



UNIVERSITY of HAWAII®
LEEWARD
COMMUNITY COLLEGE

Occupational Tuberculosis

Exposure Control Plan

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Environmental Health and Safety Office (EHSO)

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For: Leeward Community College

Date: July 7, 2008

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Next Annual Review Date: July 1, 2009

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A. 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.

B. REGULATORY AUTHORITY

Centers for Disease Control and Prevention with "Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Facilities," 1994. MMWR 43(RR13);1-132 10/28/1994; CDC's " Goals for Working Safety with Mycobacterium tuberculosis Complex Species, Public Health, and Research Laboratory, April 1997 and the OSHA, Proposed Standards for Occupational Exposure to Tuberculosis, Federal Register 61-54160 and OSHA's Directive CPL 2.106, "Enforcement Procedures and Scheduling for Occupational Exposure to Tuberculosis." (1996, February 9),

C. POLICY

It is the policy of University of Hawaii to protect employees and students from occupational/instructional 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 proper training, information and pre-assignment/annual TB screenings.

TB Clearance is required for all University employees and volunteers whose services involve contact with students and food handling duties. Clearance is required for:

New BOR employees (Executive/Managerial, Faculty, APT, casual, and non-compensated) with appointments more than 15 days.

New Civil Service employees with appointments more than 15 days.

Volunteers for more than 15 days (not necessarily consecutive) within any calendar year.

D. **PURPOSE**

The purpose of this program is to control occupational exposure to the TB bacteria. Exposure control will be carried out through:

1. The identification and subsequent referral of suspect TB source cases,
2. Exposure incident reporting and infection evaluation,
3. Tuberculin skin test screening or radiological exams and
4. 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.

E. **SCOPE**

The scope of this exposure control program at the University of Hawaii, focuses on risk group employees and students (i.e., UH Health Services, Security, Athletic Trainers, International Education, Clinical Research, Dental Hygiene, Nursing, Medical, and Social Workers and Laboratory Animal Services students and personnel).

F. **DEFINITIONS**

1. **Confirmed Infectious TB Case** -- an individual who has been diagnosed with pulmonary or laryngeal TB by positive culture of body fluid or tissue. A confirmed infectious case may also refer to an individual who has a positive acid-fast bacilli (AFB) smear or any test result that is positive for *Mycobacterium bacilli*, in the AFB smear or other test result that was obtained for the purpose of diagnosing or ruling out pulmonary or laryngeal TB as confirmed by the State of Hawaii's Health Department (DOH) or qualified hospital.
2. **Exposure Incident** -- an event where an employee or student sustain an 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:
 - a. The infectivity of the exposure source,
 - b. The proximity of the employee to the exposure source,
 - c. The extent to which the employee was protected from exposure,
 - d. The length of the exposure event.

- C. High Risk Procedure -- any procedure performed on an infected individual that is reasonably likely to aerosolize body fluids contaminated with TB bacteria. Examples include but are not limited to:
 - a. Diagnostic procedures such as sputum induction,
 - b. Bronchoscopy,
 - c. Pulmonary function testing
 - d. Resuscitative procedures performed by emergency personnel.
- D. Risk Personnel - Personnel employed in but not limited to the following departments: UH Health Services, Security, Athletic Trainers, International Education, Clinical Research, Dental Hygiene, Nursing, Medical, and Social Workers and Laboratory Animal Services students and personnel.
- E. Source Case -- either a suspected or confirmed infectious TB case.
- F. Suspect Infectious TB Case -- any individual that 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.

G. RESPONSIBILITIES

- 1. Environmental Health and Safety (EHSO)
 - a. Develop and implements Occupational TB Exposure Control Program.
 - b. Identify campus risk groups and individuals. Identify high risk procedures.
 - c. Identify suspects cases in cooperation with the University Health Service.
 - 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 -- it's effects, symptoms and the University program.
- 2. UH Health Services or Other Medical Advisor
 - a. Administer TB screening tests for risk group individuals prior to assignment and annually thereafter if negative. If positive, PPD testing will be provided as indicated in the case determination matrix (Section 8.1.D). Administer screening test to individuals exposed to source cases.

- b. Maintain screening test results. Report positive results to the State Department of Health.
 - 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 State Department of Health.
 - e. Assist EHSO in identifying source cases.
3. Affected Departments
- a. Refer new risk group employees to UH Health Services or other medical advisor for TB screening prior to commencing employment.
 - b. Refer exposed employees to the UH Health Services or other medical advisor with notification to EHSO.
 - c. Notify all individuals within the department that may have been exposed and refer to the UH Health Services.

H. EXPOSURE CONTROL PLAN

1. Tuberculosis Case Determination and Surveillance

a. New Employees

Newly hired employees reporting to identified departments as identified in Section 5.0, are required to undergo Tuberculin skin testing offered at the UH Health Services. Individuals that 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 their medical advisor for treatment. Appointment shall be suspended by UH's Office of Human Resources department until the individual is cleared for duty by the DOH or their medical advisor.

Booster testing will be completed for new at risk employees 1 - 3 weeks following initial negative PPD test.

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 DOH or medical

advisor and will not be allowed to return to work until cleared by the DOH 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 and their physician. 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 statement of non-communicability based on the negative chest X-ray by the DOH.

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 UH Health Services or their medical advisor for Tuberculin testing and if tested positive, subsequent referral to DOH 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.

e. Case Determination Matrix

(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.

2. Communication and Exposure Reporting

a. Communication

Once an individual has been diagnosed as a confirmed TB case, EHSO in conjunction with the UH Health Services will inform supervisors of exposure to departments of the confirmed case. It is the responsibility of the supervisors to identify and notify all individuals who might have been exposed. Employees who have been in contact with infected individuals must complete a report of Employee Injury form and offered TB testing unless their previous Tuberculin test results were positive.

b. Post Exposure Reporting

Employees exposed to an infected individual will be referred to their medical advisor. Students exposed to an infected individual will be referred to the UH Health Services. The UH Health Services shall maintain record of exposure and notify EHSO 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 EHSO to all new employees. Training shall consist of the following subject matter:

- 1) Factors that place individuals at risk,
- 2) modes of transmission and the differences between TB infection and disease,
- 3) Symptoms and consequences of TB
- 4) Outline of UH's Exposure Control Plan
- 5) Tuberculin testing and preventative therapy medical treatment and the prevalence of drug resistant TB strains
- 6) Personal Protective Equipment (PPE) use.

3 . Personal Protective Equipment (PPE)

All at risk 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.