TB DISEASE RESPONSE AND CASE MANAGEMENT PARTNERSHIP IN CARE

Division of Global Populations and Infectious Disease Prevention
Bureau of Infectious Disease and Laboratory Sciences
Massachusetts Department of Public Health
Welcome

Effective TB response requires knowledge, skills, and partnerships – and comes with challenges and opportunities

New introductory/foundational training series for

- New local public health partners
- Local public health nurses who haven’t provided TB case management recently

Hope to illustrate shared partnerships essential to disease response
Series of three webinars

- Introduction to Tuberculosis (archived in MAVEN Help)
- Introduction to TB Disease Response and Case Management (today)
- Introduction to TB Contact Investigations (July 1)

Participation in all webinars is not required - if you miss the any webinar you can still attend the others. Remember webinars and slides are archived in MAVEN Help [Division of Global Populations folder]
INTRODUCTION TO DISEASE RESPONSE AND CASE MANAGEMENT

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Session Two Objectives

- Discuss how tuberculosis care is provided in Massachusetts
- Review Massachusetts laws governing tuberculosis
- Identify members of the TB Disease Response Team
- Describe process of case notification, case investigation, and case management
- Discuss resources available for case investigation and case management
Providing TB Care in Massachusetts
How is TB Care Provided?

Controlling Tuberculosis in the United States
Recommendations from the American Thoracic Society, CDC, and the Infectious Diseases Society of America
Key Massachusetts Regulations and Laws

- 105 CMR 300: Reportable diseases, surveillance, and isolation and quarantine requirements
  - TB infection and TB disease are reportable
- 105 CMR 365: Standards of management of TB outside hospitals
  - 365.200: Case management
  - 365.600: Discharge planning from hospital into outpatient setting
- MGL Chapter 111 Section 94A-C: Compulsory hospitalization of person with infectious TB
Public Health Disease Surveillance in Massachusetts: A Shared Responsibility
*Each individual city and town has its own independent public health department
Resources for TB Response

- Nurse Case Management statewide (Local Public Health and DPH)
- DPH multi-disciplinary team designated to assist in TB response
  - Epidemiologist – Nurse - Direct Services Coordinator
  - Physician consultant
- Clinical care:
  - State-supported TB clinics throughout Massachusetts
  - Tuberculosis Specialty Services – Lemuel Shattuck Hospital
  - Clinical consultation available from DPH
TB Case Investigation
Tuberculosis Reporting

105 CMR 300.000: Mandated to report active or suspected active TB:

- Laboratories: Report positive NAAT or culture. Electronic Laboratory Reporting (ELR) facilitates timely reporting to DPH (but not all labs are on ELR)
- Healthcare providers: Report suspected active TB and confirmed active TB cases directly to DPH (including extra-pulmonary TB)

In practice, providers often call DPH for assistance:

- Correctional facility questioning whether to report
- Hospital infection preventionist who is “Thinking TB” when the patient has been admitted to the hospital
- Provider considering clinical symptoms plus high risk for TB disease
- “Mr X is about to sign out AMA. What do we do?”
MAVEN: Web-based Surveillance and Case Management System

- 24/7 notifications to LPH
- Case report creates TB event
- Positive lab (including via ELR) creates TB event
- Shared case management tool with local public health
- Surveillance tool for data tracking and evaluation
- Bridge with local health
The Team Approach

State Epidemiologists

State Community Health Workers/ Direct Service Team coordinators

State and Local Public Health Nurses
## TB DISEASE: Initial PH Response

### STATE TB CASE MANAGEMENT TEAM

<table>
<thead>
<tr>
<th>Clinical</th>
<th>Epidemiologist</th>
<th>Direct Services</th>
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| • Coordinate with providers and ICP ~ diagnostics and treatment regimens, isolation, and discharge planning  
• Provide TA for planning and support for LBOH partners | • Verify demographic data from case report  
• Request additional medical/risk hx info  
• Work with LBOH to begin identifying possible exposure sites and durations | • Assess and coordinate direct services/CHW support with LBOH, patient, and patient family  
• Take into consideration language, culture and other social factors  
• Support LBOH delivery of DOT services |
TB DISEASE: Initial PH Response

LOCAL PUBLIC HEALTH PARTNERS
• Notified of case through MAVEN
• Conduct home and/or hospital visit
• Interview patient for risk/exposure/contacts etc.
• Participate in discharge planning process
• DOT planning
• Specimen collection for documenting culture conversion

MASSACHUSETTS STATE TB LABORATORY
• Continue to process specimens for conventional DST, send positive culture for genotyping/WGS - If requested, for MDDR - Process additional specimens as received

STATE SUPPORTED TB CLINICS/TREATING PROVIDERS
• Prepare to receive patients post discharge/for initial visit
TB DISEASE: Response Continuation

As patients are established on treatment, the public health response continues at lower intensity

All cases in this phase are reviewed at a monthly case review with the whole DPH team

STATE TB CASE MANAGEMENT TEAM

<table>
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<tr>
<th>Clinical</th>
<th>Epidemiologist</th>
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<tbody>
<tr>
<td>• Routine monitoring of clinical picture/follow-up visits</td>
<td>• TA and support for contact investigation activities</td>
<td>• Continue working with LBOH partners for DOT</td>
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<tr>
<td>• TA as required</td>
<td>• Additional data requests to gather missing surveillance data</td>
<td>• Social support for patients and families</td>
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<td>• Transportation assistance</td>
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<td>• Support for contact investigations/education</td>
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TB DISEASE: Response Continuation

LOCAL PUBLIC HEALTH PARTNERS
• Safety and adherence supports, and DOT
• Specimen collection (if required)
• Identify, support testing and referral of high-risk contacts

MASSACHUSETTS STATE TB LABORATORY
• Finalizes Cultures and DST results. Receives any genetic testing information and shares with program

STATE SUPPORTED TB CLINICS/TREATING PROVIDERS
• Monthly patient visits to monitor treatment – including all required testing
• Priority appointments for identified contacts
TB DISEASE: Response Completion

As patients complete their TB treatment, the DPH focus shifts to surveillance activities.

Cases in this phase that meet certain criteria are reviewed quarterly at cohort review.

STATE TB CASE MANAGEMENT TEAM

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<tr>
<td>• Final review of clinical cases and clinical elements of culture confirmed cases</td>
<td>• Conclusion of contact investigation, data cleaning and reporting to CDC for RVCT variables</td>
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<tr>
<td></td>
<td>• Final data requests</td>
<td>• Support for contact investigations continues</td>
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<td>• Official case close-out procedures</td>
<td>• Other support as requested</td>
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TB DISEASE: Response Completion

LOCAL PUBLIC HEALTH PARTNERS
• Continued adherence support for contacts on treatment
• Final data submission for contacts
• Fill in missing details for case surveillance

MASSACHUSETTS STATE TB LABORATORY
• All done!

STATE SUPPORTED TB CLINICS/TREATING PROVIDERS
• Final TB clinic visit – Document TB treatment completion (or last month of therapy!)
• See any contacts with ongoing therapy
Timeline of response

- Patient gets sick
- TB Suspected
- Specimens submitted
- TB Reported
- Initial response
- Continuation response
- Final Review

6 months - >2 years

Public Health Response

Public Health Lab Response
Considerations in Early Response

- Establish and support partnership with local health and clinical provider
- Review disease presentation
  - Site of disease
  - Symptoms and duration of symptoms
  - Risk factors
- Identify possible exposure sites
- Establish need for contact tracing/contact investigation
Knowing your patient

- Review medical record
- Establish preliminary infectious period
- Do you need a respirator?
- Will you or patient benefit from interpreter access, CHW support?
- Develop interview strategies
- Introduction – Establishing rapport
- Consider patient’s background, demographics
Preparing for Initial Visit

- Interview should be conducted in person
- Ensure confidentiality
- Introduction of the Public Health Nurse (PHN), role of PHN
- Explain the purpose of the visit
- Exchange contact information
- Rapport building - Early identification of opportunities to build trust
- Engage community partners to assist in early identification of barriers to care and treatment
- Practice awareness for cross cultural communication skills
Home Assessment / Home Visit

- Physical setting and description
- Exposure risks / refine infectious period
- Contact identification testing begins
- Direct Observation Therapy (DOT) plan (time)
- Medication review
- Capacity for adherence with appointments
- Begin bridging barriers
Needs Assessment

- Determining physical needs
- Psychosocial needs
- Personal concerns
- Individual strengths
- Determine need for language capacity
- Obtain the patient’s perspective of their illness and needs
- Identify resources, possible partners
Putting it all together - Plan of Care

All of this information will determine the patient’s plan of care.
How many interviews should be conducted?

- Every encounter is an opportunity to learn more about the person – support a foundation of trust
- Always build on previously-collected information

- Additionally, every DOT encounter is an opportunity to learn about more contacts
- You learn more about possible contacts by being with them in their own environment
When should the TB Interview be Conducted?

- **Initial interview** should be conducted
  - Within 3 business days
  - Timing may be affected by the individual’s condition

As you continue the case investigation and start case management duties, information sharing with the person with TB should increase

- Additional interviews may be needed to gather more information and to build trust
- If at home, make sure interview space is private
Contact Investigation Interview

- Educate the person about TB and the contact investigation process

- Identify
  - Places WHERE they spent time
  - Persons with WHOM they spent time
  - Participation in activities and events (WHAT and WHEN)
  - How much time and when last encounter was

- Reinforce confidentiality

Contact Investigations will be covered in Session Three
Roles, Responsibilities, Activities, Challenges

Case Presentation

- Case investigation
- Case management
- Contact investigation
- Community support and adherence
Case Study

58-year-old man presented from local facility to out-of-area hospital with concerns for malignancy. Symptoms included cough, weight loss, sore throat and dysphagia. TB not in the differential.
Risk factors and Social History

- Substance use
- Past corrections history
- Military history
- Smoker
- US born
Diagnostic Work-up

- Chest X-ray
- Sputum for AFB – collected 8 hours apart
- Sputum NAAT test
- IGRA
- Baseline liver and kidney function tests
- Airborne precautions
- Report to MDPH
- Reported to local health
Cavity on Imaging
Investigation Evolves

- IGRA (QuantiFERON) test was positive
- Sputum specimens were smear positive, NAAT positive
- TB treatment started
- Community and case investigation begins
Initial Case Manager Response

- Address verification
- Local case manager confers with DPH Team
- Local case manager discusses case with the hospital team for real time information
- Collecting information to create the plan of care
Community Concerns

- Questionable home situation – possible congregate living
- Not forthcoming with contacts
- Substance use concerns
- Local PHN could not ensure safe community plan
Outcome

- Patient transferred to Lemuel Shattuck Hospital
- Electively stayed through completion of therapy
- Vast clinical improvement in overall health
- Detox from substance use
- Discharged to the community
Collaborative Investigation

- Investigations start with reporting - without a formal report, DPH cannot intervene.
- Once reported, we can collaborate to facilitate a complete plan of care.
- Interventions in the hospital are often happening simultaneously with those in the community, including patient interviewing, household contact investigation, and referral.
Take-Home Points

- Suspected and/or confirmed active tuberculosis is an immediate reportable disease
- There are regulatory requirements for TB case investigation and case management
- MAVEN is the surveillance tool for case reporting and multi-disciplinary case management
- TB disease response requires the partnership of State, Local, and various community partners
- Disease investigation and disease response can take several (to many) months to complete
Till the next time

Patient gets sick → TB Reported → Initial response → Continuation response → Final Review

Specimens submitted

6 months - >2 years

Public Health Response

Public Health Lab Response
MDPH resources

- Technical assistance – Just-in-time training
- Contact investigation support with PPD or IGRA testing
- Community Health Worker support
- Transportation services
- Strategic thinking re options for contact investigation and case management
- Available through course of treatment - from early diagnosis to completion of therapy
- Archived trainings/resources in MAVEN Help
  - Introduction to Disease Response
  - DOT (Direct Observation Therapy)
  - Class AB New Arrivals
General Resources

- CDC Division of TB Elimination - [http://www.cdc.gov/tb/](http://www.cdc.gov/tb/)
- Local Public Health Institute - [https://sites.bu.edu/masslocalinstitute/2014/06/23/disease-case-management/](https://sites.bu.edu/masslocalinstitute/2014/06/23/disease-case-management/)
- DPH TB Program – [www.mass.gov/tuberculosis](http://www.mass.gov/tuberculosis)
THANK YOU

mercì grazie kam ona
mahalo hvala gracias
grazias tak kitos
cheers ma goda talofa
how do thanks
messi dankon
modupe nigwetch
domō arigato
danke kitos
grazys
dziatoje takk

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