## CENTERS FOR DISEASE CONTROL TB GUIDELINES SUMMARY OF CDC GUIDELINES

The CDC <u>Guidelines for Preventing the Transmission of Mycobacterium Tuberculosis in Health-Care Settings, 2005</u>, enforced by the federal Occupational Safety and Health Administration (OSHA) and our state Labor and Industries' Division of Occupational Safety and Health, require chemical dependency treatment programs to:

- 1. Appoint a TB Infection Control Program Manager.
- 2. Conduct an annual TB Infection Control Risk Assessment of their health care setting. (Attached sample is CDC Appendix B, TB Risk Assessment Worksheet. See questions 1 4, first part of question 5, and question 9. Questions 5 though 8 may not apply to your health care setting.)
- Write and update annually a TB Infection Control Plan that describes the agency's administrative, environmental, and respiratory infection controls that are appropriate for the level of risk at their setting. (See TB Model Policies located at: <a href="http://www.dshs.wa.gov/DASA/services/certification/Main/agencycertification.shtml">http://www.dshs.wa.gov/DASA/services/certification/Main/agencycertification.shtml</a>, Sections I - IV.)

### The plan requires:

- a. Baseline testing of all health care workers. Further testing of health care workers is done only as indicated by the provider's annual risk assessment. Agencies with low risk would not require additional testing of every employee only those whose annual risk assessment or symptom screen indicated the need for further testing. Agencies with medium risk would continue to require annual testing, but only at worksites that have had three or more active cases of TB in the past year.
- b. TB screening of all patients at intake by taking their TB medical history, conduct a TB risk assessment and a TB symptom screen, but only those at risk or having symptoms of TB require a TB test. (Attached sample is Appendix I of the TB Model Policies.) The annual risk assessment determines which patients need to be tested at each treatment site. CDC guidelines state testing should not be done on substance abusers unless they are at high risk of TB infection due to other risk factors such as:
  - IV drug use (between 9% recent and 26% lifetime TARGET patients),
  - HIV infection (3.32% report having an infectious disease at admission),
  - Resident of a correction facility (2 % came from jail/prison),
  - Homeless facility (8% report they came from a homeless shelter or lived on the street at admission),
  - Close contact with someone with infectious TB, recently traveled to or emigrated from a country with a high incidence of TB, etc.

### Appendix B. Tuberculosis (TB) risk assessment worksheet

This model worksheet should be considered for use in performing TB risk assessments for health-care facilities and nontraditional facility-based settings. Facilities with more than one type of setting will need to apply this table to each setting.

Scoring $\sqrt{\text{or Y}} = \text{Yes}$	X or N = No	NA = Not
Applicable		

### 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.	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 <i>Mycobacterium tuberculosis</i> within your setting (inpatient and outpatient)?	Yes No

### 2. Risk Classification

Inpatient settings	
How many inpatient beds are in your inpatient setting?	
How many patients with TB disease are encountered in the inpatient setting in 1 year? Review laboratory data, infection-control records, and databases containing discharge diagnoses.	Previous year 5 years ago
Depending on the number of beds and TB patients encountered in 1 year, what is the risk classification for your inpatient setting? (See Appendix C.)	o Low risk o Medium risk o Potential ongoing transmission
Does your health-care setting have a plan for the triage of patients with suspected or confirmed TB disease?	Yes No
Outpatient settings	
How many TB patients are evaluated at your outpatient setting in 1 year? Review laboratory data, infection-control records, and databases containing discharge diagnoses.	Previous year 5 years ago
Is your health-care setting a TB clinic?  (If yes, a classification of at least medium risk is recommended.)	Yes No
Does evidence exist that a high incidence of TB disease has been observed in the community that the health-care setting serves?	Yes No
Does evidence exist of person-to-person transmission of <i>M. tuberculosis</i> in the health-care setting? (Use information from case reports. Determine if any tuberculin skin test [TST] or blood assay for <i>M. tuberculosis</i> [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?	
Considering the items above, would your health-care setting need a higher risk classification?	Yes No
Depending on the number of TB patients evaluated in 1 year, what is the risk classification for your outpatient setting? (See Appendix C)	<ul><li>o Low risk</li><li>o Medium risk</li><li>o Potential ongoing transmission</li></ul>
Does your health-care setting have a plan for the triage of patients with suspected or confirmed TB disease?	Yes No
Nontraditional facility-based settings	
How many TB patients are encountered at your setting in 1 year?	Previous year 5 years ago
Does evidence exist that a high incidence of TB disease has been observed in the community that the setting serves?	Yes No
Does evidence exist of person-to-person transmission of <i>M. tuberculosis</i> in the setting?	Yes No
Have any recent TST or BAMT conversions occurred among staff or clients?	Yes No
Is there a high incidence of immunocompromised patients or HCWs in the 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 setting?	
Considering the items above, would your setting require a higher risk classification?	Yes No
Does your setting have a plan for the triage of patients with suspected or confirmed TB disease?	Yes No
Depending on the number of patients with TB disease who are encountered in a nontraditional setting in 1 year, what is the risk classification for your setting? (See Appendix C)	o Low risk o Medium risk o Potential ongoing transmission

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 Janitorial staff	
o Physicians	o Maintenance or engineering staff o Transportation staff	
<ul> <li>Mid-level practitioners (nurse practitioners [NP] and physician's assistants [PA])</li> </ul>	o Dietary staff	
o Nurses	o Receptionists	
o Administrators	o Trainees and students	
o Laboratory workers	o Volunteers	
o Respiratory therapists	o Others	
o Physical therapists		
o Contract staff		
o Construction or renovation workers		
o Service workers		
Is baseline skin testing performed with two-step TST for	HCWs? Yes No	
Is baseline testing performed with QFT or other BAMT for	or HCWs? Yes No	
How frequently are HCWs tested for <i>M. tuberculosis</i> infection?		
Are the <i>M. tuberculosis</i> infection test records maintained	d for HCWs? Yes No	
Where are the <i>M. tuberculosis</i> infection test records for HCWs maintained? Who maintains the records?		

If the setting has a serial TB screening program for HCWs the conversion rates for the previous years? †	s to test for <i>M. tuberculosis</i> infection, what are
1 year ago 4 years ago	)
2 years ago 5 years ago	)
3 years ago	
Has the test conversion rate for <i>M. tuberculosis</i> infection been increasing or decreasing, or has it remained the	o Increasing o Decreasing
same over the previous 5 years? (check one)	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 <i>M. tuberculosis</i> infection that exceeds the health-care setting's annual average?	Yes No  If yes, list
For HCWs who have positive test results for <i>M. tuberculosis</i> 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 the local health department or their primary physician?	Yes No Not applicable

## 4. TB Infection-Control Program

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Does the health-care setting have a written TB infection-control plan?	Yes No
Who is responsible for the 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 <i>M. tuberculosis</i> )?	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 Dhygigiana	o Laboratory personnel
o Physicians	o Health and safety staff
o Nurses	·
	o Administrator
o Epidemiologists	o Risk assessment
o Engineers	0 1 Herr 400000 Herri
-	o Quality control (QC)
o Pharmacists	o Others (specify)
	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

Has a person been designated to be responsible for implementing an infection-control plan in your health-care setting? If yes, list the name:	Yes No
Based on a review of the medical records, what is the ave	rage number of days for the following:
<ul> <li>Presentation of patient until collection of specimen</li> <li>Specimen collection until receipt by laboratory</li> <li>Receipt of specimen by laboratory until smear results a</li> <li>Diagnosis until initiation of standard antituberculosis tree</li> <li>Receipt of specimen by laboratory until culture results a</li> <li>Receipt of specimen by laboratory until drug-susceptibil health-care provider</li> <li>Receipt of drug-susceptibility results until adjustment of if indicated</li> </ul>	eatment are provided to health-care provider lity results are provided to
Admission of patient to hospital until placement in airbo	rne infection isolation (AII)
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	Yes No
infection-control plan being properly implemented?	
Is ongoing training and education regarding TB infection-control practices provided for HCWs?	Yes No

# 6. Laboratory Processing of TB-Related Specimens, Tests, and Results Based on Laboratory Review

Which of the following tests are either conducted in-house at your health-care setting's laboratory or sent out to a reference laboratory?	In-house	Sent out
Acid-fast bacilli (AFB) smears		
Culture using liquid media (e.g., Bactec and MB-BacT)		
Culture using solid media		
Drug-susceptibility testing		
Nucleic acid amplification (NAA) testing		
What is the usual transport time for specimens to reach the laboratory	for the following	ng tests?
AFB smears	_	
Culture using liquid media (e.g., Bactec, MB-BacT)		
Culture using solid media		
Drug-susceptibility testing		
Other (specify)		
NAA testing		
Does the laboratory at your health-care setting or the reference laboratory used by your health-care setting report AFB smear results	Yes No	
for all patients within 24 hours of receipt of specimen? What is the procedure for weekends?		
procedure for weekends:		

### 7. Environmental Controls

Which environmental controls are in place in your health-care setting? (Check all that apply and describe)		
Environmental control	<u>Description</u>	
o All 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?		

Doom	ACH	Design	
Room	<u>ACH</u>	<u>Design</u>	
Which of the following local exterior or er	nclosing devices such as	exhaust ventilation devices are used in	
your health-care setting? (Check all that	_		
o Laboratory hoods			
o Booths for sputum induction			
o Tents or hoods for enclosing patient or	procedure		
What general ventilation systems are use	ed in your health-care sett	ing? (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 ye	our health-care setting? ((	Check all that apply)	
HEPA filtration			
o Fixed room-air recirculation sys	stems		
o Portable room-air recirculation			
	Systems		
<u>UVGI</u>			
o Duct irradiation			
o Upper-air irradiation			
o Portable room-air cleaners			
How many All rooms are in the health-ca	are setting?		
,	5		

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 environmental engineer (e.g., professional engineer) or other professional engineer.			
appropriate expertise (e.g., certified industrial hygienist) for consulta	tion on		
design specifications, installation, maintenance, and evaluation of econtrols?	nvironmental		
Are environmental controls regularly checked and maintained with re	esults Yes No		
recorded in maintenance logs?	100 110		
Are All rooms checked daily for negative pressure when in use?	Yes No		
Is the directional airflow in All rooms checked daily when in use with	smoke Yes No		
tubes or visual checks?			
Are these results readily available?	Yes No		
What procedures are in place if the All room			
pressure is not negative?			
Do All rooms meet the recommended pressure differential of 0.01-in	nch water Yes No		
column negative to surrounding structures?			
8. Respiratory-Protection Program			
Does your health-care setting have a written respiratory-protection p	orogram? Yes No		
Which HCWs are included in the respiratory o Janitorial staff	<u>'</u>		
protection program? (Check all that apply)			
o Maintenance or engineering staff o Physicians			
o Transportation	staff		
o Mid-level practitioners (NPs and PAs)			

o Nurses	o Dietary staff		
o Administrators	o Students		
o Laboratory personnel	o Others (specify)		
o Contract staff			
o Construction or renovation staff			
o Service personnel			
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).			
<u>Manufacturer</u> <u>Model</u>	Specific application		
Is annual respiratory-protection training for HCW advanced training in respiratory protection?	s performed by a person with	Yes No	
Does your health-care setting provide initial fit to	esting for HCWs?	Yes No	
If yes, when is it conducted?			
Does your health-care setting provide periodic fi	t testing for HCWs?	Yes No	
If yes, when and how frequently is it conducted?			
What method of fit testing is used? Describe.			
What method of hit testing is used? Describe.			
Is qualitative fit testing used?		Yes No	
Is quantitative fit testing used?		Yes No	

### 9. Reassessment of TB risk

How frequently is the TB risk assessment conducted or updated in the health-	
care setting?	
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* infection)

### TB HISTORY, RISK ASSESSMENT & SYMPTOM SCREEN

Once an applicant receives a job offer, or a patient is being assessed for admission, and has been informed about the importance of monitoring for tuberculosis (TB), obtain the following information about their TB history, TB risk assessment, and symptom screen:

#### A. TB HISTORY:

- 1. Ask the person the following questions:
  - a. Have you ever tested positive for TB infection?
    - i. If no, complete risk assessment.
    - ii. If yes, ask have you ever been treated for Latent TB Infection (LTBI)? If yes, ask did you complete treatment for LTBI?
  - b. Have you ever been diagnosed with having TB disease?
    - i. If yes, ask were you treated for TB disease?
    - ii. If yes, ask did you complete treatment for the disease?
- 2. Request medical records for any yes answers and any no answer to questions 1. a. ii, b. i, or b. ii, and complete symptom screen.

#### B. RISK ASSESSMENT:

- 1. Ask the patient/applicant the following questions:
  - a. Have you worked or lived with or spent time with or been exposed to anyone who has been sick with TB in the last two years?
  - b. Have you lived or traveled in Africa, Western Europe, Russia, Mexico, Central or South America, Asia, India, or the Philippines?
  - c. Have you lived or worked in a correctional facility, long-term care facility, or homeless shelter?
  - d. Are you infected with HIV?
  - e. Have you ever injected illegal drugs?
  - f. Do you smoke?
- 2. If the patient/applicant answers no to all the above questions, admit the patient, and conduct or refer the employee for baseline TB testing.
- 3. If the patient/applicant answers yes to any of the risk assessment questions, conduct a symptom screen.

### C. SYMPTOM SCREEN:

- 1. Ask the person, "Do you currently have any of the following symptoms?"
  - a. Drenching night sweats of more than two weeks duration.
  - b. Unexplained weight loss.
  - c. Body weight 10% below ideal body weight.
  - d. Loss of appetite.
  - e. A cough lasting more than three weeks.
  - f. Coughing or spitting up of blood.
  - g. Hoarseness.
  - h. Chest pain.
- 2. If the person answers "yes" to two or more of the above symptoms, isolate the person and provide or refer the person to his/her personal physician, private clinic or the local health department for TB testing (if the person has never had a positive TB test), medical evaluation, treatment and documentation of a non-infectious state, prior to employment or admission.
- 3. If the person answers "no" to all the above, admit the patient, and provide or refer the employee applicant for baseline TB testing.

Note: Under TB Policy I.B., persons who have latent TB infection (LTBI) and persons who are being treated for TB disease, but have documentation they are not contagious must not be refused treatment or employment. These persons must be provided or referred to their physician, clinic, or health department for treatment. This agency must monitor satisfactory compliance with and completion of TB and LTBI treatment regimens of employees and active patients under its care.