



## Working with Community Providers

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## Learning Objectives

1. Describe common issues that require health department intervention with community providers.
2. Share various strategies that have been used to engage community providers in the treatment of TB clients.



### TB Elimination in the United States: Status and Future Directions

(Phil LoBue, Director DTBE, SETBC meeting, 10-2014)

- Main Challenges to TB Elimination
  - Political commitment
  - As cases continue to decrease, seems less of a priority to general public and policymakers
  - Resources at risk
  - Loss of expertise and experience
  - Clinical, laboratory, program
  - Drug and biologic shortages because of lack of market
  - Regulatory requirements limit access to GDF or other mechanisms that can access larger global market
  - Concentration of remaining cases and outbreaks in more difficult-to-reach populations (Foreign-born, homeless, etc.)



### TB Elimination in the United States: Status and Future Directions

(Phil LoBue, Director DTBE, SETBC meeting, 10-2014)

- Key Risk Groups, (2013 CDC Surveillance Data)
  - Foreign-born persons (65% of cases reported)
  - Racial and ethnic minorities (incidence rates 6.2 – 25.9 times greater than non-Hispanic whites)
  - HIV-infected persons (6.8% of cases with reported test result)
  - Homelessness (5.7% of cases)
  - Correctional facility (3.9% of cases)



### TB Elimination in the United States: Status and Future Directions

(Phil LoBue, Director DTBE, SETBC meeting, 10-2014)

- Two Key Themes for TB Elimination
  - Address TB in foreign-born persons
    - Domestic strategies
    - Global strategies
  - Address latent tuberculosis infection (LTBI)
    - <10 thousand TB cases; 11 million persons with LTBI



### TB Elimination in the United States: Status and Future Directions

(Phil LoBue, Director DTBE, SETBC meeting, 10-2014)

- Expansion of testing and treatment beyond health department
  - How can we leverage Affordable Care Act?
  - USPSTF considering recommendation for LTBI testing
  - Who serves targeted populations in the community and how can we engage them?



## Working with Other Providers to Promote TB Control and Prevention

- What do community providers want or need?
- How can you help them with these needs?
- What do they need to know about TB?
- How can they help us reach our goals?

## Core Curriculum on Tuberculosis: What the Clinician Should Know

### Chapter 8. Community TB Control

<http://www.cdc.gov/tb/education/corecurr/index.htm>

## Who Serves Targeted Populations?

Private sector includes

- Clinicians
- Community health centers (Including federally qualified HC)
- Hospitals
- Academic institutions
- Medical professional organizations
- Community-based organizations
- Correctional facilities
- Civil surgeons
- Pharmaceutical and biotechnology industries

## Responsibility for TB Control

- Health departments maintain primary responsibility for TB prevention and control
- Complexity of TB control requires public health sector to collaborate with others

## Roles and Responsibilities: Public Health Sector

**The Public health sector plans, coordinates, and evaluates TB control efforts.**

1. Planning and policy development
2. Contact investigation
3. Clinical/diagnostic services for TB patients and their contacts
  - Provide for expert consultation and oversight
  - Provide guidance to TB laboratories
4. Training and education
  - HCWs, community members, public health officials, and policy makers
5. Surveillance and information management
6. Monitoring and evaluation

## Roles and Responsibilities: Public Health Sector (cont.)

**Health department must ensure**

- TB patients can access diagnostic/treatment services
- Completeness of TB-related services and continuity of care, regardless of where patient seeks care
- Standards of care are met
- Radiology and lab services readily accessible
- Radiograph and AFB results available within 24 hours
- All TB smear, culture, and drug-susceptibility results reported promptly by laboratories
- Clinicians promptly report all suspected and confirmed TB cases

## Roles and Responsibilities:

### Private Sector Providers

- Understand prevalent risk factors and medical conditions of their patient populations
- Be aware of local TB reporting laws
- Report TB suspects; refer patients to necessary services
- Know procedures for suspected TB: diagnose, hospitalize, plan treatment
- Follow current guidance for screening, diagnosis, treatment of TB and LTBI; infection control
- Be able to administer TB tests, rule out TB disease, administer treatment
- Educate and motivate patients about implications of TB
- Establish recommended infection control practices



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## POLL QUESTION

### What are the Challenges to TB Prevention in Primary Care?

- 1) Short primary care visits with focus on acute, current issues, active TB is rare
- 2) Not familiar with routine TB risk assessment
- 3) Lack of standardized documentation of TB risk-factors – do it every visit?
- 4) Lack of standardized documentation of testing & evaluation for LTBI & TB
- 5) All of the above



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## TBESC: Attitudes Toward Managing Latent TB Infection in Primary Care

- Increasing proportion of foreign-born TB cases and large pool of latently infected FB persons residing in U.S.
- Effective TB control strategies require that primary care providers be adept at identifying active TB as well as managing persons with latent TB infection (LTBI).
- CDC, Seattle and King County Public Health Department, and the University of Washington conducted a 3-year study about the facilitators and barriers associated with the primary-care management of latent and active TB among immigrant populations.



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## TBESC: Attitudes Toward Managing Latent TB Infection in Primary Care

- **Results:** Factors Preventing LTBI Testing and Treatment
  - “TB Clinic rarely communicates with us.”
  - “I don’t have a way to track PPDs, or if patients are compliant taking INH.”
  - “Patients won’t take INH for 9 months.”
  - “The guidelines are confusing, and constantly changing.”
  - “I have too many patients, and too little time to address this. I’ll lose money.”



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## TBESC: Attitudes Toward Managing Latent TB Infection in Primary Care

- **Results:** Factors Preventing LTBI Testing and Treatment
  - “TB is very rare so LTBI screening is not critical.”
  - “But, it’s pretty much in my opinion, a waste of money, because I might find 1 out of 200. I would have to screen 200 people before I would find one case. And, most patients would not...I would have to do it as a freebie, cause they’re not going to pay for that...it costs me about \$5.00 for a test.”
    - Dallas, Private Practice Physician



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## TBESC: Attitudes Toward Managing Latent TB Infection in Primary Care

- **Results:** Factors Preventing LTBI Testing and Treatment
  - “Firstly, the BCG does muddy the water. Second, it depends on the age group. If they are already over 35 with a positive PPD, next is the chest x-ray. If they don’t have any symptoms or problems, do you do a PPD? Even if it’s positive you expect the chest (film) to return negative, you’re not going to do anything anyway. So, why do you want a PPD in the first place? And if you expect something in the chest x-ray, why don’t you do that in the first place? If they don’t have pulmonary symptoms and they are fine, you’re not going to preventatively treat them anyway, then why are you going through the procedure if you’re not going to do anything different? I think that’s wasting money, OK?”
    - San Francisco, Private Practice Physician



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## Treating the Patient with TB: Guidelines for Collaborating with Community Physicians

- **Scripts and Templates**
  - Steps in TB Case Management
  - Script for Contacting Private Physician
  - Letter of Introduction to the Private Physician
  - DOT Contract/Authorization to Release Medical Records
  - Initial Medical Evaluation Form
  - Initial Nursing Assessment Form
  - Medical Update from Private Physician Form
  - Monthly Update for Private Physician Form
  - Documenting Directly Observed Therapy (DOT) and Log
- Documenting Treatment Completion and Letter Physician's Evaluation of TB Services survey

## Template: Script for Contacting Private Physician (1)

Hello, my name is \_\_\_\_\_  
from \_\_\_\_\_.

I'm calling in reference to your patient \_\_\_\_\_.

He/she was reported by <hospital infection control nurse, state or local TB program, laboratory> as a TB case or suspect. The <agency> would like to collaborate with you in caring for this patient. We can offer the following services:

- Case management
- Directly observed therapy
- Field staff and support services
- Sputum collection and results

## Template: Script for Contacting Private Physician (2)

These services will improve the chances that <patient's name> will complete the course of treatment for TB and therefore, stop the spread of the disease. Of course, since you will be providing the medical management of this patient, he/she will come to your office on a regular basis. We ask that you provide a monthly update on a simple form that we will provide. Our office will communicate with you on a regular basis and mail you an update of the patient's progress. By keeping the lines of communication open, we hope to identify any problems or barriers that may arise and deal with them before they become major obstacles.

We realize that in a busy practice time is an important issue. We have streamlined the forms we use to avoid unnecessary phone calls to you and your staff members.

## Treating the Patient with TB: Guidelines for Collaborating with Community Physicians

### Suggested resolutions to common challenges

- Telephone or visit to the physician's office to discuss the related issues: failure to report, treatment issues, insufficient services or lack of services. Always follow-up the telephone call or office visit with a brief letter detailing the outcomes
- Inform the physician of state requirements for reporting TB. Explain when the TB case/suspect should be reported and provide easy, simple ways to facilitate reporting of TB case/suspect in the future; "Just call our office when you start someone on TB medications, and we'll assist you in reporting the case"

## Treating the Patient with TB: Guidelines for Collaborating with Community Physicians

### Suggested resolutions (cont.)

- If the physician fails to report in the future, or does not return telephone calls from the TB control program, it will be necessary to take additional steps with direction provided by the state health department. Since all essential TB control activities begin when the TB case is reported, failure to obtain notification about a case or suspect will delay initiation of public health activities necessary to prevent transmission of TB in the community
- If treatment is outside the standards recommended by CDC and the American Thoracic Society, ask the physician for an explanation. If the rationale is questionable or not acceptable, ask the Medical Director at the state or local health department to help resolve the issue and/or take necessary actions

## Treating the Patient with TB: Guidelines for Collaborating with Community Physicians

### Suggested resolutions (cont.)

- Advise the private physician about the usual services provided for a person with TB and offer to provide or coordinate some of the needed services such as, DOT and sputum induction/ collection.
- If the physician continues to provide sub-optimal care, contact the State TB Nurse Consultant and/or State Health Department Medical Director for assistance. It may be useful to visit the patient and assess their health status, and provide education about the essential components of TB treatment so the patient can appropriately discuss questions and concerns with the physician

## Treating the Patient with TB: Guidelines for Collaborating with Community Physicians

### Suggested resolutions (cont.)

- Public health workers who are confronted with obstacles from the private sector should engage the state and local health departments in a strategic plan to educate community providers and enforce the responsibilities in the care and treatment of patients with TB. The ultimate responsibility for the essential TB control activities of surveillance, case finding, reporting, ensuring patient adherence to TB treatment, isolation of infectious patients, contact investigation, and delinquency control lies with the TB control program at the state or local level

## What Resources Should You Have in Your Tool Kit?

### • Diagnosis:

- Availability of an Assay for Detecting *M. Tuberculosis*, Including Rifampin-Resistant Strains, and Considerations for Its Use – United States, 2013. MMWR 2013; 62 (No. 41).  
[http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6241a1.htm?s\\_cid=mm6241a1\\_e](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6241a1.htm?s_cid=mm6241a1_e)
- Updated Guidelines for Using Interferon Gamma Release Assays to Detect *M. tuberculosis* Infection – United States, 2010. MMWR 2010; 59 (RR-5); 1-25.  
[http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5905a1.htm?s\\_cid=rr5905a1\\_e](http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5905a1.htm?s_cid=rr5905a1_e)

## What Resources Should You Have in Your Tool Kit?

### • Diagnosis:

- Updated Guidelines for the Use of Nucleic Acid Amplification Tests in the Diagnosis of TB. MMWR 2009; 58 (01); 7-10.  
[http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5801a3.htm?s\\_cid=mm5801a3\\_e](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5801a3.htm?s_cid=mm5801a3_e)
- Diagnostic Standards / Classification of TB in Adults and Children. *Am J Respir Crit Care Med* 2000; 161.  
<http://ajrccm.atsjournals.org/cgi/content/full/161/4/1376>

## What Resources Should You Have in Your Tool Kit?

### • Treatment:

- Treatment of Tuberculosis** - MMWR 2003; 52 (No. RR-11)  
<http://www.cdc.gov/MMWR/PDF/rr5211.pdf>
  - Errata (January 7, 2005)** – MMWR 2005;53 (No. 51-52): 1203  
<http://www.cdc.gov/mmwr/PDF/wk/mm5351.pdf>
- Hepatotoxicity of Antituberculosis Therapy: An Official ATS Statement** – *Am J Respir Crit Care Med*; 2006;174:935-972  
<http://www.thoracic.org/sections/publications/statements/index.html>
- Updated Guidelines on Managing Drug Interactions in the Treatment of HIV-Related TB. MMWR 2008; 57 (No. 04, 98).  
[http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5704a4.htm?s\\_cid=mm5704a4\\_e](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5704a4.htm?s_cid=mm5704a4_e)

## What Resources Should You Have in Your Tool Kit?

### • Targeted Testing and Treatment of LTBI:

- Targeted Tuberculin Testing and Treatment of Latent Tuberculosis Infection. MMWR 2000; 49 (No. RR-6).  
<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr4906a1.htm>
- Update: Adverse Event Data and Revised American Thoracic Society/CDC Recommendations Against the Use of Rifampin and Pyrazinamide for Treatment of Latent Tuberculosis Infection. MMWR 2003; 52 (No. 31).  
<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5231a4.htm>

## What Resources Should You Have in Your Tool Kit?

### • Targeted Testing and Treatment of LTBI:

- Recommendations for Use of an Isoniazid–Rifampine Regimen with Direct Observation to Treat Latent Mycobacterium tuberculosis Infection. MMWR 2011;60:1650–1653.  
[http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6048a3.htm?s\\_cid=mm6048a3\\_w](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6048a3.htm?s_cid=mm6048a3_w)
- Latent Tuberculosis Infection: A Guide for Primary Health Care Providers.  
<http://www.cdc.gov/tb/publications/LTBI/default.htm>

## What Resources Should You Have in Your Tool Kit?

- **Infection Control:**
  - Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, 2005 *MMWR* 2005; 54 (No. RR-17) 1-141. <http://www.cdc.gov/mmwr/pdf/rr/rr5417.pdf>
    - Errata (September 25, 2006) <http://www.cdc.gov/tb/pubs/mmwr/Errata09-25-06.pdf>
    - Risk Assessment Worksheet (September 27, 2006) [http://www.cdc.gov/tb/pubs/mmwr/Maj\\_guide/AppendixB\\_092706.pdf](http://www.cdc.gov/tb/pubs/mmwr/Maj_guide/AppendixB_092706.pdf)
    - Additional FAQs (February 12, 2007) [http://www.cdc.gov/tb/pubs/mmwr/Maj\\_guide/faqsGuidelines.htm](http://www.cdc.gov/tb/pubs/mmwr/Maj_guide/faqsGuidelines.htm)

## What Resources Should You Have in Your Tool Kit?

- **Contact investigation and screening:**
  - **Guidelines for the Investigation of Contacts of Persons with Infectious Tuberculosis: Recommendations from the National Tuberculosis Controllers Association and CDC.** *MMWR* 2005; 54 (No. RR-15, 1-37) <http://www.cdc.gov/mmwr/pdf/rr/rr5415.pdf>
  - **Guidelines for Using the QuantiFERON®-TB Gold Test for Detecting *Mycobacterium tuberculosis* Infection.** United States *MMWR* 2005; 54 (No. RR-15) 49-55 <http://www.cdc.gov/mmwr/pdf/rr/rr5415.pdf>
  - **QuantiFERON®-TB Gold Testing Services:** This list of institutions that have agreed to provide QFT testing services to outside physicians and laboratories can be accessed at [http://www.quantiferon.com/contacts\\_usca.php](http://www.quantiferon.com/contacts_usca.php)

## What Resources Should You Have in Your Tool Kit?

- **Other:**
  - Fact sheets for patients (and providers) <http://www.cdc.gov/tb/publications/factsheets/default.htm>
    - Treatment of Drug-Susceptible Tuberculosis Disease in HIV-Infected Persons
    - Treatment of Latent Tuberculosis Infection: Maximizing Adherence
    - Treatment Options for Latent Tuberculosis Infection
    - What You Need to Know About Your Medicine for Latent Tuberculosis (TB) Infection-Fact Sheet Series
      - Isoniazid-specific Regimen
      - Rifampin-specific Regimen
      - Isoniazid and Rifampentine-specific Regimen

## What Resources Should You Have in Your Tool Kit?

- **Other:**
  - **Electronic resources: Podcasts, videos, DVDs.** <http://www.cdc.gov/tb/publications/eResources.htm>
  - Mobile Application for Latent Tuberculosis Infection: Guide for Diagnosis and Treatment. <http://www.cdc.gov/tb/publications/MobileLTBIApp/default.html>
  - MDR and XDR (Public health should be closely involved)
  - Peer-reviewed literature

## “Forging Partnerships”

- Identify partners and stakeholders in your area
  - Who is referring patients to you?
  - What high risk settings are in your area?
  - What populations are in your area, and what agencies or community leaders advocate for these groups?
- Partnerships offer increased access to resources.
  - Academic centers with specialists, diagnostics, case managers, interpreters, etc.
  - Private providers and community health centers can screen high risk patients; ±provide treatment

## “Forging Partnerships”

- Build awareness among local providers and stakeholders
  - Epidemiologic profile of TB cases, high risk populations
  - VA standards of TB care; state legal requirements
  - New national or local TB practices or initiatives
- Share information so they know what you know
  - One-on-one calls, meetings, etc.
  - Professional meetings
  - Other awareness campaigns
- Emphasize focus on *community* health as well as the health or treatment of individual patients

## “Forging Partnerships”

- Prepare in advance.
- Make sure your recommendations are based on data.
  - Evidenced-based
  - National or local standard of care
  - Current, appropriate, practical
- Consider what would be most influential for that individual.
- Use a spokesperson that is recognized as an expert or more likely to be valued as a peer when necessary.
- Build on previous successes over time.


 CDC. Forging Partnerships to Eliminate Tuberculosis, 2007. <http://www.cdc.gov/tb/publications/guidestoolkits/forge/default.html>


## “Forging Partnerships”

- Build an environment where people feel comfortable sharing their views.
- Listen to what they have to say; consider their experience, expertise and perspective.
- Communicate an interest in, and respect for, the experience, training, interests, and concerns of the provider you are working with.
- Establish trust with potential partners through an open and honest exchange of information.


 CDC. Forging Partnerships to Eliminate Tuberculosis, 2007. <http://www.cdc.gov/tb/publications/guidestoolkits/forge/default.html>


## “Forging Partnerships”

- Do not try to control everything, and do not think that you know all the answers in advance. Instead, try to create guiding principles and identify shared values and goals.
- Don't be accusing.
- Be aware of historical issues (Baggage), turf issues.
- Get over the fear factor and develop the skills and confidence to get engaged with new partners.
- As a last resort, refer to potential negative outcomes of practicing against the standard of care (ongoing transmission, individual morbidity and mortality, legal repercussions)


 CDC. Forging Partnerships to Eliminate Tuberculosis, 2007. <http://www.cdc.gov/tb/publications/guidestoolkits/forge/default.html>


## CASE STUDIES




## Working with Private Providers to Manage Clinical TB-Case 1

- A 52-year-old Hispanic female presented in January 2006 with left upper quadrant abdominal pain.
- An abdominal and CXR series revealed a density in the left upper lung; there was no hilar, mediastinal or axillary adenopathy.
- She denied cough, fever or night sweats. She had no prior history of TB.
- She immigrated to the US from Mexico 20 years ago and on occasion returned there to visit family. She is diabetic and a non-smoker.
- A private medical provider placed a TST which was found to be positive with an induration of 25 mm.




## Working with Private Providers to Manage Clinical TB-Case 1

### Case 1 (con't)

A. What is the most significant issue suggesting active TB disease in this patient's history?

1. Left upper quadrant abdominal pain.
2. Left upper lung density.
3. History of immigration from Mexico.
4. Diabetes.




## Working with Private Providers to Manage Clinical TB-Case 1

### Case 1 (con't)

B. What should be done next?

1. Collect three sputa for acid-fast bacilli (AFB) smear and culture.
2. Refer patient back to her private physician with documentation of the TST result.
3. Identify this patient's contacts and place patient in home isolation.
4. Start patient on latent TB infection (LTBI) treatment.

## Working with Private Providers to Manage Clinical TB-Case 1

- The patient's 3 sputa were AFB smear and culture negative for *M. tuberculosis*.
- A CT scan revealed a 2.4 cm slightly irregular cavitary mass in her left upper lobe.
- After the negative cultures, she was given a prescription for a 9 month course of isoniazid (INH) and vitamin B6.

## Working with Private Providers to Manage Clinical TB-Case 1

C. If she was referred to you, what would be your next step in management of this patient?

- Order INH and begin case management of this LTBI case.
- Provide INH directly observed therapy (DOT) as this patient is high risk for progressing to TB disease.
- Provide all 9 months of INH so the patient's ability to complete treatment is optimized while traveling back and forth to Mexico.
- Encourage the prescribing physician to treat for active TB and reassess for improvement at 2 months.

## Working with Private Providers to Manage Clinical TB-Case 1

- The patient was started on INH because the private physician concluded the patient had LTBI.
- After completion of six months of LTBI treatment, she received a follow-up CT which showed a thick-walled cavitary lesion.
- She was referred for a thoracotomy and surgical removal of the mass. A left upper lobectomy was performed which showed a 4 cm cavitary lesion with no evidence of malignancy. The cavitary lesion had focal extension into the surrounding bronchiole.
- A direct smear of the tissue removed was AFB 2+ positive; *M. tuberculosis* was isolated by culture within 9 days.
- The patient's physician diagnosed old granulomatous disease. The patient had an unremarkable surgical recovery; she was discharged with diabetic medication and referred to the local health department to resume her INH and B6 and complete the last 3 months of treatment.

## Working with Private Providers to Manage Clinical TB-Case 1

D. What should the local health department do?

1. Assure that patient continues INH as prescribed.
2. Discontinue treatment – her LTBI was cured by removal of the diseased lesion.
3. Continue INH treatment until susceptibilities are completed.
4. Stop INH treatment and refer this patient to an expert in TB diagnosis and treatment through the state health department. Obtain drug susceptibilities on the lobectomy specimen.

## Working with Private Providers to Manage Clinical TB-Case 1

- The public health department reclassified this patient as a TB case. They also took charge of the case and referred the patient to an experienced TB physician.
- Three repeat sputa were obtained and all were AFB smear and culture negative.
- 4-drug regimen with isoniazid, rifampin, pyrazinamide, and ethambutol (RIPE) was initiated because her drug susceptibilities subsequently showed the isolate to be sensitive to all first line drugs.
- The health department was concerned that inappropriate treatment could result in the case becoming drug resistant.

## Working with Private Providers to Manage Clinical TB-Case 1

E. What public health actions should the Health Dept. do now?

1. Meet with physicians involved and provide TB educational material.
2. No action is needed – this patient is being treated for active TB as a precaution.
3. Establish a procedure in the local health department for working more effectively with private medical providers in the community.
4. Send letters of reprimand to all physicians involved and report them to the state medical licensing board.
5. 1) and 3) are both good suggestions.

## Working with Private Providers to Manage Clinical TB

1. What are your health department's policies concerning working with private providers?
2. What are your health department's policies concerning seeking TB expert consultations?
3. Does your state have a policy for "taking charge" of a TB case that is being handled incorrectly? What are the jurisdictional rules for your health department and at the state level?

## Case 2

- Refugee from Sudan was evaluated after immigration and found to have a positive IGRA result. The patient had a mild cough and had lost weight since arrival, but PA CXR appeared normal to the provider. He was started on RIF 600mg qd.
- Formal CXR interpretation, however, was read as "mild bilateral hilar prominence, recommend PA & LAT".
- The provider was unable to reach the patient for over a month. When he finally turned up a month later for his refill, repeat CXR found B"ilateral hilar enlargement, R > L, recommend contrast enhanced CT chest."

## Case 2 (cont.)

- CT chest 6-16-14:
  - Patchy groundglass opacities in the posterior RUL and clustered nodules RML... most likely infectious or inflammatory and may be related to patient's history of prior TB infection.
  - Bil hilar and subcarinal adenopathy, nonspecific but likely reactive related to granulomatous disease such as TB, histoplasmosis, or less likely sarcoidosis. Primary lung neoplasm or metastatic disease is also included in the differential. Recommend pulmonary consultation and short three 3 month f/u imaging.
- What is your Plan?

## Case 3

- Private provider has recently read the NEJM article about the efficacy of 3HP, and has begun to prescribe this regimen for all of his patients with LTBI, allowing self-administration.
- What should the health department do?

## Case 4

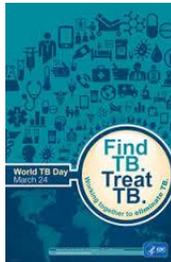
- A local community college has begun to test all of its students for TB using the TST. They are referring many low risk individuals to you with "positive" test results. You are concerned that they are reading erythema as induration and use a 10mm cut point for a positive result.
- What do you do?

## Case 5

- A local rheumatology clinic has begun testing all of its patients for TB infection before starting TNF-alpha inhibitor therapy. You are called regarding what to do about a patient with a positive test result.
- How should you proceed?



**PARTNERSHIPS ARE  
CRITICAL!!!**



Thank You!

**1-800-4TB-INFO**

## Working with Private Providers to Manage Clinical TB-Case 1

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- She denied cough, fever or night sweats. She had no prior history of TB.
- She immigrated to the US from Mexico 20 years ago and on occasion returned there to visit family. She is diabetic and a non-smoker.
- A private medical provider referred her to the local PHD where a TST was done and was found to be positive with an induration of 25 mm.

## Working with Private Providers to Manage Clinical TB-Case 1

### Case 1 (con't)

A. What is the most significant issue suggesting active TB disease in this patient's history?

1. Left upper quadrant abdominal pain.
2. Left upper lung density.
3. History of immigration from Mexico.
4. Diabetes.

## Working with Private Providers to Manage Clinical TB-Case 1

### Case 1 (con't)

B. What is the next action as a public health provider?

1. Collect three sputa for acid-fast bacilli (AFB) smear and culture.
2. Refer patient back to her private physician with documentation of the TST result.
3. Identify this patient's contacts and place patient in home isolation.
4. Start patient on latent TB infection (LTBI) treatment.

## Working with Private Providers to Manage Clinical TB-Case 1

- The patient's 3 sputa were AFB smear and culture negative for *M. tuberculosis*.
- A CT scan revealed a 2.4 cm slightly irregular cavitary mass in her left upper lobe.
- After the negative cultures, she was referred back to the health department with a prescription for a 9 month course of isoniazid (INH) and vitamin B6.

## Working with Private Providers to Manage Clinical TB-Case 1

C. What is the health department's next step in management of this patient?

- Order INH and begin case management of this LTBI case.
- Provide INH directly observed therapy (DOT) as this patient is high risk for progressing to TB disease.
- Provide all 9 months of INH so the patient's ability to complete treatment is optimized while traveling back and forth to Mexico.
- Encourage the prescribing physician to obtain a consultation from a TB expert before commencing LTBI treatment.

## Working with Private Providers to Manage Clinical TB-Case 1

- The patient was started on INH because the private physician and health department concluded the patient had LTBI.
- After completion of six months of LTBI treatment, she received a follow-up CT which showed a thick-walled cavitary lesion.
- She was referred for a thoracotomy and surgical removal of the mass. A left upper lobectomy was performed which showed a 4 cm cavitary lesion with no evidence of malignancy. The cavitary lesion had focal extension into the surrounding bronchiole.
- A direct smear of the tissue removed was AFB 2+ positive; *M. tuberculosis* was isolated by culture within 9 days.
- The patient's physician diagnosed old granulomatous disease. The patient had an unremarkable surgical recovery; she was discharged with diabetic medication and referred to the local health department to resume her INH and B6 and complete the last 3 months of treatment.

## Working with Private Providers to Manage Clinical TB-Case 1

D. What should the local health department do?

1. Assure that patient continues INH as prescribed.
2. Discontinue treatment – her LTBI was cured by removal of the diseased lesion.
3. Continue INH treatment until susceptibilities are completed.
4. Stop INH treatment and refer this patient to an expert in TB diagnosis and treatment through the state health department. Obtain drug susceptibilities on the lobectomy specimen.

## Working with Private Providers to Manage Clinical TB-Case 1

- The state TB public health department reclassified this patient as a TB case. They also took charge of the case and referred the patient to an experienced TB physician.
- Per recommendation from a TB expert, three repeat sputa were obtained and all were AFB smear and culture negative.
- The physician immediately began 4-drug regimen with isoniazid, rifampin, pyrazinamide, and ethambutol (RIPE) as recommended by the TB expert because her drug susceptibilities subsequently showed the isolate to be sensitive to all first line drugs.
- The state TB controller contacted the local health department as he was concerned that inappropriate treatment could result in the case becoming drug resistant.

## Working with Private Providers to Manage Clinical TB-Case 1

E. What public health actions should the Health Dept. suggest?

1. Meet with physicians involved and provide TB educational material.
2. No action is needed – this patient is being treated for active TB as a precaution.
3. Establish a procedure in the local health department for working more effectively with private medical providers in the community.
4. Send letters of reprimand to all physicians involved and report them to the state medical licensing board.
5. 1) and 3) are both good suggestions.

## Slides from Nurse Case Management case studies

- 1. What are your health department's policies concerning working with private providers?
- 2. What are your health department's policies concerning seeking TB expert consultations?
- 3. Does your state have a policy for "taking charge" of a TB case that is being handled incorrectly? What are the jurisdictional rules for your health department and at the state level?