TUBERCULOSIS EXPOSURE

CONTROL PLAN

THE UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO

Provided by:

Environmental Health &Safety Department

June 2009

EXECUTIVE SUMMARY

The University of Texas Health Science Center San Antonio is committed top to providing a workplace free of recognized hazards that is conducive to education, patient care, and research. In the pursuit of these endeavors, occupational exposure to potentially infectious agents may be required by some employees. This TB Exposure Control Plan (ECP) contains guidelines and procedures that should be used in conjunction with standard healthcare or research techniques to minimize exposure to *Mycobacterium tuberculosis*.

This plan should not be construed as a limitation on the use of infectious materials in the course of University of Texas Health Science Center San Antonio education, patient care, or research goals. However, this plan should be used by supervisors to develop patient and employee procedures to minimize the exposure to *Mycobacterium tuberculosis*. This manual is intended to assist all levels of management in implementing effective policies for providing safe patient care in the clinical environment and safe laboratory practices during the course of employment at University of Texas Health Science Center San Antonio.

The ECP is not intended to be an exhaustive or fully comprehensive reference on this subject, but rather a guide for use by technically qualified healthcare workers and researchers. Further advise concerning hazards associated with specific biological agents, recombinant DNA, and the development new or unfamiliar activities should be obtained through consultation with the Institutional Biosafety Committee, the Infection Policy and Education Committee or the Environmental Health and Safety Department.

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TUBERCULOSIS EXPOSURE CONTROL PLAN

I. Background:

TB is a global threat, infecting one-third of the world's population and killing 2 million people per year. In the United States, TB incidence rates are not evenly distributed throughout all segments of the population. As of 2005, the national TB case rate was 4.9 per 100,000 persons while in the same year, the case rate for the state of Texas was 6.7 per 100,000 persons. In 2007, Texas continued to be one of the five leading US states by number of TB cases. While Texas continues to exceed the national case rate, a steady decline in Texas incidence rates has occurred with a 6.3 case rate reported for 2007. Bexar County case rates declined in 2007 to 4.7 cases per 100,000 residents, a decrease from 6.0 cases per 100,000 in 2006.

II. PURPOSE

The UT Health Science Center at San Antonio realizes that the risk of tuberculosis transmission in our facilities exists and seeks to reduce this risk for all health science center workers at the main campus, north campus including the CTRC, satellite clinics, Harlingen, Laredo, and Edinburg, all patients and visitors in our clinics, and others in the health science center facilities. The research mission of the UTHSCSA also includes working with tuberculosis in the laboratory setting as well as working with non-human primates who are susceptible to TB infection. The UT Health Science Center at San Antonio will follow the current CDC guidelines for TB Exposure Control in the Health Care Setting. The current CDC guidelines are available at www.cdc.gov/tb/pubs/mmwr/Maj_guide/infectioncontrol.htm

III. Regulatory Authority:

Centers for Disease Control and Prevention "Guidelines for Preventing Transmission of Mycobacterium tuberculosis in Health-Care Settings, 2005." MMWR2005;54(No.RR-17), OSHA Respiratory Protection Standard, 20CFR 1910.134, July 2, 2004, CDC's Goals for Working Safely with Mycobacterium tuberculosis Complex Species, Public Health and Research Laboratory, April 1997, and NIH Guide for Care and Use of Laboratory Animals.

IV. HIERARCHY OF CONTROL MEASURES:

A. The use of Administrative Controls to reduce the risk of exposure to persons with suspected or confirmed infectious TB.

B. Use of engineering controls to prevent the spread and reduce the concentration of infectious droplet nuclei

C. Use of personal protective equipment.

V. SCOPE:

The plan covers all patients, classified employees, staff, faculty, volunteers, and educational appointees.

VI. RISK ASSESSMENT FOR HEALTH CARE WORKERS:

A. An initial risk assessment to evaluate the risk of TB transmission will be done by Environmental Health and Safety with assistance by the Infection Policy Education Committee (IPEC). This will cover all parts of the health science center, including clinics where TB patients may receive care or cough-producing procedures may be performed, and individual groups of health care workers that work throughout the facility. See Appendix A, Determination of Risk Assessment Categories and Frequency of TB Screening.(Francis J. Curry National Tuberculosis Center)

B. Each specific area of the health science center will be classified as high, intermediate, or low risk based on the number of active or infectious TB patients admitted to the area and other risk factors. If data is not available, all areas and occupational groups likely to encounter active Tb patients will be considered high risk. If areas have not shown an increase in skin test conversion rates for those with occupational exposure compared to those without occupational exposure, this area will be categorized a low risk area.

C. The frequency of risk assessment and skin testing will be determined on the basis of the most recent risk assessment. Low risk groups will be assessed every 12 months, intermediate groups every 6 months, and high risk groups every 3 months.

D. Representatives of the TB Committee, a subcommittee of the IPEC, will inspect the facility, review data, and make recommendations regarding changes in the TB Exposure Control Plan at least annually or as necessary to update the plan in response to documented nosocomial transmission of TB.

E. Following each risk assessment, IPEC, in conjunction with other appropriate health care workers will review all TB Control policies to assure that they are effective and meet current needs.

VII. ANALYSIS OF HEALTH CARE WORKERS PPD TEST SCREENING DATA:

A. Results of employee TB (PPD) testing will be kept in retrievable aggregate database in the Environmental Health and Safety Department.

B. PPD conversion rates will be calculated as follows:

A= # health care workers with new positive skin tests in each area or group.

B= # health care workers with negative skin tests in each area or group

$$\% \text{ Conversion} = \frac{A}{A+B} \times 100$$

C. To identify area where the risk of occupational PPD test conversion may be increasing, PPD test conversion rates for each area will be compared to rates in areas without occupational exposure to active TB and to previous rates in the same area.

D. Anytime a cluster of PPD conversions is noted, further evaluation is indicated.

E. The frequency of PPD testing is determined by risk assessment.

F. Areas in which cough-inducing procedures are performed on patients who may have active TB will, at the minimum be considered intermediate risk.

VIII. REVIEW OF PATIENT MEDICAL RECORDS:

The medical records of patients diagnosed with active TB will be reviewed by the occupational health nurse for the risk assessment and to determine whether any employee exposures occurred.

IX. CASE SURVEILLANCE:

Data on the number of active TB cases among patients and health care workers will be collected, reviewed, and used to:

A. Identify the number of isolation rooms required

B. Recognize clusters of nosocomial transmission

C. Assess the level of potential occupational risk.

D. Monitor drug susceptibility characteristics of *M. tuberculosis* isolates.

X. OBSERVATION OF INFECTION CONTROL PRACTICES:

A. Compliance is considered to be a standard of performance and will be included in the annual performance evaluation for all employees with potential for exposure.

B. Recommended practices are stated in this plan, copies of which are located in each department safety manual and the Environmental Health & Safety website address: http://research.uthscsa.edu/safety

C. Strategies for monitoring compliance:

1) Follow-up on the report of an employee's failure to comply with the required protective measures will be the responsibility of the employee's supervisory staff.
2) Follow-up of problems identified through informal reports, complaints from staff, quality assurance or safety reports, minutes from committees, evaluation of education and training programs will be the responsibility of the affected department's supervisory staff. Significant issues will be forwarded to the IPEC or the Institutional Biosafety Committee.
3) Non-compliance will be reported to an employee's immediate supervisor for evaluation and follow up.

XI. ENGINEERING EVALUATION:

The TB Engineering Evaluation documentation will be reviewed as a part of the risk assessment at intervals.

XII. ADMINISTRATIVE CONTROLS:

A. Initial assessment: Patients will be assessed for possible infectious TB at the site of initial presentation (Emergency room, dental clinic, CTRC clinics, observations areas, etc) following the procedure for handling suspected TB patients. Health care workers who are the first points of contact should ask the following questions which will help recognize and detect patients with signs and symptoms of TB:

1) Have you had a cough of 2 or more weeks of duration?
2) Has this cough been productive sputum? Is it blood stained?
3) Have you had fever, night sweats, unintentional weight loss, lethargy or weakness?

4) Do you or any of your family have TB now, or a history of TB?
   At this time, it should be determined if a patient is a member of a high risk group.
   For those patients whose assessments indicate suspected infectious TB, follow established TB protocol for proper actions

B. Physician Referral: Referring physicians or facilities should be questioned as to the patient's possible TB status, in order to facilitate the patient's admission into appropriate isolation and care.

C. Radiology and Bacteriologic Screening
   1) The microbiology laboratory will be responsible for notifying the attending physician and the occupational health nurse of all positive AFB direct smear and culture results.
   2) The Environmental Health & Safety Department will notify Bexar County TB Control, (San Antonio Metropolitan Health Department) of all positive AFB direct smears and cultures.

D. Laboratories: Laboratories in which specimens for mycobacteriologic studies are processed should be designed to conform to criteria specified by CDC and NIH.

E. Operating Room Recommendations for TB Control:
   1) Elective procedures on patients with TB should be delayed until the patient is no longer infectious.
   2) If procedure must be done, operating rooms with and anteroom are preferred. The anteroom doors should be closed and traffic kept to a minimum. For operating rooms without anterooms, the doors to the OR must be kept closed, and traffic in and out of the room kept to a minimum. Procedures should be done when few other patients are present in the operating suite (e.g., end of day) and when minimum numbers of personnel are present. This applies to pulmonary and on-pulmonary sites. (Tuberculosis bacilli in extra pulmonary lesions may become airborne during irrigation and drainage procedures).
   3) Personnel present when operative procedures are performed on patients with infectious TB should wear medically approved respiratory protection, rather than standard surgical masks. Positive-pressure respirators are not appropriate for use during procedures requiring surgical masks due to the exhalation valve.
   4) A bacterial filter placed on the patient's endotracheal tube or at the expiratory side of the breathing circuit of the anesthesia machine may be useful in reducing the risk of contamination of anesthesia equipment or discharge of tubercle bacilli into the ambient air.

F. Management of Patients with Suspected Tuberculosis in Ambulatory Care Settings and Emergency Centers:

1) Refer to Administrative controls initial assessment section.
2) Place patient with suspected infectious TB in Airborne Precautions in separate negative pressure room or demistifier tent, if available. If separate waiting/exam room is unavailable or if patient requires transportation to ancillary departments, patient should wear mask.
3) Schedule patient to minimize exposure to other patients.
4) Patients should be instructed to cover their mouth with tissues if it is necessary for them to clear respiratory secretions, and to then reapply the mask. Patients should also be told how to dispose of the tissues.
5) If patients are known to be non-compliant with TB medications, institute Airborne Precautions until they are documented to be non-infectious.
6) Patients with previously diagnosed TB infections should be considered to be infectious until the physician determines otherwise.

G. PPD Skin Testing:
   1) Administration of tuberculin test (Mantoux);
      a) 0.1ml of PPD will be injected into either the volar or dorsal surface of the arm. Anergy panels should be ordered in addition to PPD testing for immunocompromised patients where TB is suspected.
      b) Tuberculin is injected just beneath the surface of the skin.
      c) Discrete, pale elevation of the skin 6-10mm should be produced.
   2) Reading of the skin Test
      a) Trained personnel should read the test between 48-72 hours and record results on the appropriate form which will then be placed in patient's chart.
      b) Presence or absence of induration is to be assessed (not redness or erythema) and should be recorded in millimeters.

H. Treatment Guidelines: Patients who have confirmed active TB or are considered highly likely to have active TB should be started on appropriate treatment promptly, according to current guidelines.

   While the patient is in the hospital, anti-tuberculosis drugs will be administered by directly observed therapy, in which a health care worker observes the patient ingesting the medications. All patients should be discharged on outpatient directly observed therapy. Arrangements for this will be made in collaboration with the San Antonio Metropolitan Health Department, TB clinic at 210-207-2870.

I. Cough-Inducing Procedures
   1) Cough-inducing procedures should not be performed on patients who may have infectious TB unless absolutely necessary. These cough inducing procedures include endotracheal intubation and suctioning,

diagnostic sputum induction, aerosol treatments (including pentamidine therapy) and bronchoscopy. Other procedures that may generate aerosols, e.g. irrigation of TB abscesses, homogenizing or lyophilizing tissue, are also included in these recommendations.

2) All cough inducing procedures performed on patients who may have infectious TB should be performed using local exhaust ventilation devices, e.g. booths, or if that is not feasible, in a negative air flow room that meets TB ventilation requirements (i.e. isolation rooms).
3) Health care workers should wear a hospital-approved respirator or mask when present in rooms where cough inducing procedures are being performed on patients who have, or are at high risk of having infectious TB.
4) After completion of cough-producing procedures, patients with known or suspected TB should remain in isolation room or enclosure and not return to common waiting areas until coughing subsides. They should be given tissues and instructed to cover their mouth and nose when coughing. If they must recover from their sedatives or anesthesia following procedures such as bronchoscopy, they should be monitored in a separate isolation room and not in recovery rooms with other patients.
5) Before the booth, enclosure, or room is used for another patient, adequate time should be allowed to pass so that any droplet nuclei that have been expelled into the air can be removed. The time will vary according to the efficiency of the ventilation of filtration used, but is generally 20 minutes.
6) If performing bronchoscopy in positive pressure rooms, such as operating rooms, if unavoidable, TB infection should be ruled out before the procedure. If bronchoscopy is being performed for diagnosis of pulmonary disease on patients that may have infectious TB, it should be performed in a room that meets TB isolation ventilation requirements.
7) Before prophylactic aerosolized pentamidine (AP) therapy is initiated, all patients should be screened for active TB. Screening should include medical history, PPD, and chest X-ray.
8) Before each subsequent AP treatment, patients should be screened for symptoms suggestive of TB. If such symptoms are elicited, a diagnostic evaluation for TB should be initiated.
9) For patients with suspected or confirmed active TB, it is preferable to use oral prophylaxis for pneumocystic pneumonia (PCP), if clinically applicable.
10) San Antonio Metropolitan Health Department should be notified 210-207-2870 for contact investigation prior to discharge.

J. Other Infection Control Measures: Any required infection control measures must be followed to ensure compliance with OSHA standards and/or current guidelines for preventing the transmission of *M. tuberculosis.*

XIII. Engineering Controls:

A. Prevention of nosocomial transmission: Patient rooms and areas where patients with suspected or confirmed TB are treated should be at negative pressure to adjacent areas, have at least 6 air changes/hour, be directly exhausted to the outside or have air re-circulated through a HEPA filtration system with 99.7% filtration. Patient isolation rooms are required to have negative pressure relative to the surrounding areas.

B. Monitoring of isolation rooms for negative pressure when used for TB isolation should be done routinely, per current guidelines or standards.

C. HEPA filters should be monitored and changed routinely, per current guidelines or standards.

D. The need for supplemental ventilation or air cleaning will be periodically reassessed as part of the risk assessment.

XIV. Respiratory Protection:

A. In the following circumstances, health care workers should wear a NIOSH approved high efficiency particulate air (HEPA) respirator or an approved N-95 respirator.
   1) When entering rooms housing patients with suspected or confirmed infectious TB
   2) When performing high risk procedures on patients who have suspected or confirmed infectious TB. Examples of these include administration of aerosolized medications, bronchoscopy, sputum induction, endotracheal intubation, and suctioning procedures, and autopsies.
   3) Emergency medical response personnel or others who must transport, in a closed vehicle, an individual with suspected or confirmed TB

B. Qualitative or quantitative fit testing must be performed for each respirator wearer. The results of such fit testing will be maintained in a retrievable aggregate database. Fit testing will be arranged through the Environmental Health and Safety Department.

C. Medical surveillance will be performed on all potential HEPA respirator wearers.

D. Disposable HEPA respirators should be discarded per facility policy or current guidelines.

E. Multi-user reusable HEPA respirators should be cleaned and filters checked and/or changed per facility policy or current guidelines
F. Designated user reusable HEPA respirators should be cleaned and filters checked and/or changed per hospital policy or current guidelines.

G. HEPA respiratory wearers should perform check to insure proper fit prior to each use.

H. Facial hair that interferes with the seal of the mask should be removed. Department directors will be responsible for monitoring compliance and, if necessary, will initiate counseling or appropriate disciplinary action.

XV. HEALTH CARE WORKERS TUBERCULOSIS SCREENING PROGRAM:

A. Health care workers should have a Tuberculin PPD (Mantoux) upon initial employment and at appropriate intervals as determined by Environmental Health & Safety and IPEC in conjunction with the CDC TB guidelines. A two-step Tuberculin skin test (TST) will be utilized to establish baseline TST's on new hires who have never had a TST, or have no written documentation of prior testing, or have not a TST within the last 12 months. Remote UTHSCSA locations must make arrangements with a local medical provider. See Appendix B.

B. Annual skin testing will be completed for all employees who work in the CTRC and other clinic areas where patient care is provided. Employees with a baseline negative TST will complete the periodic TB screening questionnaire and skin test during their anniversary month. See Appendix C.

C. Individuals with a previous history of a positive TB skin test should not continue to undergo skin testing. However, a baseline chest x-ray should be on file in the employee's health record. These employees must complete an annual TB screening questionnaire designed for persons with a history of positive tuberculin skin test. See Appendix D.

D. All health care workers with a history of positive skin test should either have a chest x-ray on employment or when they initially convert to a positive skin test. If conversion occurs at the time of hire or at annual screening, a chest x-ray and TB evaluation will be required.

E. Tuberculin PPD is not contraindicated for pregnant or breast feeding employees.

F. Health care workers who previously received BCG vaccine as a child should receive a baseline TB skin test. If positive, the employee should have a chest x-ray.

G. Health care workers with immunosuppression should follow guidelines employed by the UT student health services/Employee Health policy. Because these individuals may be at higher risk for acquisition of TB and rapid progression to active disease, voluntary reassignment to lower risk areas may be advisable.

XVI. HEALTH CARE WORKERS WITH TB INFECTION OR ACTIVE DISEASE

A. Health care workers with positive PPD's and no symptoms of active disease should continue work as usual and be counseled to notify Environmental Health & Safety if symptoms develop and to seek medical evaluation.

B. Health care workers with infectious TB should notify UT Environmental Health & Safety and be excluded from work until documented to be non-infectious (three consecutive daily negative AFB smears that are negative or show decreasing numbers of organisms and substantial improvement in symptoms. Clearance from Environmental Health & Safety will monitor compliance with medications. Noncompliant health-care workers should be excluded from work until therapy is re-instituted and the individual assessed to be noninfectious.

C. Health care workers with TB at sites other than the lung or larynx usually do not need to be excluded (except exuding skin lesions).

D. All information provided by health care workers regarding their health status will be treated confidentially.

XVII. EDUCATION AND TRAINING

All health care workers should receive initial employment and annual education about TB that is appropriate to their job category. The following is an outline of the materials to be covered.

A. The basic concepts of TB transmission, pathogenesis, and diagnosis, including the difference between latent TB infection and active TB disease, the signs and symptoms of TB, and possibility of secondary inoculation in the person with a positive PPD test. Collection of specimens for AFB cultures should be included.

B. The potential for occupational exposure to patients with infectious TB, including the prevalence of TB in the community and nationwide, situations

with increased risk of exposure to TB (bronchoscopy, autopsy, etc) and working with people reported to have high risk for TB.

C. Appropriate isolation measures (negative pressure rooms etc.)

D. The principles and practices of infection control that reduce the risk of transmission of TB, including the hierarchy of TB infection control measures, and exposure control plan. Include Respiratory/Airborne Precautions, Transportation of TB patients, and required PPE.

E. The purpose of PPD testing, the significance of a positive result and the importance of participation in the skin test program.

F. The principles of preventive therapy of latent TB infection, indications, use and effectiveness, including the potential adverse effects of the drugs.

G. The responsibility of the employee to seek medical evaluation promptly if symptoms develop that may be due to TB or if PPD test conversion occurs in order to receive appropriate evaluation and therapy and to prevent transmission of TB to patients and other employees.

H. The principles of drug therapy for active TB. This should include the practice of direct observed therapy in the hospital and community.

I. The importance of notifying the appropriate group (Student or Employee health) if diagnosed with active TB so appropriate contact investigation can be instituted.

J. The responsibilities of the institution to maintain the confidentiality of the employee while assuring that the employee with TB receives appropriate therapy and in non-infectious before returning to duty.

K. The higher risk posed by TB with individuals with HIV infection or other causes of severely impaired cell-mediated immunity including:

    1) The more frequent and rapid development of clinical TB after infection with *Mycobacterium tuberculosis.*
    2) The differences in the clinical presentation of the disease.

3) The high mortality rate associated with MDR-TB (M. tuberculosis organisms that are resistant to more than one anti-Tb drug) disease in such individuals.

L. The potential development of cutaneous anergy as immune function declines (measured by CD4 and T-lymphocyte counts)

M. The institution's policy on voluntary work reassignment options for immunocompromised employees.

N. Information regarding the efficiency and safety of BCG vaccination and the principles of PPD screening among BCG recipients

O. Respiratory Training to include:

1) Define HEPA respirator use and why OSHA requires its use.
2) When to use a respirator (in room care of TB patient, bronchoscopy etc).
3) Recognize the respirators used for TB
4) Describe how to clean and inspect the respirator.
5) Describe how long to use the respirator
6) Describe how to fit the respirator
7) Demonstrate a respirator fit-check
8) Medical surveillance requirement of respirator program
9) Describe the OSHA requirements for the program. (Respiratory protection against *M. tuberculosis* will follow OHSA's 29CFR 1910.134 Refer to the Respiratory Protection plan for additional information at the Environmental Health & Safety website).

Appendix A

Determination of Risk Assessment Categories and Frequency of TB Screening

I. Risk Assessment Categories:

A. Classification of risk for a facility, area, occupational group, or job title will be based on the following:

1. Profile of TB in the community, **and**

2. Number of infectious TB patients admitted to an area, or the estimated number of infectious TB patients with whom health-care workers (HCWs) may be in contact, **and**

3. Results of analysis of HCW tuberculin skin test (TST) conversions (when appropriate), **and**

4. Possible person-to-person transmission of *Mycobacterium tuberculosis (M. tb).*

B. The five risk assessment categories outlined by the CDC will be utilized to evaluate the potential risk of *M. tb* exposure to HCWs in the facility, area, occupational group, or job title and to assist in determining the appropriate risk category of the HCWs. The CDC's recommended screening frequency associated with each risk category will be used.

1. Minimal-risk

a. Applies only to an entire facility in which:

1) Patients with TB disease are not admitted to in-patient or out-patient areas, **and**

2) Facility is located in a community with no reported TB cases in prior year.

b. Screening frequency: HCWs will be screened at hire to determine baseline only.

2. Very low-risk

a. Generally applies only to an entire facility in which:

1) Patients with TB disease are not admitted to in-patient areas, but may receive assessment, diagnostic evaluation, or out-patient management in clinic areas, **and**

2) Patients with suspected TB disease who need in-patient care are promptly referred to another facility.

b. Although the facility as a whole is very low-risk, out-patient areas in which patients with TB disease receive care should be periodically reassessed and assigned to the appropriate low-, intermediate-, or high-risk category.

c. Screening frequency: HCWs will be screened at least annually, according to their individual risk.

3. Low-risk

a. Applies to areas, occupational groups, or job titles in which:

1) TST conversion rate is not:

a) Significantly greater than that for areas, occupational groups, or job titles in which *M. tb* exposure is unlikely, **or**

b) Significantly greater than previous conversion rates for the same area, occupational group, or job title, **and**

2) No clusters of TST conversions have occurred, **and**

3) Person-to-person transmission of *M. tb* has not been found, **and**

4) Fewer than six TB patients are seen each year.

b. Screening frequency: HCWs will be screened at least annually.

4. Intermediate-risk

a. Applies to areas, occupational groups, or job titles in which:

1) TST conversion rate is not:

a) Significantly greater than that for areas, occupational groups, or job titles in which *M. tb* exposure is unlikely, **or**

b) Significantly greater than previous conversion rates for the same area, occupational group, or job title, **and**

2) No clusters of TST conversions have occurred, **and**

3) Person-to-person transmission of *M. tb* has not been found, **and**

4) Six or more TB patients are seen each year. (Examination or treatment of 6 or more TB cases per year increases the risk of occupational exposure.)

b. Screening frequency: HCWs will be screened every six months.

5. High-risk

a. Applies to areas, occupational groups, or job titles in which:

1) TST conversion rate is:

a) Significantly greater than for areas, occupational groups, or job titles in which *M. tb* exposure is unlikely, **or**

b) Significantly greater than previous conversion rates for the same area, occupational group, or job title and nosocomial transmission is suspected, **or**

2) Cluster of TST conversions has occurred and occupational (nosocomial) transmission is suspected, **or**

3) Possible person-to-person transmission of *M. tb* has been detected.

b. Screening frequency: HCWs will be screened every three months.

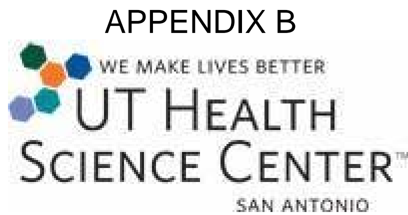
C. The risk of exposure to *M. tb* may change for a facility, area, occupational group, or job title. Therefore, reassessment of risk should to be performed periodically.

[Determine the risk level and screening frequency for HCWs by area, occupational group, or job title and insert in the table on the following page.]

RISK LEVEL AND SCREENING FREQUENCY FOR HCWS BY AREA, OCCUPATIONAL GROUP, OR JOB TITLE

AREA, OCCUPATIONAL GROUP, OR JOB TITLE	RISK LEVEL	SCREENING FREQUENCY

APPENDIX B



TB Screening Questionnaire **Pre-placement/Initial**

____

Last Name **First Name** **MI** **Date Form Completed** _____/_____/____

Date of Birth____/____/____ **UTHSCSA BADGE#:** ____________________________

Department____________________ **Job Title** ____________________________**Work Phone**___________________

1.Were you born in the U.S.A.?
[ ] No [ ] Yes
If no, what is your country of birth? ____________________What year did you move to the U.S.A?____________

2. Have you traveled or lived outside the U.S.A. in the last two years?
[ ] No [ ] Yes, If yes, where?____________________________

3. Have you ever had a TB skin test? (*Bubble under the skin, not four-prong test*)
[ ] No [ ] Yes
a) If yes, when was your last test? ___/___/___
b) What was the result?
[ ] Positive [ ] Negative [ ] Don't Know
c) Do you have a copy of this result in writing?
[ ] Yes [ ] No [ ] Don't Know
d) If the result was positive, what medication did you take?
[ ] Isoniazid (INH) [ ] None [ ] Other [ ] Don't Know

4. Have you ever received the BCG vaccine? (*BCG is a vaccine used to prevent TB*)
[ ] No [ ] Yes [ ] Not sure

5. Have you ever been treated for active TB disease?
[ ] No [ ] Yes [ ] Not sure
a) If yes, what year did you start treatment? ________________________________
b) What medication did you take? __________________How long did you take this medication? ____________

6. Have you ever had a chest x-ray?
[ ] No [ ]Yes If yes, when?____________ [ ] Not sure

7. Has a health care practitioner ever told you that your immune system isn't working right or can't fight infection?
[ ] No [ ] Yes [ ] Not sure

8. Do you work, volunteer, or live in another facility that provides medical or social services?
[ ] No [ ] Yes, If yes, where? ________________________________

9. Have you ever had any of the following symptoms for more than 3 weeks at a time? (*Please check all that apply*)
[ ] Persistent coughing [ ] Excessive fatigue [ ] Coughing up blood
[ ] Hoarseness [ ] Excessive sweating at night [ ] Persistent fever
[ ] Excessive weight loss [ ] **NONE OF THE ABOVE**

THE ABOVE INFORMATION IS ACCURATE AND CORRECT: ____

EMPLOYEE SIGNATURE

Date TST Applied	**Initials**	**Site RA/LA**	**Product Name**	**Lot#**	**Expiration Date**	**Dose (TU)**	**DateRead**	**Initials**	**Induration (mm)**
___/___/___	______	______	_______	__________	___/___/___	______	___/___/___	______	__________
___/___/___	______	______	_______	__________	___/___/___	______	___/___/___	______	__________

APPENDIX C

UT HEALTH SCIENCE CENTER SAN ANTONIO — WE MAKE LIVES BETTER

Periodic/Post Exposure:
Last Tuberculin SkinTest Negative

TB Screening Questionnaire

____
Last Name **First Name** **MI** **Date Form Completed** ____/____/____

Date of Birth____/____/____ **UTHSCSA BADGE#:** ______________________

Department__________________ **Job Title** __________________**Work Phone**__________________

1. Since your last TB skin test, have you worked in a location where patients with TB received care or services?
   [ ] Yes [ ] No [ ] Don't know

2. Since your last TB skin test, have you lived with or had close contact with someone who has TB?
   [ ] Yes [ ] No [ ] Don't know

3. Since your last TB skin test, has your negative test turned to a positive?
   [ ] Yes [ ] No [ ]Don't know

4. Since your last TB skin test, have you had an abnormal Chest x-ray?
   [ ] Yes [ ] No [ ] Don't know

5. Since your last TB skin test, has a health practitioner told you that your immune system isn't working or can't fight infection?
   [ ] Yes [ ] No [ ] Don't know

6. Do you work, volunteer, or live in another facility that provides medical or social services?
   [ ] Yes [ ] No [ ] Don't know

7. Since your last TB skin test, have you traveled outside the U.S.A.?
   [ ] Yes [ ] No [ ] Don't know

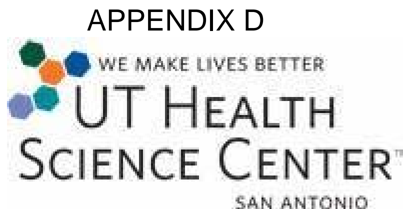
8. Since your last TB skin test, have you had any of the following symptoms for more than 3 weeks at a time?
   (*Please check all that apply*)

   [ ] Persistent coughing [ ] Excessive fatigue [ ] Coughing up blood
   [ ] Hoarseness [ ] Excessive sweating at night [ ] Persistent fever
   [ ] Excessive weight loss [ ] **NONE OF THE ABOVE**

THE ABOVE INFORMATION IS ACCURATE AND CORRECT: ________________________________
EMPLOYEE SIGNATURE

Date TST Applied	Initials	Site RA/LA	Product Name	Lot#	Expiration Date	Dose (TU)	Date Read	Initials	Induration (mm)
___/___/___	______	______	_______	__________	___/___/___	______	___/___/___	______	__________
___/___/___	______	______	_______	__________	___/___/___	______	___/___/___	______	__________

APPENDIX D



TB Screening Questionnaire

Periodic/Post Exposure:
History of Positive Tuberculin Skin Test

____
Last Name **First Name** **MI**

Date Form Completed _____/_____/____

Date of Birth____/____/____

UTHSCSA BADGE#: ____________________________

Department____________________ **Job Title** ____________________**Work Phone**____________________

1. Since your last TB review, have you worked in a location where patients with active TB received care or service?
[ ] Yes [ ] No [ ] Don't know

2. Since your last TB review, have you lived with or had close contact with someone who has TB disease?
[ ] Yes [ ] No [ ] Don't know

3. Since your last TB review, have had an abnormal chest x-ray?
[ ] Yes [ ] No [ ] Don't know

4. Since your last TB review, has a health practitioner told you that your immune system isn't working right or can't fight infection?
[ ] Yes [ ] No [ ] Don't know

5. Do you work, volunteer, or live in another facility that provides medical or social services?
[ ] Yes [ ] No

6. Since your last TB review, have you traveled outside the U.S.A.?
[ ] Yes [ ] No If yes, where and when? ___________________

7. Have you ever had any of the following symptoms for more than 3 weeks at a time? (*Please check all that apply*)
[ ] Persistent coughing [ ] Excessive fatigue [ ] Coughing up blood
[ ] Hoarseness [ ] Excessive sweating at night [ ] Persistent fever
[ ] Excessive weight loss [ ] **NONE OF THE ABOVE**

THE ABOVE INFORMATION IS ACCURATE AND CORRECT: ________________________________
EMPLOYEE SIGNATURE

Additional follow-up due to findings (completed by Environmental Health & Safety):
[ ] Yes [ ] No

If yes, explain follow-up required:

____
____
____

____ __________
Signature **Date**