The Role of Public Health in the Management of Tuberculosis

Lorna Will, RN, MA
TB Nurse Consultant
Wisconsin TB Program

Ann Steele, RN
Public Health Nurse
Appleton Health Dept

November 2016
Disclosure

• We have no relevant financial relationships associated with the content of the presentation.

• We do not intend to discuss off-label/investigative use of a commercial product/device.
Learning Objectives

• Identify major roles of local and state public health departments
Public Health and Tuberculosis (TB)

Wisconsin Statute Chapter 252 gives public health the authority to control communicable diseases. The primary authority lies with the local health department.

252.07 Tuberculosis. (5) Upon report of any person under sub. (1m) or (1t), the local health officer shall at once investigate and make and enforce the necessary orders. If any person does not voluntarily comply with any order made by the local health officer with respect to that person, the local health officer or the department may order a medical evaluation, directly observed therapy or home isolation of that person.
Public Health and TB

The state health department may only step in if the local health department is unable or unwilling to use their responsibilities.

250.04 Powers and duties of the department (2)

• 250.04(2)(a) The department possesses all powers necessary to fulfill the duties prescribed in the statutes and to bring action in the courts for the enforcement of public health statutes and rules.

• 250.04(2)(b) (b) If local health departments fail to enforce public health statutes or rules, the department may enforce those statutes and rules. If the department does this, the county, city or village for which the local health department has jurisdiction shall reimburse the department for expenses that the department incurs in enforcing communicable disease statutes and rules.
Quick Summary

• Local public health has the legal authority and responsibility for TB control in WI

• State public health has the responsibility and authority to control communicable diseases, including TB – but only steps in if local public health is unwilling or unable.
Local Health Departments

• Funded by a mix of local/state/federal dollars
• Funding may be program-specific
• Staffing depends on funding
• Larger departments have nurses who work largely on TB; smaller department nurses have many duties, TB among them.
State TB Program

• Funded by CDC (for program costs) and state tax dollars (for TB meds, dispensary, and TB prevention)

• Is a unit within the Communicable Disease Epidemiology section within the Bureau of Communicable Diseases, WI Division of Public Health
State TB Program

• Responsible for reporting TB cases, statistics on cases and LTBI, any anomalies to CDC.

• Responsible for providing consultation and assistance to local health departments (LHDs), tribal health departments, clinicians, and the general public.
State TB Program

- Administers TB dispensary program
- Administers LTBI medication program
- Administers TB medication program
- Works with other state agencies to adjust statutes, policies, and procedures re TB
State TB Nurse Consultants
Day to Day:

• Take multiple calls from health depts, clinicians, general public
• Follow up with local health departments on active cases (try for at least monthly)
• Review TB suspects in WEDSS – contact LHD with any questions
• Review and approve med requests
State TB Nurse Consultants
Day to Day:

• Provide training, both state-wide and individual as needed

• Maintain knowledge of new/changed therapies, tests, and technologies

• Collect, analyze, and provide epidemiologic and statistical data on TB in WI

• Collaborate with national and international organizations working on TB
WI State TB Staff

- Lorna Will RN, MA  608-266-3729
- Marjorie Wall RN  608-266-9452
- Judy Rabinowitz RN  608-266-7338
- Julie Tans-Kersten, MS, BSMT (ASCP)  608-261-6387
TB Issues in WI

• TB screening and testing
• TB infection (latent TB infection or LTBI)
  • Treatment regimens, monitoring, followup
• Suspect TB disease
• TB disease
• TB prevention
TB Screening and Testing

Local:

- Conduct screening and testing programs for high risk groups, contact investigations
- Advise clinicians and facilities on appropriate tests and screening forms
- Advise clinicians and facilities on local TB epidemiology (as in “the last TB case we had was in 2011, an itinerant farm worker, so we are a very low risk area”)

TB Screening and Testing

State:

• Develop TB screening questionnaires based on state epidemiology and USA trends
• Advise clinicians, LHDs, and facilities on use of these tools
• Recommend changes to policies, procedures, and statutes to minimize unnecessary testing for TB in low risk area
• Provide guidance for test result interpretation
LTBI

Local:

- Identify persons with positive tests at screening events
  - Arrange medical evaluation and CXR, then proceed as below
- Receive medication orders from clinicians
  - Evaluate orders for appropriateness and completeness
  - Contact patient to assess understanding, willingness to proceed with treatment
LTBI, continued

Local:

- Put patient into WEDSS
- Determine whether pt needs sputum samples before treatment
- Determine insurance status

- Get baseline medical history at first visit to assess for comorbidities, potential issues with treatment
LTBI, continued

Local:

- Educate patient regarding TB infection, potential side effects, when to call nurse, when to hold meds (if self-administered)
- Provide written information in appropriate language on TB and medications
- Ensure presence of interpreter for non-English-speaking clients
- Develop monitoring flow sheet to assess adherence, side effects, dose count
LTBI, continued

Local:

• Coordinate appointments for labs or exams
• Ensure confidentiality of all records and interactions
• Consult with clinician and/or state program for side effects or problems with treatment
• Request refills as needed through WEDSS
• Be the cheerleader/coach
• When treatment complete or stopped early, provide follow up via WEDSS
LTBI, continued

State:

• Approve medication requests for dispensary and send to pharmacy

• Send refill requests to pharmacy

• Evaluate and approve any requests for additional testing needed for patient

• Calculate statistics re LTBI yearly: # tested, # positive, # started treatment, # completed
Suspect TB disease

Local:

- Get call from clinician re suspect within jurisdiction
  - Obtain as much information as possible: history of illness, testing done and results, comorbidities
  - Contact State TB as needed re recommendations for additional testing
- Enter patient into WEDSS as TB suspect
Suspect TB disease, continued

Local:

• Contact patient

  • History of illness, comorbidities, presence of symptoms, ability to provide sputums, other persons present in household, insurance status

• Determine whether isolation is needed

  • Place into isolation if needed; educate patient and family about what this means, potential enforcement if not followed. Some LHD have a written isolation agreement for patients to sign.
Suspect TB disease, continued

Local:

- Obtain sputums if possible and send to WI State Laboratory of Hygiene by courier
- Await PCR and/or GenXpert result on sputums
- Report results (positive or negative) to patient and family, clinician
- If not TB disease, does patient have LTBI? Then enter into WEDSS and treat as above.
- If TB disease, see below.
Suspect TB disease, continued

State:

• Receive calls from laboratories, clinicians, health departments
• Ensure that appropriate LHD is notified of suspect TB
• Assist as needed with getting tissue and/or sputum samples tested
• Watch for/call for results of testing to assure decision made re patient status as soon as possible
Suspect TB disease, continued

State:

• Interpret test results and assist LHD and clinicians in next steps
  • *e.g.*, negative PCR but symptomatic patient with risk factors; positive PCR with infant and small children in household; insufficient sample to test, but symptomatic patient with risk factors
TB disease

Local:

- Receive test results or clinician call regarding new case of disease.
- Obtain as much information from provider as possible.
  - history of illness, determine infectious period, ? source of infection, risk factors, baseline medical history (HIV, diabetes, renal disease, hepatitis, alcohol usage, other meds including OTC).
TB disease, continued

Local:

- Consult with State re need for additional tests, labs to CDC.
- Sputums X 3 for AFB to WSLH if not already done.
- Enter new case into WEDSS, including history from clinician, lab results, CXR and CT reports.
TB disease, continued

Local:

• Initial home or hospital visit with patient, nurse wearing N95 mask.
  • Education: TB disease, isolation needs/minimizing transmission, need for sputums, general info. on treatment esp. DOT.
    • Provide written information about TB and medications as appropriate.
  • Psychosocial assessment to identify barriers (financial, housing, employment, denial).
TB disease, continued

Local:

- Identify high-risk contacts and arrange for testing as soon as possible.
- Ensure isolation as ordered.
- Use interpreters as needed.
- Emphasize confidentiality with patient and family.
- Get State medication approval. Add vitamin B6 and/or MVI as needed by patient.
- Obtain medications from local pharmacy.
TB disease, continued

Local:

- Begin treatment using directly-observed therapy (DOT). Usually four drug treatment, but may vary if patient is known or thought to be drug resistant.

- Arrange vision testing and, if needed due to medications chosen, hearing testing during first weeks of treatment.

- Develop monitoring flow sheet for side effects, response to treatment, and dose count.
TB disease, continued

Local:

• Discuss with patient and family common side effects, when to report, how to manage. Provide written information.

• Do contact investigation for non-household contacts, alerting work/social/neighborhood contacts as appropriate.
  • Arrange testing for high risk contacts as soon as possible.

• Coordinate appointments for labs or exams.
TB disease, continued

Local:

- Maintain ongoing communication with clinician. Obtain CXR and lab results as needed and put into WEDSS.
- Have regular care conferences with patient, family, and providers.
- Develop a caring and trusting relationship with the patient and family.
- Coordinate referrals for other illnesses and issues as needed.
TB disease, continued

Local:

- Use incentives and enablers through American Lung Association program.
- Document everything!
- If patient requires placement in a facility, assist facility in using appropriate protective equipment and educate staff as needed.
- If patient needs home care, work with agency to assure safety of agency staff.
TB disease, continued

Local:

- Obtain weekly or monthly sputums, depending on patient status and length of time on meds
- Have ongoing consultation with State TB Nurse consultant. At least monthly check-in.
- Consult with Mayo as needed.
- Maintain DOT throughout treatment course. Use eDOT if necessary once patient is through intensive phase and is no longer in isolation.
TB disease, continued

Local:

• If patient moves, complete interjurisdictional form and notify agency which will receive patient.

• At end of therapy, summarize side effects and treatment course, and close patient in WEDSS.
TB disease, continued

State:

- Receive laboratory and/or clinician reports of case.
  - Notify LHD of new case as soon as possible.
  - Document anything known in WEDSS.
  - Count patient officially.
- Consult with LHD re start of treatment, need for isolation, issues regarding household members.
- Approve med request and issue pharmacy confirmation.
TB disease, continued

State:

• Begin RVCT for all new clients.

• Start physical chart for all lab reports, imaging reports, medical records, and notes.

• Talk at least weekly with LHD re new cases, monthly or as needed with those on established regimen and progressing well.

• Monitor lab reports to assess treatment effectiveness, continued need for isolation.
TB disease, continued

State:

• Monitor drug susceptibilities.
• Compare genotype with other WI and USA genotypes to assess for clustering, potential contacts.
• Assess progress of contact investigation.
  • Assist LHD in determining whether to widen investigation.
  • Emphasize treatment of all positive contacts.
  • Track completion rates of treatment of contacts.
TB disease, continued

State:

• Continue to monitor throughout treatment course.
• Complete RVCT as information becomes available.
• At treatment completion, close case after talking with LHD.
• Submit final RVCT to CDC.
• Add patient and contacts to statistical forms for annual reports to state, local, and national entities.
TB Prevention

State and Local Health Departments work with community groups and clinicians to prevent TB by

• Identifying high-risk groups

• Collaborating to
  • Educate
  • Screen
  • Test
  • Treat
Questions or comments?

Thank you!