Continuum of Therapy

Virtually all patients with active pulmonary tuberculosis should be admitted to the hospital to initiate treatment. Initial therapy requires four anti-tuberculous medications: isoniazid, rifampin, pyrazinamide and either ethambutol or streptomycin.\textsuperscript{8,9} Admitting the patient to initiate therapy permits observation for side effects, education regarding the disease, and assessment of psychosocial issues which may impede therapy. Patients initiated on therapy as outpatients cannot be readily assessed for these problems. Patients with drug susceptible tuberculosis will begin to respond to treatment within two weeks of initiating therapy. A patient who has not sterilized his sputum after twelve weeks of therapy may have a resistant isolate requiring the addition of new medications. \textit{See Appendix 2: Drug Tables.}

Hospitalized patients must remain in airborne isolation as a precaution to prevent the spread of the infection to susceptible persons.\textsuperscript{4} The isolation room is ventilated in a way that draws air into the room from the corridor (negative pressure relative to
adjacent spaces) and exhausts the room air outside the building. The entire room air volume must be exchanged a minimum of six times per hour. At that rate, the room air is decontaminated in approximately one hour. Persons entering the isolation room must wear certified respirators which filter particles in the size range of the tubercle bacillus out of the room air.

**Experience of Isolation**

The experience of tuberculosis isolation for patients is a demeaning one. Patients describe feelings of embarrassment, seclusion, and shame at the thought of family members and friends having to wear a mask to visit them. Patients in airborne isolation are not permitted to move freely about the hospital because of the potential of spreading the disease to other patients.

Following discharge from the hospital, patients are permitted to return home. Any subsequent exposure among household personnel will be no more severe than that which occurred prior to admission. As an outpatient, it may be difficult to remember to take the medications. The likelihood that a patient will not be adherent to therapy is difficult to predict. For that reason, all patients should be referred for treatment follow-up on a Directly Observed Therapy (DOT) basis. Directly Observed Therapy is administered by the Health Department and consists of the patient self-administering their medications in the presence of an observer. Such programs have greatly enhanced the compliance with treatment of Mycobacterium tuberculosis infections.

Directly Observed Therapy became necessary in this country when it was observed that a significant proportion of patients failed to complete a curative course of therapy. In a seminal paper reported from the Harlem Hospital it was learned that 89% of patients failed to complete therapy. Predicting compliance with a complicated medical regimen can be difficult. Therefore, all patients with tuberculosis should be considered
candidates for DOT. Some individuals, despite hospitalization and DOT, are unable to remain adherent to therapy. In such cases it may be necessary to obtain a court order to remand the patient for examination and treatment.

Departments of Health in most jurisdictions possess the statutory authority to detain, examine, and isolate patients known or suspected to have tuberculosis. Patients may be held against their will under order from a court to insure their compliance with medical therapy. Such orders are reserved for those individuals who have demonstrated lack of awareness, indifference, or inability to comply with their anti-tuberculous regimen.¹⁰