

	POLICIES & PROCEDURES Number: 40-170 Title: Tuberculosis (TB)
Authorization: <input checked="" type="checkbox"/> SHR Infection Prevention & Control Committee <input type="checkbox"/> Facility Board of Directors	Source: Infection Prevention & Control Date Initiated: February 5, 2002 Date Reaffirmed: June, 2003 Date Revised: May, 2007 Scope: SHR Agencies & Affiliates

Introduction

Mycobacterium tuberculosis is the causative organism of tuberculosis (TB) and is spread by the respiratory route. Bacilli are suspended in droplet nuclei when a person with active disease in the lungs or larynx coughs, talks, sings or laughs or if infected tissue is irrigated or manipulated, such as during surgery or autopsy. Droplet nuclei are approximately 5 microns in size and remain suspended in the air for hours.

The risk of transmission:

- is related to the number of organisms aerosolized.
- is associated with cavitory disease, smear positive sputum, or a cough.
- occurs if patients are placed in poorly ventilated rooms.

Once inhaled, the organisms are deposited in the alveoli. The person may have mild symptoms but more often the initial infection goes unrecognized. Although organisms may remain viable indefinitely the immune system is usually able to prevent subsequent disease. As long as the person is without symptoms, he or she is said to have "latent TB infection". A positive tuberculin skin test is currently the only way to determine that the person has been infected. Only 10% of infected people go on to develop active TB disease. **The person is not contagious unless active disease develops.**

Typically 80 – 85% of active TB cases will be pulmonary and the remainder extrapulmonary. Persons with pulmonary or laryngeal TB are considered contagious whereas those with extrapulmonary TB are not unless bacteria are aerosolized from extrapulmonary masses.

TB is usually slow and insidious in onset. Persons with HIV infection may have a more rapid progression. In active pulmonary TB, symptoms of slight cough and weight loss may be overlooked until they worsen and include hemoptysis, fever and night sweats. Extrapulmonary TB typically presents with weight loss, fever, sweats, as well as symptoms from the specific site of disease.

With TB on the rise and the occurrence of reported outbreaks in hospitals, the need continues for aggressive measures to control TB.

Policy

1. In addition to Standard Precautions, use **Airborne Precautions** for patients known or suspected to be positive for contagious pulmonary or laryngeal TB. Refer to Airborne Precautions policy in the Infection Prevention and Control Manual.
2. Patients with possible or known TB will be placed in single rooms with monitored negative pressure (see list of suitable rooms in Airborne Precautions policy).

Purpose

1. To prevent the transmission of TB to health care workers, visitors or other patients.

Procedure

1. Identification of TB positive status in patients
 - TB is diagnosed with a combination of Diagnostic Imaging and Laboratory tests. Pulmonary TB is detected with chest X-ray and sputum for acid fast bacilli (AFB)
 - Microbiology will notify the Infection Control Professional (ICP) and the nursing unit of sputum tests which are smear positive for AFB. The specimen is then cultured to confirm the diagnosis of TB, the bacteria grow slowly & this takes several weeks.
 - Nursing unit will notify Infection Prevention and Control if a patient has **not** been on Airborne Precautions and now has query or known contagious TB disease (sputum positive for AFB).
2. Patient Placement
 - See policy Tuberculosis (TB) Management Program for general patient placement procedures.
 - Keep both anteroom (where applicable) and room doors closed whether or not the patient is in the room.
 - A child under age 4 may be placed in rooms 3127 and 3129 at RUH. Consult with the ICP for further assessment.
 - Older children that do not fit the above criteria are to be placed in a single room. Consult ICP for assessment if child is on a nursing unit that does not have a monitored negative pressure room.
 - Post Airborne Precautions sign.
 - If transfer to negative pressure isolation is not immediately feasible, contact the on-site Infection Prevention & Control Professional regarding interim room placement.
 - Airborne Precautions may be discontinued after effective drug treatment for at least 2 weeks or 3 consecutive sputum smears are negative for afb. Please consult the ICP before discontinuing precautions.

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3. Masks

- Health care workers are to wear a special high-filtration tight-fitting mask, preferably labeled as N95, to enter the patient room.
- Patient is to wear a procedure mask whenever leaving the room. If the patient cannot tolerate wearing a mask, all staff attending the patient are to wear an N95 mask.

4. Patient Transport

- Transport of the patient to other departments should be limited to essential purposes only.
- Inform the receiving department that Airborne Precautions are required.

5. Patient/Visitors and Family Teaching

- Patients/visitors and family should understand the nature of the infectious process and precautions being used, as well as the prevention of transmission of TB to others during the patient's hospital stay and upon his/her return to the community.

6. Medication

- A combination of several medications is administered for treatment of TB and these may be initiated before the diagnosis is confirmed on culture or drug sensitivity is known.
- All TB medications are to be administered using Directly Observed Therapy (DOT) where the nurse watches the person ingest the pills.
- TB medications are supplied free of charge via the TB clinic. Contact the clinic in advance of discharge to arrange follow-up and DOT in the community.

7. Contact Tracing

- Infection Prevention and Control shall notify Occupational Health and Safety of the confirmed diagnosis and need for contact tracing.
- The names of all staff who were in close proximity (sharing the same airspace for a prolonged period of time i.e. days, not hours or minutes) to the patient for the dates that the patient was **not** on Airborne Precautions are to be listed by the manager of the department or designate as directed by Occupational Health and Safety for follow-up.
- Names of visitors and other patient contacts (see close proximity notation above) are to be given by Infection Prevention and Control to the TB Clinic for follow-up.

References:

1. Centers for Disease Control and Prevention [CDC]. Guidelines for isolation precautions in hospitals. Hospital Infection Control Practises Advisory Committee [HICPAC], 2005.
2. Health Canada & The Lung Association, Canadian Tuberculosis Standards, Fifth Edition, 2000.