STATE OF NEW YORK
DEPARTMENT OF HEALTH

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February 16, 2006

DAL/DQS: #06-03
Subject: Guidelines for Tuberculosis Control in Long Term Care Facilities

Dear Long Term Care Facility Administrator:

On December 30, 2005, the Centers for Disease Control and Prevention (CDC) issued new guidelines for preventing transmission of *Mycobacterium tuberculosis* in health care settings. The entire document can be directly obtained from the CDC [http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5417a1.htm]. These guidelines provide an extensive review of the literature, recommendations for tuberculosis (TB) control, supportive documentation and references.

Some, but not all, of the recommendations are applicable to New York State long term care facilities. This document summarizes the essential elements, presents differences that apply in New York State, and provides additional recommendations for screening of residents in long term care facilities, since this aspect is not addressed in the CDC guidelines.

Please ensure that all facility staff are knowledgeable about these guidelines and are aware of your responsibilities as a provider, so that the health and safety of all residents in your facility are protected.

**Definition of Employees Requiring TB Screening**
CDC defines "employees" as all paid and unpaid persons working, or volunteering, in a long term care facility, who have the potential for exposure to *M. tuberculosis* through air space shared with residents. This definition includes physicians, students, and contract personnel whether part-time, temporary or full time. The New York State Department of Health (NYSDOH) employee screening requirements applies to all workers, regardless of the potential for exposure to residents.

**Tuberculosis Infection Screening**
Historically, the tuberculin skin test (TST) has been used to screen for tuberculosis infection, using the Mantoux method with 5 tuberculin units of purified protein derivative (PPD). The TST should be placed, read and interpreted by a person with education, training and competency in TB screening. Employees are not allowed to read or interpret their own TST results.

When performing a TST, the manufacturer, lot number, date placed, date read and names of persons placing, reading and interpreting the test should be documented.

Recently, the FDA approved a whole blood assay to detect TB infection. Currently, the only available FDA-approved blood assay is the QuantiFERON TB-Gold (QFT). There are many advantages to the QFT when compared to the TST. QFT testing eliminates the need for multiple visits, eliminates the variation associated with placement, reading and interpretation, eliminates the potential confounding effect of Bacille Calmette-Guèrin and most atypical mycobacteria, and provides results that are readily documented and retrievable. The disadvantages of the QFT include the test kit costs, limited laboratory availability, and the processing requirement that the blood reach the laboratory and be set up within 12 hours of obtaining the specimen. Either the TST or the QFT are acceptable methods for health care worker and resident screening for tuberculosis infection.

**Employee TB Screening Prior to Employment**
Baseline TB screening should be conducted with an approved test to detect *M. tuberculosis* infection (currently this includes the TST using the Mantoux method or the QFT blood test.)

If the TST is used, two-step testing is recommended for newly hired health care workers whose initial TST result is negative. The second-step should be administered 1–3 weeks after the first TST was placed. The second TST is needed at baseline because injection of purified protein derivative (PPD) for the initial TST may "boost" responses to a subsequent test. In the absence of a known exposure, a reaction to the second-step of a two-step TST is considered to be due to boosting as opposed to recent infection with *M. tuberculosis*. A second TST is not needed if a HCW has had a documented TST during the previous 12 months. **If the QFT is used for screening, there is no need to perform a two-step baseline.** The TST reading(s) and/or the QFT laboratory report should be documented in the employee health record.

Any employee found to be positive upon TB screening should undergo a clinical evaluation, including a baseline chest x-ray examination. Employees should not be allowed to work until active pulmonary or laryngeal TB disease has been ruled out.

At initial hire, HCWs with documentation of previous treatment for Latent TB Infection or TB disease do not need to undergo a TB test. These HCWs should receive an annual, clinical evaluation for symptoms suggestive of TB including a cough for $\geq$3 weeks, loss of appetite, unexplained weight loss, night sweats, bloody sputum (hemoptysis), hoarseness, fever, fatigue, or chest pain. If symptomatic, a chest x-ray examination and further clinical evaluation are indicated.

**Routine TB Screening of HCWs in New York State Long Term Care Facilities**
Annual TB screening and education of employees must be performed in long term care facilities in New York State. If previously negative, the TST or QFT should be performed. If previously positive, a screen for symptoms should be performed and the employee evaluated as appropriate. All screening activities should be documented in the employee health record.

For administrative purposes, a converter is defined as an individual with a ≥10 millimeter (mm) increase in the size of TST induration, or with a positive QFT, after establishing a prior negative baseline TB screening test. All converters must be assessed for active TB disease (clinical evaluation and chest x-ray examination). If active TB disease is suspected or diagnosed, the employee should not return to work until TB disease has been ruled out, or the employee has been placed on effective treatment, has had a clinical response to therapy, and has had three consecutive negative Acid Fast Bacilli smears taken a minimum of 8 hours apart.
Clusters of TST or QFT conversions or active TB disease in a health care worker must be reported to the local and state health departments.

**Screening Residents Prior to Admission**
All potential residents should be screened for symptoms consistent with active TB disease prior to arrival. Potential residents with symptoms suggestive of active TB disease, including persistent or productive cough for ≥3 weeks, loss of appetite, unexplained weight loss, night sweats, bloody sputum (hemoptysis), hoarseness, fever, fatigue, or chest pain, should be evaluated prior to admission. If symptoms are present, active TB disease should be ruled out prior to admission, unless the Long Term Care facility has the ability to properly evaluate, treat, and isolate the resident in an airborne infection isolation room (AIIR).

**Resident Screening Upon Admission**
All residents should be screened for latent TB infection and active TB disease upon admission, if not done immediately prior to admission. In addition to the screening for an active disease process noted above, baseline screening for latent TB infection should be performed with either the TST or QFT.

If the TST is used, two-step testing is recommended for baseline testing. The second-step should be administered 1–3 weeks after the first TST result was placed. The second TST is not needed if the resident has had a documented TST during the previous 12 months. **If the QFT is used for screening, there is no need to perform a two-step baseline.**

**Routine, Periodic Screening of Residents**
After baseline testing, the NYSDOH does not recommend routine; periodic TB screening tests for residents in long term care facilities. Clinical staff should be vigilant for symptoms suggestive of active TB in residents, particularly those with untreated latent TB infection. Any resident with symptoms suggestive of active TB disease should be immediately referred for evaluation and treatment.

**Prompt Detection of Active TB**
If a case of active pulmonary or laryngeal TB is diagnosed in a resident, employee, or visitor, the case should be immediately reported to state and local health departments, and a contact investigation should be performed in consultation with state and local health department authorities.

LTC facilities without airborne isolation capabilities should develop a written TB infection control plan that outlines protocols for the prompt recognition, triage, and transfer of persons who have suspected or confirmed TB disease to another health-care setting.

The protocols should include notification of transport staff and staff in the new facility of suspect TB prior to transfer to ensure appropriate precautions and evaluation.

**Reporting to Health Department Authorities**

**Cases of Active TB Disease: Reporting to Local Health Department**
A case of active TB disease must be immediately reported to the local health department (LHD). Reporting should occur if a resident or employee is found to be smear positive, culture positive or if a clinician suspects active TB disease and has initiated anti-tuberculous medications.

**Health Care Facility Report to State Health Department**
In addition to reporting cases to the LHD, a Health Care Facility Infection Control Report [electronic submission: https://commerce.health.state.ny.us/hpn/infecontrol/forms.html or form to fax: http://www.health.state.ny.us/nysdoh/infection/infecreport.pdf ] should be completed and submitted to the NYSDOH if active TB disease is diagnosed in an employee or resident or if a cluster of TB converters is identified upon routine screening. A cluster is defined as two or more converters on a unit or service within a potentially overlapping time frame.

**Contact Investigations**
LHDs are responsible for ensuring all contacts of an infectious TB case have been screened and evaluated for possible treatment. Communication and collaboration with local and state health department authorities is essential for the prevention and control of TB in health care facilities and the community at large.

**Additional Information**
For additional information on TB infection control issues, contact Rachel L. Stricof in the Bureau of Tuberculosis Control, New York State Department of Health 518 474-7000, or e-mail the Bureau at <tbcontrol@health.state.ny.us>

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The Department of Health is committed to working with you to ensure the protection of your residents.

Sincerely,

Margaret Oxtoby, M.D., Director
Bureau of Tuberculosis Control

Keith W. Servis, Director
Division of Quality and Surveillance
for Nursing Homes and ICFs/MR