PUBLIC HEALTH ROLE IN TB: ISOLATION/CONFINEMENT/COMMITMENT

Who has responsibility to ensure this happens:

- Health Dept. has primary responsibility for TB prevention and control
- Responsibility for successful treatment is assigned to the Health Care Provider-not the patient.
- Due to the complexity of TB control, this requires the PH sector to collaborate with others (medical providers, hospitals, clinic’s, CBRF’s, etc)
TB Disease Treatment Plan

- The most effective intervention to decrease infectiousness is treatment and ensuring treatment compliance.
- If treatment efforts are not successful, the TB Control Program (i.e. Public Health) needs to take a more restrictive measure.

* A patient can be involuntarily isolated, but cannot be forced to swallow anti-TB drugs.
WHEN HOSPITALIZATION IS NOT NEEDED

- Case has a stable residence
- Case does not reside in a congregate setting, and there will be no infants/children under 5 yr, or immune compromised in residence. (We have TB cases who live with children-so we have put measures in place to reduce transmission).
- Case is not actively using drugs/ETOH.
- Is ambulatory/can care for self or have others who will do this.
- Is able to observe risk reduction,(covers mouth when coughing, wears a mask with others or for all medical appt, and does not use public transportation.)
- Is competent and willing to follow care plan:
  - keep all appointments
  - get all medical tests as recommended
  - be available for DOT
Hospital Discharge of TB Client
(May still be infectious)

Should meet all of the following criteria:

- Has a stable residence-this is verified.
- Can care for self.
- Is not actively using drugs/ETOH.
- Resolution of fever/ resolution or near resolution of cough/willing to observe risk reduction behaviors.
- Current Rx regimen is likely to be susceptible.
- Medical providers/PH are confident that client will adhere to TB Rx by DOT after discharge (Rx must be initiated and is tolerated).
- Arrangements are made for DOT.
- Will follow-up with all needed tests and appointments.
- No significant contact with infants, young children or immune-suppressed. No contact with new visitors.
- Will not care for children, go to work outside of home or take trips without MD/PH permission.
HOME ISOLATION PLAN

- Testing/treatment of others in household.
- Housing needs
- Instruction on what is permitted/prohibited.
- Masking education
- Compliance with appointments and treatment.
- Cultural barriers/language barriers.
- Legal issues.
- Other medical health issues (dialysis)
- Multiple medical providers & coordination of care.
- Mental health issues/substance abuse issues.
- Nutritional needs.
- Social support/family dynamics.
- Financial needs/support/work issues.
CLIENT MONITORING

Assess response to treatment

- Clinical evaluation (assessment of symptoms, to include both daily nursing assessment and medical evaluations as ordered)
- Need for on-going bacteriological exam (+smear is not specific to MTB, or live/dead organisms)
- Chest radiograph (assess for improvement)

*If after 2-months, symptoms do not resolve-evaluate for MDR/Non adherence to drug regimen
DETERMINING NON-INFECTIOUSNESS

- Client has minimal likelihood of multi-drug resistant to TB
- Client has received multi-drug anti-TB therapy for 2-3 weeks.
- Client has adherence to DOT and tolerating.
- Client has evidence of clinical improvement (decreased cough, improving smears)
- All close contacts of client have been identified, evaluated, advised and if indicated, started on Rx:

*This may take longer then 2 weeks to find all, do the needed evaluations and plan needed medical home and medical assessments.
Infectious TB
(When to Release from Isolation)

- Has been on 4-drug Rx for at least 2 weeks  
  And
- Compliant with DOT  
  And
- Has had 3-AFB negative smears and/or 2 negative PCR’s or is unable to produce sputum upon induction plus no MDR risk factors.
  - There is cough resolution or no cough and improvement of clinical symptoms.
  - Medical provider/State TB program/Local Health Dept. all agree that there is clinical and/or radiographic improvement despite continuing cough.
CULTURES/NUCLEIC ACID AMPLIFICATION (NAA)

- CDC recommends that NAA testing be performed on at least one respiratory specimen for each client with signs & symptoms of pulmonary TB. It specifically detects MTB.
- A single negative NAA test should not be used to exclude TB disease
- Culture = gold standard for confirmation of TB disease.
- In the absence of a + culture, TB disease may also be diagnosed on clinical signs & symptoms alone by MD knowledgeable in managing TB disease.
- Cultures are done on all specimens regardless of AFB smear or NAA results
TB TESTING AND SCREENING ISSUES

- **Routine TB screening**
  - once conducted at population level
  - now limited to persons at risk, such as:
    - Persons in contact with others sick with TB.
    - Refugees and other immigrants.
    - Health care workers-on employment or after TB exposure.
    - Endemic risk factors.

- **What if someone refuses screening?**
  - potentially infectious workers can be excluded from employment
  - Persons can be required to submit to screening
  - involuntary screening generally requires a court order
LEGAL ISSUES IN TB CONTROL

- **Who can the health department screen?**
  - Is screening voluntary?
  - What if someone refuses?

- **Refusing Treatment**
  - Can a patient be detained to compel compliance?
  - Can a patient be physically compelled to accept medication?

- **Isolation**
  - What are the patient’s rights?
  - Can patients be isolated indefinitely if they remain contagious?
ISSUES RELATED TO ACTIVE TB DISEASE

- Positive TST
  - Patient who refuse further testing may be treated as infectious.
  - Patients may be required to submit to a CXR or provide a sputum sample.

- Positive CXR or positive sputum sample for AFB
  - Patients may be isolated until treatment renders them non-contagious.
  - Patients may be involuntarily isolated or held if there is a risk of flight or compliance.

Issues Related to Compliance with Treatment

- It is recommended that all person with infectious TB have DOT.
- For persons who refuse/do not cooperate with DOT
  - isolation may be imposed until they adhere
  - A court may to order adherence.
ISSUES RELATED TO COMPLIANCE WITH TREATMENT

- It is recommended that all persons with active TB undergo DOT
  - Whether DOT must be used depends on state law

- For patients who refuse or do not cooperate with DOT:
  - Isolation may be imposed until they adhere
  - A court may be asked to order adherence
VOLUNTARY COOPERATION

*Always the first choice*

- Must be compliant with
  - Isolation
  - Treatment

A verbal/letter is given explaining home isolation:
- Not allowed outside the home, except for medical appt. and then must wear a mask
- No visitors during infectiousness
- Plan for isolation release is given
- Current household is considered already exposed and therefore not a great risk (Exceptions-infants and immunocompromised)
Concerns if Voluntary Plan is not adhered to

- Health officer prepares, hand delivers and reads to client the isolation plan. If client does not read/speak English, documents are translated and interpreter is present when delivery of letter.

- Client is to remain isolated until released and is to cooperate with the treatment plan

The Order can include:

- Order of DOT plan
- Order of medical evaluation
- Order for isolation plan
- Release of isolation plan
HEALTH DEPARTMENT ORDER

March 14, 2012

To: Patient Name and Address

As the Public Health Officer for Madison and Dane County, Wisconsin, I have been informed by medical personnel that you have active pulmonary tuberculosis. I have also been informed that you have not remained in isolation and went to the mall on December 20, 2010. You must follow your doctor’s orders to get well and to make sure that you do not infect other people. As the Public Health Officer for Madison and Dane County, I have the final authority to protect the public from tuberculosis and other contagious diseases. I am, therefore, directing you as follows:

- You must take your medications as prescribed.
- You must wear a mask while riding in a cab to your medical appointments.
- You must wear a mask while at medical appointments.
- You must stay isolated at home until directed by Public Health Madison-Dane County.
  - You must stay in your apartment except for when you go to medical appointments.
  - This also means that no one may enter your apartment, including your family.
  - You may not visit family or friends.
  - You may not visit any place of business for any reason, including the mall.
  - However, you may go outside for fresh air, for exercise or when going to medical appointments.

The Health Department will monitor your clinical condition regularly. We will let you know if your health is getting better and tell you when your treatment is complete. Wisconsin laws regulate the control of tuberculosis and cause the Health Department to take action to prevent the spread of this disease. If you do not agree to take all the action listed in this letter and comply with these actions, it will be necessary for you to be involuntarily placed in isolation and treatment which may be in a hospital or jail cell.

This order is effective as of December 23, 2010 and is to stay in effect until I withdraw or change the order. If you violate this Order, I will inform the Dane County Circuit Court of your refusal to follow this prescribed treatment regimen and request appropriate orders of confinement to protect others from being infected. Violation of confinement orders may result in civil or criminal penalties.

Dated at Madison, Wisconsin, this day of ________________________, 2010.

______________________________________________________
Name, Director Public Health Madison-Dane County
HEALTH DEPARTMENT ORDER

Date

To: Patient Name and Address

As the Public Health Officer for Madison and Dane County, Wisconsin, I have been informed by medical personnel and nursing staff that you have not followed through with recommended medical diagnosis procedures to rule out pulmonary tuberculosis. You must follow your doctor’s orders to get well and to make sure that you do not infect other people. I am, therefore, directing you as follows:

• You must go to all of your medical appointments.
• You must make a doctor’s appointment as soon as possible (and no later than 2/10/2012).
• You must keep your doctor’s appointments.
• You must be on time for all of your doctor’s appointments.
• You must agree to all lab tests that your doctors order.
• You must wear a mask when going to medical appointments and while at medical appointments.
• You must stay isolated at home until directed by your doctor or Public Health Madison Dane County. This means that you are not permitted to leave your house, enter any residence other than your own or attend public functions (i.e. to visit friends, participate in team sports, go shopping, etc). However, you may go outside for a walk or jog.
• You must answer or return phone calls from PHMDC staff.
• You must provide sputum specimens as directed by PHMDC staff or by medical staff.

Public Health Madison Dane County (PHMDC) staff will monitor your clinical condition regularly. Wisconsin laws regulate the control of tuberculosis and require the local health department (PHMDC) to take action to prevent the spread of this disease. If you do not agree to take all the action listed in this letter and comply with these actions, it will be necessary for you to be involuntarily placed in isolation and treatment which may be in a hospital or jail cell.

This order is effective as of February 1, 2012 and is to stay in effect until I withdraw or change the order. If you violate this Order, I will inform the Dane County Circuit Court of your refusal to follow this prescribed treatment regimen and request appropriate orders of confinement to protect others from being infected. Violation of confinement orders may result in civil or criminal penalties.

Dated at Madison, Wisconsin, this day of ________________________, 2012.

____________________________________________________
Name, Director Public Health Madison-Dane County
**WI STATUES: 252.06 & 252.07**

**252.06** The local Health officer may require isolation if it is suspected or confirmed that person has a communicable disease. (Some examples)
- Person leaves Hosp. AMA
- Person fails to attend TB related medical appointments/tests
- Sputum smears/cultures pending

**252.07(5)** Health officer has statutory responsibility to investigate and enforce any rules promulgated by DHFS to prevent/control the transmission of TB. If any person does not comply, the Health officer can take further legal action to confine the person. (Some examples)
- Diagnosis of TB likely, based on CXRs
- Sputum smears + for AFB
- Person refuses medical evaluation for TB Disease and in close physical contact with others & not using risk reduction
- Person refuses treatment/refuses to accept TB diagnosis
- Person has history of violating isolation

*(Legal Confinement is a last resort & very expensive)*
CONFINEMENT ORDER

- Health officer can immediately confine for 72 hours to a facility if a written order from the Health Officer is violated.
- Health Officer then can proceed to petition for Court ordered Confinement.

**Confinement orders need to have:**

- Affidavit by MD is signed-notarized
- Affidavit of PH worker-signed-notarized
- Oder of Confinement (The Plan) by health officer
- All papers are presented to the person and explained. They are hospitalized until the client is determined to be non-infectious.
- HD legal Counsel files this petition with the Court, asking to extend the order of Confinement beyond the 72hr/until the person is no longer a threat to self & the general public per: **WI Stat.252.07 (9)(b)**
- Public Health’s legal Counsel must petition the Court to release the person from this Order. PH **does not** do this independently.
CONT.

- When this petition is put into place-law enforcement can arrest the client (if client is not already in a facility at the time) and take to a hospital with a negative air-flow room.
- If necessary-guards can be placed 24/7 to keep client confined. (This is an expensive option at the cost to the Local Health Dept)

**Paying for & Implementing PH Restrictions**

- TB Isolation & treatment is expensive
  - Covered by private health insurance?
  - What if the person is homeless?
- Cost may cause small HD’s to be reluctant to order restrictions
- Isolation facilities are limited
  - Large outbreak could overwhelm facilities
  - Home isolation orders are difficult to enforce
COOPERATION WITH OTHER INSTITUTIONS

- Hospitals
  - OSHA requires hospitals to isolate persons with infectious TB.
  - Hospitals have no legal authority to keep patients in their rooms.
  - HD must order & oversee enforcement of restriction on hospital pt.

- Jails and prisons
  - Jails and prisons can impose restrictions.
  - PH may assist in managing and investigating cases.

- Airline Travel: Multi-jurisdictional considerations:
  - Airlines are regulated by Federal Aviation Adm.
  - Airport safety is regulated by the Transportation Safety Adm.
  - Both agencies may be involved in investigation of airline/airport case
  - Notification & screening of exposed involve the airline, CDC, & State/Local HD.
Persons with infectious TB who travel interstate may be subject to Federal isolation.

State HD also assist each other in tracking disease carriers who leave the State.

Law enforcement may be asked to help find persons who have left treatment while still infectious.

CDC, through DHS, may prevent persons with infectious TB from boarding commercial flights via a “Do Not Board” order.
DEALING WITH A “TB SUSPECT”

252.07(1g)(d) Suspect TB-if symptoms & lab tests are indicative of TB (prolonged fever, cough, hemoptysis or medical image findings).

Isolate until

- Client should have 3 sputum specimens collected 8-24 hr intervals, with at least 1 collected in early AM, that are AFB-free.
- CXR must rule out active TB disease.
- If this client is not started on TB Rx and develops a +M-TB culture-this suspect must begin TB Rx & isolation.
- Work site or congregate setting to which they are returning is appropriate.
RETURN TO WORK/SCHOOL

- The resolution or near resolution of symptoms—especially cough.
- 3 consecutive AFB smears 8-24 hr apart with 1 in AM. (3 negative cultures if MDR)
- Concurrent Rx with appropriate TB regimen to which the strain is known or likely to be susceptible. Completion of at least the first 2 weeks of DOT Rx.
- Clients that work in:
  - Health Care (esp. if they work with neonates or with people with HIV/AIDS)
  - OR
  - Day Care should not be allowed to return until drug susceptibility results are known and a MD knowledgeable in managing TB disease determines they are noninfectious.
MDR-TB (Release from Isolation)

More stringent requirements must be met:

- Cough resolution
- Have been on 4-5 drug Rx that is TB sensitive for at least 6-weeks
- Drug regimen compliant (DOT)
- Must have 3-AFB negative smears and 3 AFB negative cultures
EXTRA PULMONARY TB DISEASE

- Physical exam (cannot be used to rule in / rule out TB)
- Test (TST/IGRA)
- Chest radiograph (Should be done on all-to rule out infectiousness-if abnormal, obtain sputum specimens. May consider obtaining sputum x3 for all extra pulmonary TB cases.
- Bacteriologic exam of specimens
- Medical History-ask about symptoms

Culture Negative TB Disease

- Increased suspicion of TB disease-despite neg. smears
- Abnormal CXR or other radiographic evidence suspicious of active TB (i.e. TB of the spine. These may be considered culture negative extra-pulmonary case)
- Clinical symptoms
- No other diagnosis
- +TST/IGRA
- High risk of acquiring TB infection