EmergencyKT: Tuberculosis

**ED Triage: Pulmonary Complaint**
1. Cough
2. Hemoptysis
3. Nurse Discretion for other symptoms

**Conduct TB Risk Factor Screening:**
- Foreign Born OR
- History of TB or Exposure to TB OR
- HIV Positive OR
- Homeless OR History of Incarceration

- Risk Factors?
  - No
    - Deemed Low-Risk.
    - Continue Standard Triage.
    - Provide mask.
  - Yes
    - Mask Placement
      - Chest X-ray
    - Read by MC resident/attending/F doc/ Pod Doc if Squad patient
    - Any Positive Finding on CXR?
      - No
        - Standard Triage
        - Inform Resident
      - Yes
        - Continue Mask
        - Inform Resident
        - Consider PPD placement in ED.

**Squad Arrival: Pulmonary Complaint**
Triage by POD Nurse/Physician

**Incidental Chest X-ray Finding**
Concerning for TB. Evaluate for TB symptoms and risk factors.

**Positive CXR Findings Include ANY of the Following:**
1. Peripheral opacity with ipsilateral hilar adenopathy
   - With or without pleural effusion
   - Concerning for Primary TB
2. Unilateral or Bilateral upper lobe airspace disease
   - Apical or Posterior segment consolidation
     - With or without:
       i. Cavitation
       ii. Superior retraction of hilar structures
       iii. Volume loss
   - Concerning for Reactivation TB
   - Concerning for Miliary TB
3. Miliary pattern

**-Isolate in NP room.**
- Inform resident.
- Prompt further TB history/symptomatology.

**Negative Pressure Room Available?**
- Yes
  - Mask Patient in Private Room.
  - Attempt to open NP room.
  - Inform resident.
- No
  - Isolate in NP room.
  - Inform resident.
  - Prompt further TB history/symptomatology.

**Active TB most likely DX?**
- Yes
  - Bed request per MD discretion.
  - Contact TB clinic for PPD f/u.
  - Low risk TB D/C instructions.
  - Contact TB clinic for PPD follow-up.
- No
  - Place PPD.
  - TB high risk d/c instructions.
  - Call TB clinic.

**Patient meets hold criteria?**
Appendix 1
- Yes
  - Bed request per MD discretion.
  - Contact TB clinic for PPD f/u.
- No
  - Place PPD.
  - Call TB clinic.

**Admit?**
- No
  - Low risk TB D/C instructions.
  - Contact TB clinic for PPD follow-up.
- Yes
  - Admit to negative pressure. If unavailable - private with droplet.

Yes. (Sign 72 hour hold if necessary)

Appendix 1
- Bed request per MD discretion.
- Contact TB clinic for PPD f/u.

Appendix 2
- Low risk TB D/C instructions.
- Contact TB clinic for PPD follow-up.

Appendix 3
- Bed request per MD discretion.
- Contact TB clinic for PPD f/u.

**Appendixes:**
- Appendix 1
- Appendix 2
- Appendix 3

11-19-12
Appendix 1

TB Protocol HOLD CRITERIA

Patient appropriate for 72-hour hold if they meet ANY of the criteria below:

✓ Patient lacks decision making capacity
✓ Patient unable or unwilling to contract for home respiratory isolation
✓ Patient does not have appropriate social support (i.e. unable to have food brought to home, etc.)
✓ Patient does not have or is unlikely to follow up with TB Clinic or PCP
✓ Patient does not have an appropriate living arrangement for respiratory isolation
✓ Patient has history of Multi-Drug Resistant TB
✓ Patient has a significant language barrier limiting understanding of responsibilities
TB LOW-RISK DISCHARGE INFORMATION

1. Your patient has concerning risk factors (i.e. foreign born, immunosuppressed, homeless, h/o incarceration, h/o TB exposure) AND clinical features (i.e. cough, weight loss, hemoptysis) WITHOUT positive findings or CXR*, concerning for possible LATENT TUBERCULOSIS.

2. Clinician is recommended to perform the following actions before discharge to home:
   a. Patient SHOULD be reported to Hamilton County TB Clinic Nurse: 513-946-7610 or 513-946-7600 for emergencies after normal business hours (see page 5)
   b. Patient SHOULD have PPD placed in Emergency Department (located in SRU Pyxis)
   c. Patient SHOULD receive Low-Risk Discharge Packet

TB HIGH-RISK DISCHARGE INFORMATION

1. Your patient has concerning risk factors (i.e. foreign born, immunosuppressed, homeless, h/o incarceration, h/o TB exposure) AND concerning clinical features (i.e. cough, weight loss, hemoptysis, any positive findings on CXR*) for ACTIVE TUBERCULOSIS.

2. Your patient DOES NOT meet any HOLD CRITERIA for admission to hospital (Appendix 1)

3. Patient MAY be discharged home provided they perform the following actions
   a. Patient MUST sign Contract for Respiratory Isolation in the Home (page 4)
   b. Patient MUST be reported to Hamilton County TB Clinic Nurse: 513-946-7610 or 513-946-7600 for emergencies after normal business hours (see page 5)
   c. Patient MUST be provided 3 Surgical Isolation Masks for themselves and 3 N-95 Isolation Masks for family members or visitors with appropriate instructions on Mask Placement (High-Risk Discharge Packet)
   d. Patient MUST have PPD placed in Emergency Department (located in SRU Pyxis)
   e. Patient SHOULD receive High-Risk Discharge Packet

*ANY infiltrate, effusion, cavitary lesion, hilar lymphadenopathy, or military pattern
Instructions for Respiratory Isolation in the Home

The purpose of these instructions is to clarify how to isolate a person with infectious tuberculosis (TB) disease. When a person has infectious tuberculosis of the lungs, germs are spread through the air when that person (the patient) breathes, coughs, talks or sneezes. To prevent others from becoming sick with tuberculosis, I agree to follow the measures described below:

I agree to remain in the designated isolation area/room. The door to this area shall remain closed at all times to minimize the spread of germs into other areas of my home. To further reduce the risk of infecting others, I will (if weather allows) keep an electric fan in the window to vent air from the isolation room to the outdoors.

I agree to wear a surgical mask whenever (this means anytime, all the time, and every time) I leave the isolation room/area or if another person enters my air space (i.e. someone walks into my bedroom). I understand that the mask will reduce the number of germs that enter the room. I agree to wear the mask as prescribed until I am notified, in writing by TB Control, that it is no longer necessary to do so.

I agree to minimize the number of visitors in my home until I am no longer contagious. I understand that visitors and family members should wear an N 95 mask if and when visits are necessary. The TB control program has provided special masks to filter out the germs in the air. I and my family members have been taught how to place the mask over the face so that it fits tightly and without gaps. We have been shown how to bend the metal piece to fit snugly over the nose and produce a seal around the mouth and nose. I understand these measures are necessary to minimize the number of germs that others might breathe in.

I understand that children, especially infants and young children can develop TB disease easily. I agree to avoid any and all contact with infants and children until I am instructed in writing, by TB Control, that is safe to do so.

I agree not to leave my home unless it is absolutely necessary (such as in an emergency). If I must leave my home for any reason, I agree to notify the nurses at the TB program in advance, so that they can assist me to take any necessary precautions to protect others from becoming infected with tuberculosis. I agree to wear a mask and utilize additional precautions, as instructed by the TB nurses, if I must leave my home for a doctor appointment at the TB clinic. I understand I will require assistance obtaining groceries and other items while I am in isolation. I agree to work with the TB nurses to follow the arrangements that are made to provide this assistance. I will not utilize public transportation until I am informed, in writing by TB Control, that it is safe to do so.

If I have any questions or need assistance I agree to call the TB Clinic nurse at: 946-7614

______________________________   ______________________________   ______________________________
Patient Signature                   Witness Signature                   Nurse or Physician

_________________________   ___________________________   ___________________________
Date                               Date                                Date

My signature indicates that I have read and understand the information above and I agree to comply with the preceding instructions until I am notified in writing by the Medical Director of the TB Control Program that I am no longer able to infect others.

03/2010
Hamilton County Tuberculosis Control Clinic

General Information
The Hamilton County Tuberculosis Control Clinic exists to treat and prevent Tuberculosis. We are a full service Tuberculosis clinic serving those who live or work in Hamilton County.

Address: 184 East McMillan Street, Cincinnati, Ohio 45219

Clinic Hours: 7:30 am to 4:30 pm Monday through Friday

Main Telephone Number: (513) 946-7610
(Please use (513) 946-7600 for emergencies after normal business hours.)

Services
Listed below are the services offered at the Tuberculosis Control Clinic exists to treat and prevent Tuberculosis Control Clinic. Please read the information carefully, not all services are free and some services require an appointment.

All services and medication are free if you have a recent positive skin test or tuberculosis exposure, infection or disease.

Skin Tests
Walk-in Monday, Tuesday, Wednesday and Friday 7:30 am - 3:45 pm
Fee: $20.00 unless you are homeless, indigent or are apart of a contact investigation.
Because we must read the TB skin tests 48 to 72 hours after it is administered, we cannot administer skin tests on Thursdays on a Friday before a Monday holiday.

Chest x-rays are provided by appointment only.
Call (513) 946-7606 to make an appointment.
Fee: $40.00

Physician Services for Tuberculosis are provided by appointment only.
Call (513) 946-7610

TB education and training is available at no charge for groups.
Please call (513) 946-7365 to discuss your group's training needs or interests.

We provide interpreters for those with limited English proficiency or hearing impairment. Please specify your need for these services when you schedule your appointment.

Hamilton County Public Health
Tuberculosis Control