



Tuberculosis Exposure Control

1.0 BACKGROUND

Since 1985, the rate of new cases of tuberculosis in the general US population has increased approximately 23 percent reversing a 30-year downward trend. In 1992, more than 26,000 new cases of active tuberculosis were reported in the US. In New York City alone, 3,700 cases of active tuberculosis were reported in 1991. Tuberculosis is a contagious disease that causes infections of the lung primarily, but which can occur in other areas of the body. Some of the symptoms are fatigue, weight loss, fever, night sweats, loss of appetite, persistent cough and shortness of breath, which may result in serious respiratory illness or death.

2.0 REGULATORY AUTHORITY

California Code of Regulations, Title 8 §5144 (proposed) enforced by the California Occupational Safety and Health Agency (Cal/OSHA) specifically addresses controlling exposures to TB. In addition, §332.2, §3203, §5079, §5141, §5143, §5144, and §14301 requires employees to protect workers from TB exposure.

3.0 POLICY

It is the policy of California State University, Fullerton to protect employees and students from occupational injuries and illnesses. The overall safety of faculty, staff, and students is the main focus of this program so as to not to subject them to avoidable risks and/or accidental injury or illness. No employee or student will be required to perform any task that would be considered unsafe or unreasonably hazardous.

To accomplish this, multi-departmental cooperation is necessary. Risk group personnel will be provided with pre-assignment and annual TB screenings as indicated in the following sections proper information, and training by the University.

4.0 PURPOSE

The purpose of this program is to control occupational exposure to the TB bacteria. Exposure control will be carried out through: the identification and subsequent referral of suspect TB source cases, exposure incident reporting and infection evaluation, Tuberculin skin test screening, radiological exam and training.

This program will establish regulatory authority and responsibility of persons designated to implement and manage this program. It will assist in safeguarding the overall health and safety of the employees that may come in contact with infected individuals.

5.0 SCOPE

The scope of this exposure control program at California State University, Fullerton (CSUF) focuses on risk group employees (i.e., Student Health Center, Public Safety, athletic trainers, International Education, and animal care personnel).

6.0 DEFINITIONS

Confirmed Infectious TB Case - an individual who has been diagnosed with pulmonary or laryngeal TB by positive culture of body fluid or tissue or an individual who has a positive acid- fast bacilli (AFB) smear or any test result which is positive for Mycobacterium bacilli, in the AFB smear or other test result which was obtained for the purpose of diagnosing or ruling out pulmonary or laryngeal TB as confirmed by the Orange County Health Department or qualified hospital.

Exposure Incident - an event where an employee or student sustains substantial exposure to a confirmed infectious TB case, or to a suspect infectious TB case who is determined to have been an infectious TB case at the time of the incident, without the benefit of all applicable exposure control measures. In determining whether the event involves substantial exposure, the following factors shall be taken into account: the infectivity of the exposure source, the proximity of the employee to the exposure source, the extent to which the employee was protected from exposure, and the length of the exposure event.

High Risk Procedure - any procedure performed on an infected individual which is reasonably likely to aerosolize body fluids contaminated with TB bacteria. Examples include but are not limited to: diagnostic procedures such as sputum induction, bronchoscopy, or pulmonary function testing and resuscitative procedures performed by emergency personnel.

Risk Personnel - Personnel employed in but not limited to the following departments: Student Health Center, Public Safety, International Education, and Animal Care.

Source Case - either a suspected or confirmed infectious TB case.

Suspect Infectious TB Case - any individual which exhibits the following symptoms: night sweats, weight loss, chronic coughing with bloody expectoration, chest pain, and fatigue. In addition, individuals with positive Tuberculin skin tests and suspicious chest X-rays shall be also considered suspect cases.

7.0 RESPONSIBILITIES

7.1 Environmental Health and Safety

- A. Develop and implement TB Exposure Control Program.
- B. Identify campus risk groups and individuals. Identify high risk procedures.

- C. Identify suspect cases in cooperation with the Student Health Center.
- D. Provide consultation to affected departments concerning exposure minimization.
- E. Maintain documentation of employee exposure to source cases.
- F. Provide employees with training and education about TB - its effects, symptoms and the University program.

7.2 Student Health Center

- A. Administer TB screening tests for risk groups individuals prior to assignment and annually thereafter if negative. If positive, PPD testing will be provided as indicated. Administer screening test to individuals exposed to source cases.
- B. Maintain screening test results. Report positive results to the Orange County Health Department.
- C. Provide chest X-ray to individuals with positive test Tuberculin skin test results
- D. Arrange referral of suspect cases to off-site locations capable of providing confirmative testing, adequate treatment and isolation in conjunction with the OCHD.
- E. Assist EH&S in identifying suspect cases.

7.3 Affected Departments

- A. Refer new risk groups employees to Health Center for TB screening prior to commencing employment.
- B. Refer exposed employees to the Student Health Center with notification to EH&S.

8.0 EXPOSURE CONTROL PLAN

8.1 Tuberculosis Case Determination and Surveillance

A. New Employees

Newly hired employees reporting identified departments as identified in Section 5.0, are required to undergo Tuberculin skin testing offered at the Student Health Center. Individuals which have tested positive must submit to a chest X-ray to determine the disease's state of activity.

If the chest X-ray reveals an active TB condition, the individual will be referred to OCHD for treatment. Appointment shall be suspended until the individual is cleared for duty by the OCHD.

Boosting will be completed for new risk employees 1 - 3 weeks following initial PPD testing. Refer to the Case Determination Matrix in Section 8.1.D.

B. Current Employees

Employees placed in at risk groups will undergo Tuberculin testing annually. If PPD tests results are positive, the individual will complete a chest X-ray examination. If the subsequent X-ray examination yields positive results, the individual will be reported to the OCHD and will not be allowed to return to work until cleared by the OCHD or their physician.

Medicative therapy, such as INH, shall be recommended to non-active individuals. However, the choice of medicative therapy compliance must be at the discretion of the individual. Individuals whose PPD test results are positive yet have negative chest X ray results, will no longer undergo annual PPD testing and X-ray examinations unless they become symptomatic. Non-symptomatic positive individuals will be issued a waiver as "free of communicability" by the Student Health Center. Refer to the Case Determination Matrix in Section 8.1.D.

C. Symptomatic Individuals

Supervisory personnel employed with affected departments should be suspicious of individuals exhibiting symptoms of infectious or active TB. Symptoms of pulmonary TB include night sweats, weight loss, chronic coughing, blood in expectoration, fatigue and chest pain.

Suspect infectious individuals shall be referred to the Student Health Center for Tuberculin testing and if tested positive, subsequent referral to Orange County Health Department as indicated.

D. Exposed Individuals

Exposed individuals shall undergo Tuberculin skin testing immediately. If test results are negative, the individual shall undergo follow-up testing in 12 weeks to allow sufficient time for antibody generation. Individuals testing shall complete the routine outlined in Sections 8.1.A or B for positive individuals.

Case Determination Matrix

NEW EMPLOYEE	CURRENT EMPLOYEE	EXPOSED EMPLOYEE	DETERMINATION
-PPD (1)	-PPD	-PPD (2)	No exposure/free of TB
+PPD	+PPD	+PPD	Must complete x-ray examination
-X-ray (3)	-X-ray (3)	-X-ray (3)	No longer completes annual PPD & X-ray unless symptomatic
+X-ray	+X-ray	+X-ray	Refer to OCHD (confirmed case)

- (1) Booster test required
- (2) Post exposure form must be completed
- (3) Individual will be issued a waiver of non-communicability by the Student Health Center

8.2 Communication and Exposure Reporting

A. Communication

Once an individual has been diagnosed as a confirmed TB case, EH&S in conjunction with the Student Health Center will inform supervisors of exposure to departments of the confirmed case. Employees who have been in contact with infected individuals shall be provided with TB testing unless their previous Tuberculin test results were positive.

B. Post Exposure Reporting

Individuals who have been exposed to an infected individual shall be referred to the Student Health Center. The Student Health Center shall maintain record of exposure and notify EH&S of such exposures. Exposed individuals may elect to complete the Tuberculin skin test to determine if infection has occurred.

C. Training

Tuberculosis awareness training shall be provided by EH&S to all new employees. Training shall consist of the following subject matter:

- factors that place individuals at risk,
- modes of transmission and the differences between TB infection and disease,
- symptoms and consequences of TB
- outline of CSUF's Exposure Control Plan
- Tuberculin testing and preventative therapy
- medical treatment and the prevalence of drug resistant TB strains
- Personal Protective Equipment (PPE) use.

8.3 Personal Protective Equipment (PPE)

Student Health Center and Public Safety personnel shall utilize PPE including NIOSH approved respirators while in contact with suspect TB cases. These individuals will receive training on PPE use, storage methods, and maintenance.

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