order in the patient's medical record). This control order must either be in the patient's preferred language or the medical record must document that an interpreter read the order to the patient or their guardian before they signed. A new control order may be written at any time during the patient's treatment to respond to changes in the patient's condition, behavior, or living arrangements that affect the patient's threat to the public's health. TB programs must seek court-ordered management for patients who are identified as non-adherent with treatment for TB disease, [Texas Health & Safety Code ANN. §81.082(d) (2, 3, & 7) (Vernon 1992)].

O. It is the local health department's responsibility to determine when it is acceptable for a patient with pulmonary or laryngeal TB to return to school or indoors work based on the following criteria:
   1. Drug susceptible TB
      a. Clinical or radiographic improvement
      b. Completed at least 2 weeks of recommended TB treatment
      c. Three negative AFB smears from sputum specimens collected 8-24 hours apart with one being an early morning specimen. If sputum culture results become negative before the smear results, then three consecutive negative culture results satisfy the criteria for non-infectiousness.
   2. Patients with risk factors for drug resistant TB pending sensitivity testing results
      a. Depending on the number of risk factors for resistance, the treating physician may choose to follow the criteria for multidrug-resistant TB (MDR-TB) for release from home isolation pending the results of the drug sensitivity tests. Especially if the patient's symptoms are not improving or are worsening after at least 2 weeks of standard four-drug therapy, drug resistance is a strong possibility, and a consultation with a DSHS recognized expert physician would be appropriate.
   3. MDR-TB
      a. Resolution of fever and the resolution or near resolution of cough
      b. At least two weeks of treatment with an anti-TB regimen to which the strain is known to be susceptible
      c. Three cultures negative for *Mycobacterium tuberculosis* complex collected on different days
   4. High-risk settings: Persons working in high-risk settings (such as worksites with immunocompromised persons, correctional facilities, nursing homes, hospitals or homeless shelters) may need to have 3 negative cultures to return to work, at the discretion of the local health department.

P. The date that the patient is cleared to return to normal activities must be documented in the patient's medical record.

Q. For all cases and suspects regardless of their infectiousness, seek information about exposure of the presenting case to persons with known TB or symptoms of TB disease.

R. Contact investigations for suspected or confirmed cases of pulmonary, pleural, or laryngeal TB disease must be initiated within three (3) days of report or notification. Contact investigations should not be delayed pending laboratory results in congregate settings or where there is some indication that children younger than five, persons who are HIV-infected or persons who are otherwise immunocompromised may be among the contacts. A contact investigation may be halted or not initiated if a nucleic acid amplification test performed by CDC recommended protocol or another rapid laboratory test is negative for *Mycobacterium tuberculosis* complex.

S. Priority for initiating contact investigations based on the infectiousness of the presenting suspect or case:
   1. (First priority – persons with acid-fast bacilli (AFB) sputum smear positive or with cavitary TB) Identify and test all high and medium priority contacts.
   2. (Second priority – persons with suspected or confirmed pulmonary/pleural TB, AFB sputum smear negative and an abnormal chest radiograph consistent with TB disease) Identify and test all high and medium priority contacts.
   3. (Third priority – all other cases and suspects) Identify and test contacts that are living in the household, aged less than 5 years, have a medical risk factor, or were exposed during an unprotected medical procedure (such as bronchoscopy, sputum induction or autopsy).
      a. Negative test results of contacts with the most exposure to extrapulmonary cases confirms that there has been no transmission due to pulmonary involvement.
      b. Testing of contacts with the most exposure to cases aged less than 5 years may identify the source of the child's infection or other associates that may have been infected by that source case.

T. Steps in the contact investigation are as follows:
   1. Within three business days of notification or identification, the investigator should interview the presenting TB patient in person or a parent or guardian for younger children or the next of kin for a presenting TB patient diagnosed at death. Where possible, the interview should take place in the primary language of the patient or their representative. (Use the Contact Investigation Worksheet, EF 12-12062, or an equivalent form to document the information.) During this interview:
      a. Establish the period when transmission could have occurred.
      b. Gather locating information about potential contacts and their amount of exposure including the date contact was broken.
   2. Within three business days of initiation of the investigation, the investigator should visit the primary location where the patient sleeps. The investigator should visit other relevant sites of potentially significant transmission as appropriate.
   3. Notice of the intent to conduct a contact investigation in a school, correctional facility or other high-profile setting that may result in news media attention shall be reported to the DSHS central office TB Program within 48 hours of identification of a suspected or known case of TB in one of these settings. Use form EF12-12104 DSHS TB Incident Report.
   4. The investigator should establish a written plan for evaluation of identified contacts based on their priority classification.
   5. The investigator must periodically reassess and evaluate available clinical data on the

presenting case, to determine if the presenting case remains infectious and to review laboratory data related to drug susceptibility.

6. The investigator should re-interview the presenting case one to two weeks after the initial interview to clarify data or obtain missing data. Additional interviews may also be required. For example, a patient should be re-interviewed when susceptibility results indicate drug resistance or genotyping results indicate that the patient is part of a cluster in the community.
7. Contacts shall be evaluated, educated and offered treatment in accordance with Section Four (Management of Contacts to Known or Suspected Cases of TB).
8. Expansion of the investigation should occur if there is significant evidence of recent transmission.
    a. Infection rates of high and medium priority contacts exceed background prevalence of LTBI in the community
    b. Positive TSTs in contacts less than 5 years of age
    c. Contacts with a change in TST status from negative to positive on post-exposure tests
    d. Contacts have TB disease.
9. The completed initial and final report of contacts to a TB case or suspect (TB-340/TB-341 form) must be sent according to the timeline described in Section Six (Surveillance/Reporting) to the central office TB Program of DSHS unless a specific exemption is granted. If no contacts are identified or no contact investigation is to be made for a case or suspect, then a TB-340 should still be submitted with an explanatory note in the comments section.

U. All TB cases and suspects must be treated without consideration of ability to pay. When a patient works in one jurisdiction and lives in another, the two jurisdictions shall work together to accommodate the patient's preferences for place of treatment.

V. Provide initial and ongoing education to the patient regarding the epidemiology, transmission and pathogenesis of TB; means to decrease transmission; need to complete therapy; rationale for directly observed therapy and contact investigation; confidentiality of patient information, common adverse drug reactions and drug interactions of TB medications; responsibility of patient to discuss symptoms of adverse drug reactions with the nurse case manager or physician when they occur; and signs and symptoms associated with disease relapse.

Section Four
Management of Contacts to Known or Suspected Cases of TB

A. Although no safe exposure time to airborne *Mycobacterium tuberculosis* has been established, public health officials must focus resources on finding exposed persons who are more likely to be infected or to become ill with TB disease. Increased length or frequency of exposure as well as the relative infectiousness of the presenting TB case increase the probability of infection. The term "contact" as used in this document refers to a person with significant exposure in an indoor environment. The decision as to whether an individual should be considered to have had significant exposure should be made by experienced personnel within the local or regional health department and should not be influenced by fear of TB in the community.

B. Initial education, testing and evaluation of contacts should be completed within three weeks of the report of the suspect to the local health department. When a contact investigation involves a congregate setting and an incident report has been filed, exceptions may be granted to this standard.
   1. Priority of evaluation of contacts to persons with positive smears or cavitary TB
      a. High
         1). Household
         2). Contact aged < 5 years
         3). Contact with medical risk factor
         4). Contact with exposure during medical procedure
         5). Contact exposed in congregate setting
      b. Medium
         1). Contact aged 5-15 years
   2. Priority of evaluation of contacts to persons with negative smears and a chest x-ray suggestive of TB disease
      a. High
         1). Contacts aged < 5 years
         2). Contact with medical risk factor
         3). Contact with exposure during medical procedure
      b. Medium
         1). Household contact
         2). Contact with exposure in congregate setting
   3. Priority of evaluation of contacts to other persons with TB disease
      a. Medium
         1). Household contact
         2). Contact aged < 5 years
         3). Contact with medical risk factor
         4). Contact with exposure during medical procedure
   4. Evaluation consists of interviewing all contacts to obtain their relevant medical history (including specific questions about the symptoms of TB disease, previous positive tuberculin reaction and/or previous treatment for TB) and may include administration and reading of a tuberculin skin test (TST) or an interferon-gamma release assay (IGRA); a chest radiograph; and collection of sputum or another specimen for examination.
   5. If a contact has symptoms of TB disease, manage according to Section Three

(Management of TB Cases and Suspects).

6. Children less than five years of age, HIV infected individuals, and other immunosuppressed persons should be placed on treatment for LTBI pending the outcome of the second TST if the initial TST result is negative, the chest x-ray is not suggestive of TB disease, the individual has no symptoms of TB disease, and there are no contraindications to treatment. As recommended by the treating physician, individuals who are HIV infected may need the results of the analysis of smears, cultures or other rapid diagnostic procedures on appropriate specimens to differentiate between LTBI and active TB disease.
7. If there is no history of a previously positive TST and the initial TST result is positive, refer for a chest x-ray within 14 calendar days. Local health departments with radiography facilities on site should obtain a chest x-ray within 10 calendar days. If the chest x-ray is not suggestive of TB disease, and the individual has no symptoms of TB disease, offer treatment for LTBI unless there are contraindications to treatment.

C. Follow-up evaluation of contacts with no history of a previously positive TST
   1. If the initial TST result is negative, a second TST is to be administered within 8 to 10 weeks after the contact has been broken. Break in contact is defined as physical separation of the contact from the presenting case or when the presenting case is no longer considered infectious due to response to treatment. See Section Three (Management of TB Cases and Suspects) for criteria of non-infectiousness.
   2. If the repeat TST remains negative for children less than five years of age, HIV infected individuals, and other immunosuppressed persons placed on treatment for potential LTBI and contact with the source case has been broken, treatment for LTBI may be discontinued with the following exceptions. If the second TST is negative, infants less than 6 months old and HIV infected individuals with advanced immunodeficiency should be evaluated for continuation and completion of treatment for LTBI based on evidence of transmission of infection in other high priority contacts.
   3. If the repeat TST is positive for any contact, refer for a chest x-ray within 14 days. Local health departments with radiography facilities on site should obtain a chest x-ray within 10 days. If the chest x-ray is not suggestive of TB disease, and the individual has no symptoms of TB disease, offer treatment for LTBI unless there are contraindications to treatment. If the contact refuses treatment for LTBI, consider having a different member of the health care team educate the patient about the benefits of treatment and offer treatment again. If the contact still refuses treatment for LTBI, have the patient circle "I do not consent" on the TB-415 and sign the form or use a local form for documenting refusal of treatment.
   4. For contacts that are initially TST negative reactors, evidence that a second TST is administered 8-10 weeks from the date contact was broken must be documented on the forms TB-340/TB-341.
   5. For contacts who are exposed to more than one epidemiologically related case, repeat a TST or any necessary follow-up evaluation as many times as necessary until 8-10 weeks has passed from the last date contact was broken with any of the related cases.

D. Follow-up evaluation of contacts with a history of a positive TST
   1. If symptoms consistent with TB disease are present, evaluate fully for TB disease.
   2. If contact is < 5 years or immunocompromised, evaluate and obtain chest radiograph. (Both posterior/anterior and lateral views are recommended for children ≤ 6 years of

age.) If chest radiograph is suggestive of TB disease, fully evaluate for TB disease. If chest radiograph is not suggestive of TB disease, either give full treatment for LTBI or consider retreatment for LTBI.

3. If an infected contact has not previously completed treatment for LTBI, evaluate for TB disease, which includes a symptom review and a chest radiograph that is more recent than the limits described in Section Five B. If there is no indication of disease, consider for treatment for LTBI.
4. If contact has previously completed treatment for LTBI, no further treatment is required. Counsel patient about signs and symptoms of TB disease. Obtain a chest radiograph as resources allow. Consider retreatment for LTBI in children ≤ 2 years of age, immunocompromised individuals or in outbreak settings.

E. Education of contacts

Provide education to the contacts regarding the epidemiology, transmission and pathogenesis of TB; rationale for contact investigation; confidentiality of patient information; steps in the diagnostic process; the difference between LTBI and TB disease; and signs and symptoms associated with TB disease.

F. HIV-TB

1. Routine HIV screening is recommended for persons with significant exposure to someone with TB disease unless the person to be evaluated for potential TB infection knows that they are already HIV infected. However, local and regional health departments may not have the capacity to perform venipuncture for contacts evaluated under field conditions. So, the HIV test will be offered when contacts come to a public health clinic for the purpose of contact evaluation services. For contacts who are evaluated outside of the public health clinic setting, HIV tests will not be offered unless risk factors are identified for HIV infection. When risk factors for HIV infection are identified in a contact who would not normally be evaluated in the public health clinic, a referral should be made for HIV testing to a local resource for that service.
2. A person with a documented negative HIV test result from a specimen collected within the last 14 days would not need a repeat HIV test. A person with significant exposure to someone with TB disease may refuse to have a test for HIV; however, the health care worker should educate the person that knowledge of HIV status is important to the number and types of tests that should be performed to complete their evaluation for TB infection.
3. When a general consent has been obtained, separate written consent and prevention counseling for HIV testing are no longer required.
4. Newly positive HIV test results shall be reported to the appropriate HIV/STD program. The patient shall be informed of newly positive HIV test results in person by a health care worker who is trained in post-test counseling. For contacts who are HIV positive, the diagnostic process may require collection of appropriate specimens in addition to obtaining a TST and chest radiograph. Educate all HIV positive contacts about the risk of rapidly developing TB disease if infected with TB.

G. Contact investigations in congregate settings

The health department is responsible for coordinating contact investigation activities with medical staff in congregate settings, such as correctional facilities, long-term care facilities, hospitals and other residential facilities that provide medical services to residents. Coordinating activities include, at a minimum, collecting names and evaluation results of

contacts in the congregate facility, collecting names and locating information for contacts in the community, reporting the outcome of the evaluation of contacts to DSHS, assessing infection rates, sharing the percentage of infected contacts with the facility, and advising the facility when an expansion of contact investigation activities is necessary. The extent to which the health department will assist with the evaluation of contacts within the facility should be a joint decision of the health department and the congregate setting administrator.

H. Contact investigations for patients with MDR-TB or XDR-TB
   1. Most contact investigations are initiated before the resistance pattern of the case is known; however, if drug resistance is strongly suspected or when drug resistance to at least INH and RIF is known, the presenting case should be interviewed for contacts more frequently and by different interviewers. The initiation of treatment and the treatment regimen for contacts with LTBI must be based on a consultation with a TB expert.
   2. Consultation with a TB expert is required, especially for any contact suspected of having TB disease, who has a positive TST or who is immunocompromised regardless of TST result.
   3. Collect information about known previous TB exposure or history of spending time in an environment where TB exposure is a significant possibility (e.g., work or residence in a homeless shelter or correctional facility, travel or residence in countries with TB incidence of at least 20 per 100,000).
      a. If yes, consider standard treatment for LTBI, if not previously treated, and conduct periodic follow up (symptom screening and CXR) at 3, 6, 12, 18 and 24 months.
      b. If no, conduct periodic follow up (symptom screening and CXR at 3, 6, 12, 18 and 24 months).

I. Late identification of contacts

   Contacts may continue to be identified throughout treatment for the presenting case. Whenever a contact is identified after the initial case interview, the date of identification shall be documented, the initial medical evaluation should be completed within three weeks of identification, and the second round testing, if necessary, should be completed 8-10 weeks after break in contact with the presenting case.

Section Five
Management of Patients on Treatment for Latent TB Infection (LTBI)

A. Prior to treatment for LTBI, the patient with a positive reaction to a tuberculin skin test (TST) should have a chest radiograph with no abnormalities indicative of TB and exhibit no symptoms suggestive of TB. The decision whether the local or regional health department will provide, without cost to the patient, the chest radiograph for a person with a documented positive reaction to a TST resides with the local or regional health department and should be based on a consideration of exposure history, TB risk factors, and available financial resources. Candidates for treatment of LTBI who are recent contacts to a person known or suspected to have TB should receive a chest radiograph regardless of their ability to pay. A health history containing at least as much information as the TB-202 Tuberculosis Health Assessment/History must be documented in the patient's medical record. A signed consent for treatment form is to be placed in the patient's medical record. If the patient consented to treatment in one health jurisdiction and has moved to a second health jurisdiction, the receiving health jurisdiction must obtain the patient's consent to continue providing TB services and treatment. The consent form should be in the patient's preferred language or the medical record must document the use of an interpreter to read the consent form to the patient before signing.

B. If treatment for LTBI is not started within three (3) months of the chest x-ray showing no abnormalities indicative of TB or the patient begins to exhibit symptoms suggestive of TB, a new chest x-ray or other diagnostic procedures should be performed and evaluated prior to the start of therapy for LTBI. For persons at high risk of progressing to TB disease including those < 1 year of age, those coinfected with HIV, or those receiving immunosuppressive therapy, a repeat chest radiograph should be done prior to taking the first dose of medication if therapy for LTBI is not started within one month to ensure that TB disease has not developed in the interim.

C. If risk factors for potential adverse drug reactions are identified, appropriate baseline lab tests should be ordered. All patients with a history of liver disease, symptoms of liver disease, baseline liver function tests above the upper limit of normal, or risk factors for liver disease must receive screening for viral or other causes of hepatitis. If the benefits of LTBI treatment are greater than the risks of drug induced liver injury and treatment for LTBI is initiated, the frequency for continued monitoring of liver function test results and symptoms of liver disease will depend on the level of the baseline tests and the presence or absence of symptoms of hepatitis. Patients on treatment for LTBI are to be monitored by a licensed nurse, physician or physician assistant at least monthly for adverse drug reactions.

D. For all contacts diagnosed with LTBI who are less than five years of age or HIV positive or live in the same residence as a case receiving directly observed therapy, directly observed therapy for LTBI is strongly recommended. Directly observed therapy for LTBI may be provided to other high-risk persons as resources allow.

E. Patients who receive at least one dose of medication for LTBI shall be reported to the DSHS central office TB Program using a DSHS approved electronic reporting system or TB-400 forms. The DSHS central office TB Program shall be notified according to procedures described in Section Six when the patient has completed treatment or stopped medication for some other reason.

F. When treatment for LTBI is provided, it must be without consideration of the patient's ability

to pay. When a patient works in one jurisdiction and lives in another, the two jurisdictions shall work together to accommodate the patient's preferences for place of treatment.

G. Provide initial and ongoing education to the patient regarding the epidemiology, transmission, and pathogenesis of TB; need to complete therapy; confidentiality of patient information; rationale for directly observed therapy; common adverse drug reactions and drug interactions of TB medications; responsibility of the patient to discuss symptoms of adverse drug reactions with the nurse case manager or physician when they occur; and signs and symptoms associated with progression to TB disease. Instruct the patient to contact the TB program nurse or physician for a diagnostic evaluation if symptoms of TB disease occur at any time in the future.

Section Six
Surveillance / Reporting

A. Surveillance
Local health departments must demonstrate proactive community surveillance systems for TB as demonstrated by a designated TB staff person periodically contacting or providing education about reporting TB to selected health care providers (hospitals, pulmonologists, ear-nose-throat specialists, and providers in other clinic/hospital settings where individuals with TB symptoms would seek medical attention). Additional surveillance activities should focus on private laboratories, pharmacies and local repositories for certificates of death. Targeted testing and screening programs are considered part of the surveillance system.

B. Reporting
Local and regional health departments receive reports from health care providers and others about suspected and confirmed cases of TB disease and occurrences of LTBI. They also gather information about persons identified as having significant exposure to a suspected or confirmed case of TB (i.e., contacts). They must then transmit information about persons with these notifiable conditions to the DSHS central office TB Program at least weekly.

1. Transmittal of information may be by mail, courier or a DSHS approved electronic reporting system. All communications about medical records or transmittal of copies of all or part of those records shall protect the confidentiality and privacy of the patients.
2. For reporting purposes, suspicion of TB is defined as follows:
   a. The presence of at least one of the following:
      1). A smear (from any anatomic site) positive for acid-fast bacilli (AFB)
      2). A result from a rapid laboratory analysis method, such as nucleic acid amplification or high performance liquid chromatography, that is positive for *Mycobacterium tuberculosis*
      3). Biopsy, pathology, or autopsy findings consistent with active TB disease
      4). A death certificate listing TB as the immediate or underlying cause of death.
   b. OR at least two of the following:
      1). Productive cough longer than 3 weeks
      2). Positive tuberculin skin test or positive blood assay for *Mycobacterium tuberculosis*
      3). Other signs or symptoms suggestive of TB disease
      4). Radiographic findings suggestive of TB disease
      5). Clinical suspicion of pulmonary or extrapulmonary TB disease such that the physician or other health care provider has initiated or intends to initiate isolation or treatment for TB disease
3. Report 100% of all TB suspects on a DSHS approved electronic reporting system or on TB-400, parts A and B, with all required data fields complete. For all suspects, submit an updated TB-400B form whenever a change in information in a required reporting field occurs. (Use the same reporting time guidelines for submitting TB-400s for TB cases.) The standard for reclassifying a suspect (ATS classification 5) is within 90 days of the initial report. Submit an updated TB-400B form that changes the classification from 5 to 3 when culture results confirm *Mycobacterium tuberculosis* complex or in the absence of a positive culture, the patient meets the criteria for a clinical case of TB. Changes to a classification of 2, 4, or to a diagnosis not associated with TB should also be submitted

on a TB-400B as appropriate.

4. When a TB suspect for whom culture results are not available is lost to follow-up, the local or regional health department must still report on the TB-340/341 the results of skin tests placed 8-10 weeks after break in contact for those identified contacts that remain in the health jurisdiction or move to another jurisdiction within the U.S. Place a note in the comments section of the TB-340 that the TB suspect who was a potential source of infection for the contacts has been lost to follow-up.
5. For reporting purposes a case of TB is defined as follows:
   a. Laboratory confirmed (one of the following)
      1). Isolation of *Mycobacterium tuberculosis* complex from a clinical specimen. (Rapid identification techniques for *Mycobacterium tuberculosis* [e.g., DNA probes and mycolic acids high-pressure liquid chromatography performed on a culture from a clinical specimen] are acceptable under this criterion.)
      2). Detection of *Mycobacterium tuberculosis* from a clinical specimen by nucleic acid amplification test. (Nucleic acid amplification [NAA] tests must be accompanied by culture for mycobacteria species. However, for surveillance purposes, CDC will accept results obtained from NAA tests approved by the Food and Drug Administration [FDA] and used according to the approved product labeling on the package insert. Current FDA-approved NAA tests are only approved for smear-positive respiratory specimens.)
      3). Demonstration of acid-fast bacilli in a clinical specimen when a culture has not been or cannot be obtained
   b. Clinical (all of the following)
      1). A positive tuberculin skin test; and
      2). Other signs and symptoms compatible with tuberculosis (e.g., an abnormal, unstable [i.e., worsening or improving] chest radiographs, or clinical evidence of current disease); and
      3). Treatment with two or more antituberculosis medications; and
      4). Completed diagnostic evaluation
   c. Clinical by provider decision – documentation must be provided that may indicate the provider's rationale or findings on which the diagnosis was based – (one of the following)
      1). Significant improvement on abnormal chest radiograph; or
      2). Significant improvement based on symptoms from onset; or
      3). Child who is a recent contact to an active case; or
      4). Autopsy report; or
      5). Consultation by DSHS recommended TB expert physician.
6. Report 100% of all TB cases (ATS classification 3) using a DSHS approved electronic reporting system or on the TB-400, parts A and B, with all the required reporting fields complete. For all TB cases, submit an updated TB-400B form whenever a change in information in a required reporting field occurs.
7. Submit 100% of all initial, follow up, and last positive culture lab reports and drug susceptibilities as well as the first negative culture report after the last positive. (Note: for culture reports that originate from a DSHS laboratory, this requirement is automatically met. For culture reports not originating from a DSHS lab, a copy of the lab report must be submitted.) The dates of sputum and culture conversion must be

documented on a DSHS approved electronic reporting system or on the TB-400B. Since sputum specimens may have culture results that fluctuate from positive to negative to positive over a period of time before true conversion may be said to occur, the collection dates for the last positive sputum culture and the first consistently negative sputum culture must be separated by at least 7 days. The collection dates for the initial drug susceptibility test results must be no earlier than 7 days before the drug start date and no later than 7 days after the drug start date. The collection dates for the follow-up susceptibilities should be at least 30 days from the initial drug susceptibilities. If it is impossible to obtain a sputum specimen that yields a culture negative result, the patient's medical record must document the reason.

8. If treatment of a TB case or suspect has stopped due to completion of adequate therapy, death, or failure to locate the patient after three solid attempts and/or 90 days have passed since the last dose, the health department must provide acceptable closure codes and the last date that medication was given. In the event of a cross-contamination or misdiagnosis, the health department must provide documentation to justify deletion of the class 3 record (e.g., amended lab report, doctor's note, consult, etc.) along with a request to delete the record from the state case registry.
9. Health departments shall submit information about contacts, their medical evaluation for infection or disease, and treatment outcomes by the following methods:
   a. An initial report of contacts on forms TB-340 and TB-341 shall be submitted within 14 days of the initial report of the case or suspect. Follow-up information shall be submitted at intervals not exceeding 90 days, 120 days and 2 years; or
   b. Information about contacts may be entered on a DSHS approved electronic reporting system.
10. When a patient under treatment for TB disease or LTBI moves out of the local jurisdiction but within Texas or to Reynosa, Matamoros, Nuevo Laredo or Ciudad Juarez where the patient can receive services from a binational TB project, submit (within 7 days of notification of intent to move) a Referral Form (TDH TB-220) to the receiving health department or binational project. The jurisdiction where the case is originally "counted" is responsible for communicating with the receiving health department(s) for follow-up and closure information. Use the same procedure when a contact requiring medical evaluation moves or is identified as living within Texas or a city served by a binational TB project.
11. When a patient under treatment for TB disease or LTBI moves out-of-state, submit (within 7 days of notification of intent to move) the Interjurisdictional Tuberculosis Notification (NTCA 3-2002) form to the DSHS central office TB Program. The jurisdiction where the case is originally "counted" is also responsible for communicating with the receiving health department(s) for follow-up and closure information. Use the same procedure when a contact requiring medical evaluation moves or is identified as living out-of-state.
12. When a patient under treatment for TB disease or LTBI moves into the local health jurisdiction from out-of-state, submit (within 30 days of notification of the move or identification) the Interjurisdictional Tuberculosis Notification Follow-up (NTCA 5-2002) form to the DSHS central office TB Program. Use the same procedure for notifications about contacts to out-of-state cases or suspects.
13. When a patient under treatment for TB disease or LTBI moves to the interior of Mexico,

contact the CureTB binational program (within 7 days of notification of intent to move) so that communication can be made with the patient for verification of the patient's destination. Also, submit the CureTB Binational Notification of Disease form via fax to the DSHS central office TB Program.

14. When a patient under treatment for TB disease or LTBI moves to a country with a TB control program, submit (within 7 days of notification of intent to move) the International Tuberculosis Notification (revised 22 Feb 2000) form to the DSHS central office TB Program. Assistance in determining whether a country has a national TB control program may be obtained by contacting DSHS central office TB Program. The local jurisdiction should work with the DSHS central office TB Program to obtain follow-up and closure information on patients who move to another country.
15. When the health department receives a Notice of Arrival of Alien with Tuberculosis (CDC 75.17 or 75.18) for Class A, B-1, or B-2, take appropriate action to locate, evaluate and initiate treatment of the patient. Report the outcome of the evaluation and whether treatment was initiated to the DSHS central office TB Program on the form CDC 75.17 or 75.18. Also, use the TB-400A and TB-400B or a DSHS approved electronic data system to report as required for persons with suspected or confirmed TB disease or LTBI.

C. Data Quality

1. Assign at least one person at the case registry level to establish and perform quality assurance measures including but not limited to the following:
   a. Screen all forms for missing information
   b. Request missing information
   c. Document missing variables on the missing information report form
   d. Check for and consolidate duplicate patient records
   e. Verify criteria for ATS classification definitions using the DSHS verification of report form
   f. Retain the verification of report form in the case registry record
   g. Verify patient address
   h. Verify that the reporting form spells out the full patient name and does not use initials for the first or middle name
   i. Obtain treatment closure information on intrastate, interstate, or out-of-country transfer patients that were counted in your jurisdiction
   j. Obtain post-treatment follow-up information as appropriate
2. Make available to employees working at the case registry level the most current copy of the DSHS manual on reporting procedures.
3. Assure that at least one case registry employee attends training provided annually by DSHS and conveys updated information to other case registry employees in the TB Program.
4. The criteria for judging completeness of require reporting variables is as follows:
   a. Above standard if 100% of required reporting variables are complete
   b. At standard if 90%-99% of required reporting variables are complete
   c. Below standard if <90% of required reporting variables are complete

D. Data Security

1. Keep paper medical records in a locked and secure location when not in use.
2. Maintain access to convenience copies of case registry records for 3 years in addition to the current calendar year or until the calendar year data have been finalized in the state

and national reporting systems.

3. When paper medical records have exceeded state and/or local retention times, destroy the documents in a manner that protects the privacy of medical information.
4. Keep electronic medical records on a secure computer system with access limited by user identification and passwords.
5. Assure that employees are trained in maintaining the confidentiality of electronic medical records.
6. When computer equipment that contains protected medical information is to be replaced, assure the destruction or disposal of the equipment in a manner that protects the privacy of medical information that was stored on the equipment.

Section Seven
Infection Control

A. A written infection control plan, which includes sections on administrative measures, environmental controls and personal respiratory protection, with procedures in accordance with the "Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, 2005," is to be implemented in each TB program.
B. Administrative measures
    1. Suspected or confirmed infectious TB cases must be separated from other clinic patients (separate areas or appointment times).
    2. Suspected or confirmed infectious TB cases must be provided surgical masks and facial tissues.
    3. Procedures that generate large amounts of droplet nuclei (bronchoscopy, sputum collection/induction) should be conducted in airborne infection isolation rooms or booths, if available. For clinics without these capabilities, sputum specimens must be collected outside in a location that protects patient confidentiality.
    4. In areas without separate TB clinic facilities, potentially infectious TB patients must be scheduled when other clinic patients are not present.
    5. Health departments that provide TB services to three or more TB cases should follow, at a minimum, the TB screening recommendations for medium-risk settings in "Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, 2005." (For purposes of assessing the risk of a DSHS Health Service Region, the risk of the region as a whole should be considered -- not the risk of individual clinics.) Employees with positive TST results must be asked questions about signs and symptoms of TB disease on the same frequency schedule as screening for employees with negative TST results. Results of TB screening for employees should be reviewed at least annually by the manager of the TB program for that health jurisdiction.
    6. Local health departments that provided TB services to fewer than three TB cases in the last year should follow, at a minimum, the TB screening recommendations for low-risk settings and may choose to follow the recommendations for medium-risk settings in "Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, 2005."
    7. Health departments shall maintain records of employee TB screening results according to local record retention procedures or at least 3 years after employment is terminated, whichever is longer.
    8. Health departments shall report to DSHS within two weeks of reading any tuberculin skin test (TST) conversion among health care workers (HCW) providing TB services. The Centers for Disease Control and Prevention defines a TST conversion as a ≥10 mm increase in the size of the TST induration during a 2-year period in 1) an HCW with a documented negative (<10 mm) baseline two-step TST result or 2) a person who is not an HCW with a negative (<10 mm) TST result within 2 years.
C. Environmental Controls
    1. Environmental controls include the following technologies to remove or inactivate *Mycobacterium tuberculosis*: local exhaust ventilation, general ventilation, high-efficiency particulate air (HEPA) filtration, and ultraviolet germicidal irradiation (UVGI). To be effective, all environmental control equipment must be properly installed, operated

and maintained. The written TB infection control plan must outline the responsibility and procedures for performing and documenting maintenance of all environmental control equipment.

2. The TB Program shall maintain a log of all environmental control equipment maintenance. Any training required for the proper operation of environmental control equipment shall also be documented.

D. Respiratory Protection

1. A respiratory protection program (using at least N-95 respirators) shall be implemented for all employees who share the same air space with suspected or confirmed infectious TB cases. The program shall include written procedures to select a range of sizes and types of respirators that will fit employees, designate one person to be responsible for the program, implement screening of HCWs to assure that they are physically able to perform job duties while wearing a respirator, provide training for employees, implement fit-testing for all employees that will wear respirators, inspect and maintain respirators, and evaluate the effectiveness of the respiratory protection procedures through monitoring employees for conversion of TST results.
2. Fit-testing of appropriate respirators shall be performed at hire and annually for all employees that wear respirators to perform their job functions. Documentation of employee fit-testing shall be kept according to local records retention procedures or for at least 3 years, whichever is longer.

Section Eight
Targeted Testing of High Risk Groups

A. TB programs shall develop effective working relationships with drug treatment centers, homeless shelters, community based organizations, jails and other correctional facilities, and agencies providing services to migrants, refugees and other foreign born individuals, as well as those with HIV/AIDS, to assure screening of community high-risk groups. The local health department should develop targeted testing and screening programs that serve high-risk groups. These programs should be evaluated periodically and continued if the programs are identifying persons with infection or disease at a level that justifies the effort involved.
B. Targeted high-risk groups may include
    1. Foreign born persons from areas of high TB incidence including immigrants arriving with Class A, B1 or B2 waivers/notifications;
    2. Medically under-served, low-income populations, including high-risk racial and ethnic groups;
    3. Persons with HIV infection or AIDS, and individuals at high risk of contracting HIV (e.g., injecting drug and other illicit drug users; those who trade sex for drugs);
    4. Locally identified high prevalence groups including migrant workers or homeless persons; and
    5. A jail that has a capacity of at least 100 beds, or houses inmates transferred from a county that has a jail that has a capacity of at least 100 beds, or houses inmates from another state or county is legislatively mandated by the Texas Health & Safety Code ANN. §89 (Vernon 1992 & Supp. 1996) to conduct TB screening, treatment and reporting programs.
C. Evaluation of foreign born and other ethnic populations may require the use of trained interpreters such as local or regional health department personnel, contractual telephone (or on-site) interpreting services, or contractual interpreters from local organizations serving these populations. Staff should be trained to work in cross cultural settings and know the requirements to provide language services to persons with limited English proficiency.
D. When screening programs identify persons suspected or known to have active TB, those persons must receive appropriate treatment and case management as described in Section Three (Management of TB Cases and Suspects).
E. When screening programs identify persons with LTBI, those persons must be evaluated to determine whether they would benefit from and should be offered treatment for LTBI or whether other conditions would contraindicate such treatment.
F. Priority for directly observed treatment of LTBI for persons identified in targeted testing programs should be given as resources permit to the following:
    1. Children under five years of age,
    2. HIV infected persons,
    3. Persons with compromised immune systems,
    4. Persons who are recently infected,
    5. Persons with other factors linked to an increased risk for progression to disease.
G. When a person is identified with LTBI or TB disease through targeted testing, the local or regional health department must document on the TB 400A the activity used to seek or find the person (e.g. referral, project, individual, or administrative) as well as whether the person is in a recognized medical or population TB risk group.

Section Nine
Professional Education and Training

A. Professional education consists of the education and training of new employees and the continuing education of TB staff.
   1. This training shall be provided to all employees involved in TB activities including physicians, nurses, contact investigators, outreach workers, medical records clerks, receptionists, and other support staff.
   2. Within 60 days of employment, all new employees shall receive 40 hours of TB training specific to their duties and responsibilities. Each year employees shall receive 16 hours of continuing education or training relevant to their position. The CDC's "Self-Study Modules on Tuberculosis" shall be used in the initial training. Documentation of all training (including the hours, topics, and dates) shall be retained for each employee who delivers TB services and made available upon request by the DSHS central office TB Program.
   3. Suggested topics for training of personnel include
      a. Transmission and Pathogenesis of Tuberculosis;
      b. Epidemiology of Tuberculosis;
      c. Diagnosis of Tuberculosis Infection and Disease;
      d. Treatment of Tuberculosis Infection and Disease;
      e. Drug Interactions and Toxicity;
      f. Contact Investigation for Tuberculosis;
      g. Tuberculosis Surveillance and Case Management in Hospitals and Institutions;
      h. Infectiousness and Infection Control;
      i. Patient Adherence to Tuberculosis Control;
      j. Interviewing, Investigating and Influencing Techniques;
      k. Medical Record Keeping and Management;
      l. Budgeting and Fiscal Management;
      m. Operations Management;
      n. Directly Observed Therapy;
      o. TB Nurse Case Management Training;
      p. Cultural Awareness;
      q. Interpreter Utilization
   4. Suggested reading materials include
      a. Essential Components of a Tuberculosis Prevention and Control Program, CDC, 1995;
      b. Self Study Modules on Tuberculosis (modules 1-5), CDC 1995;
      c. Supplemental Self Study Modules on Tuberculosis (modules 6-9) CDC, January 2000;
      d. Core Curriculum on Tuberculosis, Fourth Edition, CDC, 2000;
      e. Diagnostic Standards and Classification of Tuberculosis in Adults and Children (CDC) 2000;
      f. Targeted Tuberculin Testing and Treatment of Latent Tuberculosis Infection (CDC) 2000;
      g. Update: Adverse Event Data and Revised American Thoracic Society/CDC Recommendations Against the Use of Rifampin and Pyrazinamide for Treatment of

Latent Tuberculosis Infection – United States, 2003, (CDC);

h. Targeted Tuberculin Skin Testing and Treatment of Latent Tuberculosis Infection in Children and Adolescents, *Pediatrics*, Vol. 114, No. 4, October 2004;
i. Treatment of Tuberculosis, ATS/CDC/IDSA 2003;
j. Controlling Tuberculosis in the United States, CDC 2005;
k. Guidelines for the Investigation of Contacts of Persons with Infectious Tuberculosis, CDC, 2005;
l. Guidelines for Preventing the Transmission of *Mycobacterium Tuberculosis* in Health Care Settings, 2005, CDC;
m. Prevention and Control of Tuberculosis in Correctional and Detention Facilities: Recommendations from CDC, 2006, (CDC)

5. Training and continuing education is also available through conferences, meetings, classes provided by the Heartland National TB Center*, various professional associations and other resources.

B. Local and regional health departments should also provide TB education and training as resources allow to community health care and social service providers who serve populations at high risk for TB.
   1. Documentation of all community-provider TB training (including the hours, topics, dates and numbers of participants) shall be retained and made available upon request by the DSHS central office TB Program.

C. Local and regional health departments may also provide TB education to geographic areas or social networks where the risk of TB is significantly higher than in the rest of the health jurisdiction. This type of TB education should be linked to a targeted TB screening effort as described in Section Eight and should only be initiated when the estimated yield of identification of persons with LTBI or TB disease justifies the expenditure of resources.

*Heartland National TB Center
2303 S. E. Military Drive
San Antonio, TX. 78223
www.HeartlandNTBC.org
1-800-TEX-LUNG

Section Ten
Patient and Provider Communication

A. Consent forms, control orders, and patient education materials should be sight translated by a trained interpreter and/or provided in appropriate languages for limited English speaking clients. Use of an interpreter for the explanation of consent forms, control orders or patient education materials by a bilingual health care worker should be documented in the patient's medical record. If the patient signs a consent form or control order in a language other than English, the person who signs as the counselor must be able to answer any patient questions about the form in that language.
B. Provider-patient communications with LEP (limited English proficient) clients should be supported with trained interpreters fully bilingual in the client's language.
C. The United States Department of Health and Human Services (HHS) has published policy guidance on Title VI's prohibition against national origin discrimination as it affects limited English proficient persons. (Federal Register: August 30, 2000; Vol. 65, No. 169; pp 52762-52774). The purpose of this policy guidance is to clarify the responsibilities of providers of health and social services who receive federal financial assistance from HHS, and assist them in fulfilling their responsibilities to limited English proficient (LEP) persons, pursuant to Title VI of the Civil Rights Act of 1964. The policy guidance reiterates HHS' longstanding position that in order to avoid discrimination against LEP persons on grounds of national origin, health and social service providers must take adequate steps to ensure that such persons receive the language assistance necessary to afford them meaningful access to their services, free of charge.
D. All TB Programs should become familiar with the various recommendations, requirements, options, and resources in the policy guidance.

Section Eleven
Quality Assurance

A. Each TB program should develop and implement a written plan to assure the quality of the TB prevention and control services that it provides.
B. The plan should include a system to
    1. Review and revise procedures,
    2. Provide ongoing medical record reviews to assure conformity to standards,
    3. Observe and document the proficiency of interactions between staff and clients during the provision of services,
    4. Evaluate clients with adverse outcomes and document actions taken to prevent future adverse outcomes,
    5. Monitor the outcomes of services provided and TB program performance through measurable indicators,
    6. Implement training or other interventions designed to improve the effectiveness of the program as revealed by the measurable indicators.
C. Each program shall notify the DSHS central office TB Program within 2 working days of any serious adverse outcomes resulting in hospitalization or death that may have been caused by the medications used to treat TB disease or LTBI. Use form EF12-12274 TB Program Report of Serious Adverse Drug Reaction Resulting in Hospitalization or Death.
D. Each program that receives funds from DSHS shall monitor program performance measures and send to the DSHS central office TB Program a narrative report describing program goals and accomplishments according to the timeline in the statement of work.