Maryland County Health Department
Tuberculosis Infection Control Plan

Introduction

In 1998, the Division of TB Control developed a Tuberculosis (TB) Prevention Plan template for use by the local health departments in Maryland. Since that time there have been significant changes in recommendations from the CDC which reflect shifts in the epidemiology of TB and changes in health care practice in the United States. The following TB Infection Control Plan template has been updated to reflect those changes.

All local health departments need a TB Infection Control Plan designed to ensure prompt detection and treatment of active TB that is based on a three-level hierarchy of controls, including administrative controls, environmental controls and respiratory protection. Administrative controls address policies aimed to reduce the risk for exposure to persons who might have TB disease. This includes assessment of the risk of TB exposure to individuals in the facility, development and implementation of a TB prevention and control plan based on the risk assessment, and education and screening of employees. Environmental controls include the use of measures such as local exhaust ventilation and airborne infection isolation rooms to prevent the spread and reduce the concentration of infectious TB droplet nuclei in the air. Respiratory protection controls include the training in, and use of respiratory protection equipment and respiratory hygiene.

TB Infection Control Plans should be re-evaluated and updated as needed, but at least annually. Overall responsibility for the plan should be assigned to a specific staff position, and plans should be implemented in all local health departments. The template has been revised according to the latest CDC and OSHA recommendations regarding tuberculosis prevention and control for health care workers (HCW) and facilities; therefore, health departments may use the template by a) completing the missing information within the template, and/or b) modifying the template according to identified need. The template is available on line at www.edcp.org/tb and may be downloaded and completed electronically. Once the initial plan is completed, any subsequent change(s) can be made without rewriting the entire document. For any questions related to this template, please call the Maryland Department of Health and Mental Hygiene, Division of TB Control, Refuge and Migrant Health at 410-767-6698.

Maryland County Health Department
TB Infection Control Plan

This plan describes the administrative controls, environmental controls, and the respiratory protection program for the _____ County Health Department. Refer to the Maryland TB Guidelines for Prevention and Treatment of Tuberculosis, 2007 for any TB Control activities not specifically addressed in this plan (i.e., when an employee can return to work after diagnosis of active TB).

Administrative Controls

1. **Responsibilities**
   The various responsibilities for this plan are assigned to employees as identified in Attachment I. This plan will be reviewed and updated as needed and annually in (indicate month) _____.

2. **Risk Assessment**
   Based on completion of the TB Risk Assessment Worksheet (Attachment II) and CDC Risk Classifications (Attachment III), risk assessment is assigned as follows[1]:

   Low risk in _____setting(s).

   Medium risk in _____setting(s).

   Potential ongoing transmission in _____setting(s).[2]

3. **Screening of HCWs**
   The frequency of screening for TB infection among staff follows CDC Risk Classification guidelines (Attachment III). Screening of HCWs is documented (Attachment IV or other similar form).

   Baseline Screening
   Baseline screening includes a two-step TST or single blood assay for *Mycobacterium tuberculosis* test (BAMT). Employees with documented previous positive TST or BAMT and documented normal CXR will receive a symptom screen. The following employee classifications are included in baseline screening (list identified employee classifications here):

   _____
   _____
   _____
   _____

[1] Different risk classifications may be applied to separate clinical areas and/or separate classifications of employees.
[2] This classification is temporary and warrants immediate investigation and corrective steps to stop ongoing transmission. Once transmission has ceased, the setting should be reclassified as medium risk for at least 1 year.

Annual Screening

Annual screening includes a symptom screen for all identified employees and testing for TB infection for identified employees with previous negative TST or BAMT.

Will be performed for the employee classifications listed below. Conversion rates are calculated annually, and any increase from the baseline rate will be investigated. (List identified employee classifications here.)

_____

_____

Will not be performed (low risk settings only) for the employee classifications listed below. After baseline testing, further screening will occur only if a documented exposure to active TB occurs, or if there is a change in the risk assessment category. (List identified employee classifications here.)

_____

_____

4. **Work Practice Controls**

Early Identification of Suspect TB

Early identification of individuals suspected to have infectious TB is performed as indicated below. Once identified, individuals with suspected TB will be masked and isolated, and the individual will be referred for evaluation.

Low risk setting. Individuals presenting for service in settings identified as low risk settings will not be screened unless they have signs or symptoms of TB.

Medium risk setting. Individuals presenting for service in settings identified as medium risk settings with symptoms of TB or known HIV infection will be screened for TB.

Potential for ongoing transmission of TB setting. All individuals presenting for service in settings identified as having the potential for ongoing transmission of TB will be screened for TB symptoms and risk factors.

Individuals who are screened and who need further evaluation will be asked to wear a surgical or procedure mask, isolated and referred as follows:

Location of isolation within facility _____.

Transported for evaluation to: _____.

Transportation provided by: _____.

OR

Evaluated on site by: _____.

Cough Hygiene
Signs are posted in all waiting areas to remind individuals to "Cover Your Cough" (Attachment V or other similar). Employees have been trained, and are encouraged to provide tissues and remind individuals to cover coughs.

Employee Education
TB education is provided to employees upon hire and annually thereafter. The topics are listed on the TB Infection Control Training Record (Appendix VI or other similar) which is signed by the employee at each training session and kept in the employee's personnel record. The following employee classifications are included in TB education sessions (list employee classifications here):

_____
_____
_____
_____

Environmental Controls

General Ventilation Systems. Ventilation systems in use in the facility are described in the TB Risk Assessment Worksheet (Attachment II). A maintenance and repair log is kept.

Airborne Infection Isolation (AII) Rooms. Ventilation systems have at least 6 ACH in existing health-care settings and at least 12 ACH in new construction or renovation of health-care settings. Air is discharged outdoors or HEPA-filtered before recirculation. Room is under constant negative pressure which is monitored at least monthly, and daily when room is in use. A maintenance and repair log is kept.

Sputum Induction Room. The sputum induction room meets the recommendations for AII room. If no AII room available, a fully enclosed sputum induction booth with local exhaust ventilation is used. Units are maintained according to manufacturers' recommendations. A maintenance and repair log is kept.

High Efficiency Particulate Air (HEPA) Filter Units. HEPA filter units are maintained according to manufacturers' recommendations. A maintenance and repair log is kept.

Ultraviolet Germicidal Irradiation (UVGI) Units. UVGI units are maintained according to manufacturers' recommendations. A maintenance and repair log is kept.

Respiratory Protection

Identified employees are required to wear NIOSH-certified N-95 respirators, in the following situations:

- In the presence of a suspected or confirmed infectious TB patient who is unable or unwilling to wear a mask.
- When entering a room, including an AII room, or a home which has been occupied by an unmasked person with suspected or confirmed infectious TB, prior to the time required for 99% of the airborne contaminants to be removed from the room (Attachment VII).
- When transporting or accompanying a person with suspected or known infectious TB in an enclosed vehicle, even if that person is wearing a surgical mask.
- In the presence of high-risk procedures (e.g., sputum induction).

Identified employees receive instruction on when to wear the respirator, how to conduct a fit-check, how to inspect, maintain, and store the respirator, when to dispose of the respirator, and respirator limitations. This instruction is documented on the TB Infection Control Training Record (Attachment VI).

Initial fit-testing of respirators is performed by: _____.

Periodic fit-testing of respirators is performed (indicate frequency) _____.

Fit-testing of respirators is performed by: _____.

The following employee classifications are required to wear N-95 respirators during the activities described above (list identified employee classifications here):

_____
_____
_____
_____

Date Plan Adopted/Revised	**Signature of Health Officer**
Signature of Person Responsible for Plan	**Signature of TB Controller (if different from person responsible)**

Attachment I

Assignment of Responsibilities for Local Health Department TB Control Plan

Responsibility	Employee Classification Responsible
Review and update plan	
Perform risk assessment	
Provide employee education	
Assure all identified employees attend annual training and maintain training records	
Perform and document employee screening	
Assure all identified employees are screened and maintain screening records	
Monitor conversion rates (if annual screening being performed) and investigate any increase over baseline rate	
Monitor and replace as needed cough etiquette signs located in the facility	
Monitor negative pressure in AII room(s), document findings, report when pressure is not negative	
Monitor and maintain HEPA units, document and maintain records filter changes and repairs	
Monitor and maintain UVGI units and warning signage, document and maintain records of cleaning and changing of bulbs	
Provide fit testing	
Maintain fit-testing records and order masks and fit-test supplies	
Comply with all elements of this plan, including attending education sessions, obtaining required screening, using respirators when indicated, using safe work practices, and reporting all TB exposures	All employees

Attachment II

Tuberculosis (TB) Risk Assessment Worksheet

This worksheet was adapted from CDC guidelines.[3] Facilities with more than one type of setting should apply this table to each setting.

1. Incidence of TB

What is the incidence of TB in your community (county or region served by the health-care setting), and how does it compare with the state and national average? What is the incidence of TB in your facility and specific settings and how do those rates compare? (Incidence is the number of TB cases in your community the previous year. A rate of TB cases per 100,000 persons should be obtained for comparison.)* This information can be obtained from the state or local health department.	Community rate_____ State rate _____ National rate _____ Facility rate _____ Department 1 rate _____ Department 2 rate _____ Department 3 rate _____
Are patients with suspected or confirmed TB disease encountered in your setting (inpatient and outpatient)?	Yes No
If yes, how many patients with suspected and confirmed TB disease are treated in your health-care setting in 1 year (inpatient and outpatient)? Review laboratory data, infection-control records, and databases containing discharge diagnoses.	Year No. patients Suspected Confirmed 1 year ago _____ _____ 2 years ago _____ _____ 5 years ago _____ _____
If no, does your health-care setting have a plan for the triage of patients with suspected or confirmed TB disease?	Yes No
Currently, does your health-care setting have a cluster of persons with confirmed TB disease that might be a result of ongoing transmission of *Mycobacterium tuberculosis* within your setting (inpatient and outpatient)?	Yes No

2. Risk Classification

Does your health-care setting provide care to TB patients? (If yes, a classification of at least medium risk is recommended for those employees who provide such care.)	Yes No
Does evidence exist that a high incidence of TB disease has been observed in the population that the health-care setting serves?	Yes No
Does evidence exist of person-to-person transmission of *M. tuberculosis* in the health-care setting? (Use information from case reports. Determine if any tuberculin skin test [TST] or blood assay for *M. tuberculosis* [BAMT] conversions have occurred among health-care workers [HCWs]).	Yes No
Does evidence exist that ongoing or unresolved health-care–associated transmission has occurred in the health-care setting (based on case reports)?	Yes No
Is there a high incidence of immunocompromised patients or HCWs in the health-care setting?	Yes No
Have patients with drug-resistant TB disease been encountered in your health-care setting within the previous 5 years?	Yes No Year _____
When was the first time a risk classification was done for your health-care setting?	_____

[3] CDC Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, 2005. MMWR 2005;54(No. RR-17):pp128-133.

3. Screening of HCWs for *M. tuberculosis* Infection

Does the health-care setting have a TB screening program for HCWs?	Yes No	
If yes, which HCWs are included in the TB screening program? (Check all that apply.) o Physicians o Mid-level practitioners (nurse practitioners [NP] and physician's assistants [PA]) o Nurses	o Administrators o Laboratory workers o Respiratory therapists o Physical therapists o Contract staff o Construction or renovation workers o Service workers	o Janitorial staff o Maintenance or engineering staff o Transportation staff o Dietary staff o Receptionists o Trainees and students o Volunteers o Others_____
Is baseline skin testing performed with two-step TST for HCWs?		Yes No
Is baseline testing performed with QFT or other BAMT for HCWs?		Yes No
How frequently are HCWs tested for *M. tuberculosis* infection?		
Are the *M. tuberculosis* infection test records maintained for HCWs?		Yes No
Where are the *M. tuberculosis* infection test records for HCWs maintained?		
If the setting has a serial TB screening program for HCWs to test for *M. tuberculosis* infection, what are the conversion rates for the previous years? †		
1 year ago _____ 2 years ago _____ 3 years ago _____	4 years ago _____ 5 years ago _____	
Has the test conversion rate for *M. tuberculosis* infection been increasing or decreasing, or has it remained the same over the previous 5 years? (check one)		o Increasing o Decreasing o No change
Do any areas of the health-care setting (e.g., waiting rooms or clinics) or any group of HCWs (e.g., lab workers, emergency department staff, respiratory therapists, and HCWs who attend bronchoscopies) have a test conversion rate for *M. tuberculosis* infection that exceeds the health-care setting's annual average?		Yes No If yes, list _____ _____
For HCWs who have positive test results for *M. tuberculosis* infection and who leave employment at the health setting, are efforts made to communicate test results and recommend follow-up of latent TB infection (LTBI) treatment with their primary physician?		Yes No Not applicable

4. TB Infection-Control Program

When was the TB infection-control plan first written?		
When was the TB infection-control plan last reviewed or updated?		
Does the written infection-control plan need to be updated based on the timing of the previous update (i.e., >1 year, changing TB epidemiology of the community or setting, the occurrence of a TB outbreak, change in state or local TB policy, or other factors related to a change in risk for transmission of *M. tuberculosis*)?		Yes No
Does the health-care setting have an infection-control committee (or another committee with infection control responsibilities)?		Yes No
If yes, which groups are represented on the infection-control committee? (Check all that apply.) o Physicians o Nurses o Epidemiologists	o Engineers o Laboratory personnel o Health and safety staff o Administrator	o Pharmacists o Risk assessment o Quality control (QC) o Others (specify)__
If no, what committee is responsible for infection control in the setting?		

5. Implementation of TB Infection-Control Plan Based on Review by Infection-Control Committee

Through what means (e.g., review of TST or BAMT conversion rates, patient medical records, and time analysis) are lapses in infection control recognized?	
What mechanisms are in place to correct lapses in infection control?	

Based on measurement in routine QC exercises, is the infection-control plan being properly implemented?	Yes No
Is ongoing training and education regarding TB infection-control practices provided for HCWs?	Yes No

6. Environmental Controls

Which environmental controls are in place in your health-care setting? (Check all that apply and describe)

Environmental control	Description
o AII rooms	_____
o Local exhaust ventilation (enclosing devices and exterior devices)	_____
o General ventilation (e.g., single-pass system, recirculation system.)	_____

o Air-cleaning methods (e.g., high-efficiency particulate air [HEPA] filtration and ultraviolet germicidal irradiation [UVGI]) _____

What are the actual air changes per hour (ACH) and design for various rooms in the setting?

Room	ACH	Design

Which of the following local exterior or enclosing devices such as exhaust ventilation devices are used in your health-care setting? (Check all that apply)

o Laboratory hoods o Booths for sputum induction o Tents or hoods for enclosing patient or procedure

What general ventilation systems are used in your health-care setting? (Check all that apply)

o Single-pass system
o Variable air volume (VAV)
o Constant air volume (CAV)
o Recirculation system
o Other_____

What air-cleaning methods are used in your health-care setting? (Check all that apply)

HEPA filtration
o Fixed room-air recirculation systems
o Portable room-air recirculation systems

UVGI
o Duct irradiation
o Upper-air irradiation
o Portable room-air cleaners

How many AII rooms are in the health-care setting?

What ventilation methods are used for AII rooms? (Check all that apply)

Primary (general ventilation):
o Single-pass heating, ventilating, and air conditioning (HVAC)
o Recirculating HVAC systems

Secondary (methods to increase equivalent ACH):
o Fixed room recirculating units
o HEPA filtration
o UVGI
o Other (specify) _____

Does your health-care setting employ, have access to, or collaborate with an environmental engineer (e.g., professional engineer) or other professional with appropriate expertise (e.g., certified industrial hygienist) for consultation on design specifications, installation, maintenance, and evaluation of environmental controls?	Yes No
Are environmental controls regularly checked and maintained with results recorded in maintenance logs?	Yes No
Are AII rooms checked daily for negative pressure when in use?	Yes No
Is the directional airflow in AII rooms checked daily when in use with smoke tubes or visual checks?	Yes No
Are these results readily available?	Yes No
What procedures are in place if the AII room pressure is not negative?	_____

Do AII rooms meet the recommended pressure differential of 0.01-inch water column negative to surrounding structures?	Yes No

7. Respiratory-Protection Program

Which HCWs are included in the respiratory protection program? (Check all that apply) o Physicians o Mid-level practitioners (NPs and PAs) o Nurses o Administrators o Laboratory personnel o Contract staff o Construction or renovation staff o Service personnel	o Janitorial staff o Maintenance or engineering staff o Transportation staff o Dietary staff o Students o Others (specify)_____ _____ _____ _____ _____

Are respirators used in this setting for HCWs working with TB patients? If yes, include manufacturer, model, and specific application (e.g., ABC model 1234 for bronchoscopy and DEF model 5678 for routine contact with infectious TB patients).

Manufacturer	Model	Specific application

Is respiratory-protection training for HCWs performed by a person with advanced training in respiratory protection?	Yes No
What method of fit testing is used? Describe.	
Is qualitative fit testing used?	Yes No
Is quantitative fit testing used?	Yes No

8. Reassessment of TB risk

When was the last TB risk assessment conducted?	
What problems were identified during the previous TB risk assessment? 1) _____ 2) _____ 3) _____ 4) _____ 5) _____	
What actions were taken to address the problems identified during the previous TB risk assessment? 1) _____ 2) _____ 3) _____ 4) _____ 5) _____	
Did the risk classification need to be revised as a result of the last TB risk assessment?	Yes No

* If the population served by the health-care facility is not representative of the community in which the facility is located, an alternate comparison population might be appropriate.

† Test conversion rate is calculated by dividing the number of conversions among HCWs by the number of HCWs who were tested and had prior negative results during a certain period (see Supplement, Surveillance and Detection of *M. tuberculosis* infections in Health-Care Settings).

Attachment III

Appendix C. Risk classifications for health-care settings that serve communities with high incidence of tuberculosis (TB) and recommended frequency of screening for *Mycobacterium tuberculosis* infection among health-care workers (HCWs)*

	Risk classification†		
Setting	**Low risk**	**Medium risk**	**Potential ongoing transmission§**
Inpatient <200 beds	<3 TB patients/year	≥3 TB patients/year	Evidence of ongoing *M.tuberculosis* transmission, regardless of setting
Inpatient ≥200 beds	<6 TB patients/year	≥6 TB patients/year	
Outpatient; and nontraditional facility-based	<3 TB patients/year	≥3 TB patients/year	
TB treatment facilities	Settings in which • persons who will be treated have been demonstrated to have latent TB infection (LTBI) and not TB disease • a system is in place to promptly detect and triage persons who have signs or symptoms of TB disease to a setting in which persons with TB disease are treated • no cough-inducing or aerosol-generating procedures are performed	Settings in which • persons with TB disease are encountered • criteria for low risk is not otherwise met	
Laboratories	Laboratories in which clinical specimens that might contain *M. tuberculosis* are not manipulated	Laboratories in which clinical specimens that might contain *M. tuberculosis* are manipulated	
Recommendations for Screening Frequency			
Baseline two-step TST or one BAMT¶	Yes, for all HCWs upon hire	Yes, for all HCWs upon hire	Yes, for all HCWs upon hire
Serial TST or BAMT screening of HCWs	No**	Every 12 months††	As needed in the investigation of potential ongoing transmission§§
TST or BAMT for HCWs upon unprotected exposure to *M. tuberculosis*	Perform a contact investigation (i.e., administer one TST as soon as possible at the time of exposure, and, if the TST result is negative, place another TST 8–10 weeks after the end of exposure to *M. tuberculosis*)¶¶		

* Health-care workers (HCWs) refers to all paid and unpaid persons working in health-care settings who have the potential for exposure to *M. tuberculosis* through air space shared with persons with TB disease.

† Settings that serve communities with a high incidence of TB disease or that treat populations at high risk (e.g., those with human immunodeficiency virus infection or other immunocompromising conditions) or that treat patients with drug-resistant TB disease might need to be classified as medium risk, even if they meet the low-risk criteria.

§ A classification of potential ongoing transmission should be applied to a specific group of HCWs or to a specific area of the health-care setting in which evidence of ongoing transmission is apparent, if such a group or area can be identified. Otherwise, a classification of potential ongoing transmission should be applied to the entire setting. This classification should be temporary and warrants immediate investigation and corrective steps after a determination has been made that ongoing transmission has ceased. The setting should be reclassified as medium risk, and the recommended timeframe for this medium risk classification is at least 1 year.

¶ All HCWs should have a baseline two-step tuberculin skin test (TST) or one blood assay for *M. tuberculosis* (BAMT) result at each new health-care setting, even if the setting is determined to be low risk. In certain settings, a choice might be made to not perform baseline TB screening or serial TB screening for HCWs who 1) will never be in contact with or have shared air space with patients who have TB disease (e.g., telephone operators who work in a separate building from patients) or 2) will never be in contact with clinical specimens that might contain *M. tuberculosis*. Establishment of a reliable baseline result can be beneficial if subsequent screening is needed after an unexpected exposure to *M. tuberculosis*.

** HCWs whose duties do not include contact with patients or TB specimens do not need to be included in the serial TB screening program.

†† The frequency of testing for infection with *M. tuberculosis* will be determined by the risk assessment for the setting.

§§ During an investigation of potential ongoing transmission of *M. tuberculosis*, testing for *M. tuberculosis* infection should be performed every 8–10 weeks until lapses in infection controls have been corrected and no further evidence of ongoing transmission is apparent.

¶¶ Procedures for contact investigations should not be confused with two-step TST, which is used for newly hired HCWs.

CDC. Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, 2005. MMWR 2005; 54(No. RR-17):p13

Attachment IV

HCW Tuberculosis Screening Form

Today's Date_____

Employee Name _____ DOB _____

HISTORY

History of TB disease? ___Yes ___No Date_____ Treatment_____
History of TB infection? ___Yes ___No Date_____ Treatment_____
Previous TB test ___ None
___ TST Date _____ Result _____mm
___ GFT-G* Date _____ Result (circle one) Positive Negative Indeterminate
Previous CXR Date_____ Result (circle one) Normal Abnormal Attach copy of CXR report.
Allergies _____

TST (Tuberculin Skin Test) #1

Date Given _____ Dose 0.1ml ID Arm L R
Aplisol Tubersol Lot#_____
Exp.Date_____
Signature_____

Date Read_____ Induration_____mm

Signature_____

TST #2 (only if needed)

Date Given _____ Dose 0.1ml ID Arm L R
Aplisol Tubersol Lot#_____
Exp.Date_____
Signature_____

Date Read_____ Induration_____mm

Signature_____

QFT-G (*QuantiFERON-TB Gold® blood assay for *Mycobacterium tuberculosis* instead of TST)

Date_____ Result (circle one) Positive Negative Indeterminate Attach copy of lab report.

CXR (needed for any newly identified positive TST or QFT-G)

Date_____ Result (circle one) Normal Abnormal Attach copy of CXR report.

SYMPTOM REVIEW (Initial)

If any of the following symptoms are present, refer for medical evaluation	Yes	No
Cough for more than 3 weeks?		
Coughing up blood?		
Chest pain or shortness of breath?		
Unexplained weight loss or poor appetite?		
Unexplained fever?		
Unexplained tiredness?		
Unexplained night sweats?		

DISPOSITION

	Date
Negative TST or QFT-G, no further screening needed	
Negative TST or QFT-G, annual TST or QFT-G needed	
Positive TST or QFT-G, normal CXR (within past 6 months), no TB symptoms, annual symptom screen needed	
History of positive TST or QFT-G with normal CXR at the time, no TB symptoms, annual symptom screen needed	
Review of TB symptoms and written information provided (see www.cdc.gov/tb for handouts)	
Positive TST or QFT-G with symptoms present and/or abnormal CXR, referred to_____ ***Must have medical evaluation to rule out active TB before starting work***	

Initials_____ Signature_____

Employee Name ____________________ DOB ____________________

SERIAL SCREENING Indicate Y (yes) or N (no)

Date										
Cough for more than 3 weeks?										
Coughing up blood?										
Chest pain or shortness of breath?										
Unexplained weight loss or poor appetite?										
Unexplained fever?										
Unexplained tiredness?										
Unexplained night sweats?										

SERIAL TSTs

Date Given ________ Dose 0.1ml ID Arm L R
Aplisol Tubersol Lot#________
Exp.Date________
Signature________

Date Read________ Induration________mm
Signature________

Date Given ________ Dose 0.1ml ID Arm L R
Aplisol Tubersol Lot#________
Exp.Date________
Signature________

Date Read________ Induration________mm
Signature________

Date Given ________ Dose 0.1ml ID Arm L R
Aplisol Tubersol Lot#________
Exp.Date________
Signature________

Date Read________ Induration________mm
Signature________

Date Given ________ Dose 0.1ml ID Arm L R
Aplisol Tubersol Lot#________
Exp.Date________
Signature________

Date Read________ Induration________mm
Signature________

Date Given ________ Dose 0.1ml ID Arm L R
Aplisol Tubersol Lot#________
Exp.Date________
Signature________

Date Read________ Induration________mm
Signature________

Date Given ________ Dose 0.1ml ID Arm L R
Aplisol Tubersol Lot#________
Exp.Date________
Signature________

Date Read________ Induration________mm
Signature________

Date Given ________ Dose 0.1ml ID Arm L R
Aplisol Tubersol Lot#________
Exp.Date________
Signature________

Date Read________ Induration________mm
Signature________

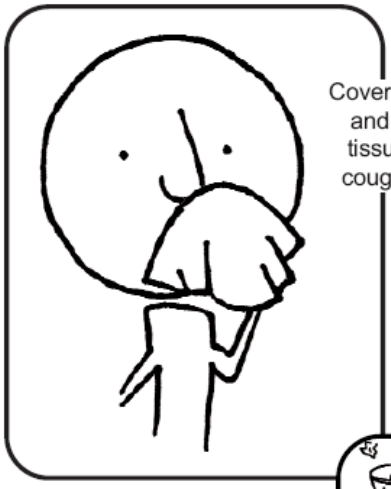
Date Given ________ Dose 0.1ml ID Arm L R
Aplisol Tubersol Lot#________
Exp.Date________
Signature________

Date Read________ Induration________mm
Signature________

Attachment V

Stop the spread of germs that make you and others sick!

Cover your Cough



Cover your mouth and nose with a tissue when you cough or sneeze

or

cough or sneeze into your upper sleeve, not your hands.

Put your used tissue in the waste basket.

You may be asked to put on a surgical mask to protect others.

Clean your Hands

after coughing or sneezing.

Wash hands with soap and warm water for 20 seconds *or*

clean with alcohol-based hand cleaner.

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Minnesota Antibiotic Resistance Collaborative

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Attachment VI

TUBERCULOSIS (TB) INFECTION CONTROL TRAINING RECORD	
Training Date _____ Instructor_____	
	Employee Initials
1. I know where the tuberculosis (TB) infection control plan (ICP) is kept and how to obtain a copy.	
2. I know how TB is spread from person-to-person.	
3. I know the signs and symptoms of TB.	
4. I know the difference between TB infection and TB disease.	
5. I am aware that health-care workers (HCWs) are at risk for TB infection and TB disease.	
6. I know that diseases and drugs that affect the immune system increase the risk of TB infection progressing to TB disease.	
7. I am responsible for following work practices discussed in this class and in the TB ICP.	
8. I understand the purpose of testing for M. tuberculosis infection and TB symptom screening.	
9. I know what to do if I see a coughing patient who has other signs or symptoms of TB.	
10. I know that treatment for TB infection can reduce the risk of progressing to TB disease.	
11. I know when to wear a respirator for protection against TB transmission, how to conduct a fit-check, how to inspect, maintain, and store the respirator, when to dispose of the respirator, and respirator limitations. ---------- OR---------- I am not required to wear a respirator to perform my assigned duties.	-------
12. I know which environmental controls (ventilation, filters, ultraviolet lamps, AII rooms) are in place at this facility.	
13. I know where to find safety and protective equipment (gowns, gloves), how to use this equipment, and how to dispose of it after use.	
14. I know what multidrug-resistant (MDR) and extensively drug-resistant (XDR) TB are.	
15. I know what the current TB case rates are for the community in which I work.	
16. I have had an opportunity to have my questions answered about the above topics.	

_____ _____

Employee Signature Date

Attachment VII

TABLE 1. Air changes per hour (ACH) and time required for removal efficiencies of 99% and 99.9% of airborne contaminants*

	Minutes required for removal efficiency†	
ACH	99%	99.9%
2	138	207
4	69	104
6	46	69
12	23	35
15	18	28
20	7	14
50	3	6
400	<1	1

* This table can be used to estimate the time necessary to clear the air of airborne *Mycobacterium tuberculosis* after the source patient leaves the area or when aerosol-producing procedures are complete.

† Time in minutes to reduce the airborne concentration by 99% or 99.9%.

CDC. Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, 2005. MMWR 2005; 54(No. RR-17):p20.