THINK YOUR PATIENT HAS TB?

A Guide for Healthcare Providers

WHAT NEXT?

- ☐ **Airborne precautions and isolation**
- ☐ **Chest x-ray**
- ☐ **Sputum for TB x 3**
- ☐ **Other specimens as needed**
- ☐ **History and physical assessment**
- ☐ **Symptom assessment**
- ☐ **Risk factor assessment**
- ☐ **Think TB…test for HIV. Think HIV…test for TB**
- ☐ **Consult TB Prevention and Control ASAP**
  (24 hour physician on-call service 306.655.1000)
- ☐ **TST or IGRA to diagnose latent TB infection**
  (negative TST or IGRA does not rule out active TB)

IGRA = interferon gamma release assay (Quantiferon); **TNF** = tumour necrosis factor; **TST** = tuberculin skin test

For more information, contact
TB Prevention and Control Saskatchewan
1-866-780-6482
Saskatoon (306) 655-1740
Prince Albert (306) 765-4260
Regina (306) 766-4311

Symptoms of Active TB

- ☐ Cough 2 weeks or longer
- ☐ Unexplained fever
- ☐ Pneumonia that does not improve with antibiotics
- ☐ Fatigue, lethargy
- ☐ Unexplained weight loss, anorexia, failure to thrive
- ☐ Night sweats
- ☐ Hemoptysis
- ☐ Chest pain, dyspnea
- ☐ Extrapulmonary signs such as lymphadenopathy

Risk for Progression to Active TB

- ☐ HIV infection
- ☐ Immunosuppressant therapy
- ☐ Anti-TNF therapy
- ☐ Steroids ≥ 15 mg/day x 1 month or longer
- ☐ Chronic renal failure needing hemodialysis
- ☐ Cancer (head/neck)
- ☐ Other cancers and on chemotherapy
- ☐ Diabetes
- ☐ Abnormal CXR
- ☐ Recent TB infection
- ☐ Silicosis
- ☐ Child < 5 years old
- ☐ 3 or more TB exposures
- ☐ Cigarette smoking
- ☐ Excessive alcohol
- ☐ Malnutrition

At Risk Populations

- Persons from countries with a high TB incidence
- Persons from high TB incidence communities in northern Saskatchewan and Canada
- Immunocompromised
- Prior exposure to someone with infectious TB

TB can be prevented, treated and cured!

Saskatoon Health Region
TB Prevention and Control Saskatchewan
Population and Public Health

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See reverse for more information

AIRBORNE PRECAUTIONS

Indications: Required for all persons with suspected or confirmed respiratory TB disease regardless of smear status. Exceptions may apply for pediatric and extrapulmonary TB.

Pediatrics: In general, children < 10 years of age considered non-infectious and precautions not needed unless showing signs of adult-type pulmonary TB (i.e., cavity on CXR *or* smear-positive sputum *or* persistent productive cough). Accompanying adults/adolescents may be infectious source. Precautions may be needed for accompanying adult/adolescent if staying with the child while in acute care.

Extrapulmonary TB: Usually considered non-infectious. Precautions may be required if draining abscess/infected tissue is irrigated or manipulated.

Placement in Facility: Airborne infection isolation room (AIIR). If room not available, transfer to a facility with an AIIR if possible. If transfer not possible, private room with door closed and HEPA filtration unit in room. If HEPA filtration unit not available then private room with door closed. Room to remain closed for a period of time following patient discharge to allow removal of airborne contaminants as per facility policy. Contact TBPC SK for additional direction or local Infection Control Practitioner.

Masks: Patient must wear procedure mask when leaving isolation for essential medical tests. Staff must wear N95 respirator when entering isolation room.

When to discontinue airborne precautions:

TB SUSPECTED: Discontinue upon **TB physician, MRP (most responsible physician) or designate order** if:

1. GeneXpert MTB/RIF assay negative (i.e., PCR for *Mycobacterium tuberculosis*), OR
2. Three consecutive AFB-negative smears if GeneXpert not available.

Note: Airborne precautions should remain in effect at the discretion of the TB physician or MRP when TB is still strongly suspected, no other diagnosis has been made and the GeneXpert and/or smears are negative.

TB CONFIRMED and patient in FACILITY: Discontinue upon **TB physician order**. The following criteria are required:

- **Smear-positive TB:** 2 weeks (14 doses) drug therapy AND clinical improvement AND 3 consecutive smear-negative sputum (collected after 14 doses taken) OR 3 weeks (21 doses) drug therapy AND clinical improvement.
- **Smear-negative TB:** 5 consecutive doses drug therapy taken and tolerated AND clinical improvement.

TB CONFIRMED and patient on HOME ISOLATION: Discontinue upon **TB physician order**. The following criteria are required:

- **Smear-positive TB**: 2 weeks drug therapy (10 doses – doses given Monday to Friday) AND clinical improvement.
- **Smear-negative TB:** 1 dose taken and tolerated.

CHEST X-RAY (or other diagnostic imaging)

- Typical findings for **immunocompetent** person with pulmonary TB: upper lobe infiltrates, upper lobe volume loss, cavitation (late sign).
- Atypical features common in **immunocompromised**: hilar and mediastinal lymphadenopathy (especially in HIV infected persons), non-cavitary infiltrates and lower lobe involvement. CXR may be normal in HIV infected persons.

SPUTUM COLLECTION

- Collect 3 specimens at least 8 hours apart with at least one collected early in the morning upon waking.
- AFB smear and culture completed on each specimen sent to Saskatchewan Disease Control Laboratory (SDCL) in Regina.
- **Culture is the gold standard for diagnosis of active TB and determining drug sensitivities.** TB does not show on gram stain.
- Saskatoon, Regina and Stony Rapids acute care facilities automatically test one specimen with the GeneXpert (PCR). GeneXpert is a rapid TB test. Culture is the priority. If the volume of sputum is insufficient then the GeneXpert may not be performed. GeneXpert available for outpatients on request. SDCL currently does not utilize a rapid TB test.
- Sputum induction may be required for those unable to spontaneously produce sputum. Perform in an airborne infection isolation room.

OTHER SPECIMENS

- Young children are often unable to produce sputum. Gastric washings may be needed. Contact TBPC SK for additional information.
- Biopsy specimens should not be placed in formaldehyde. Place in saline.
- Suspect TB if pathology/biopsy report indicates necrotizing granuloma. Consult TBPC SK.

HISTORY AND PHYSICAL ASSESSMENT

- Prior TB screening (TST, IGRA, CXR)
- History of BCG vaccination
- Recent or past exposure to TB
- Previous diagnosis or treatment of active or latent TB
- Country of birth/residence in a high TB incidence country
- General health evaluation including height/weight
- Current medications
- Past medical history, social history

TB PREVENTION AND CONTROL SASKATCHEWAN CONSULTATION

- TBPC SK is a provincial program with 3 offices – Saskatoon main office (RUH-Ellis Hall), Regina (Regina General Hospital), Prince Albert (Cooperative Health Centre). TB health records are located at the Saskatoon main office.
- Physician on-call 24 hours a day through RUH Switchboard **306.655.1000**. There are 5 physicians in Saskatoon, 1 in Regina.
- Clinical Nurse Educator, Nurse Clinicians and Nursing Supervisor available Monday-Friday 0800-1630 hours.
- Only TBPC SK approved physicians may prescribe medications to treat TB. TB medications are dispensed by the TB Pharmacy at Ellis Hall. TB medications are currently not listed on the Pharmacy Information Program (PIP).

TST and IGRA

- See TBPC SK Tuberculin Skin Testing policy and procedure for information regarding skin testing.
- IGRA test sites: RUH and SPH in Saskatoon; RGH and Pasqua in Regina; Cooperative Health Centre in P.A. All tests processed at RUH.