

## **Contact Investigation**

- > Approx 10 contacts for each case of Infectious TB in the US
- > 20-30% of contacts will have Latent TB Infection
- 1% will have TB



# **Index Case is Reported**

- ER Doctor calls Health Department to report a TB suspect
  young white male non foreign born
  - TB skin test placed
  - Sputum collected
- TB Suspect was given control measures and sent home with directions to call the Pulmonologist for follow-up.

**Happy New Year!** 

## **Investigation Begins**

- Hospital record review
- Obtain copies of x ray and labs
- Meeting with the case- home visit- first impressions
- Epidemiological history-what's the story
- Initial visit-a lot of details to cover
- Determine infectious period
- Identifying Contacts



#### **Index Case**

- Young adult male, white, non foreign born
- Chest x ray report
- 3.8 cm rounded density medial RUL
- Sputum Smear
- Negative x3
- PCR TB: MTB Complex DNA not detected
- Culture positive MTB Complex @ day 25
- PPD 20 mm
- Symptoms
  - Denies productive cough, fever, night sweats, appetite loss or weight loss
  - New onset chest discomfort
  - "Thought it was my gall bladder"

### **Contact Investigation Outcome**

- Initial contact list: 2 adult contacts
  - > 2 Current household contacts PPD Negative 0 mm
- Additional 3 adult contacts identified
  - > 3 Former household contacts PPD Positive 14, 20 , 20 mm
- 2 high risk contacts tested (children <5 yrs)</p>
  - > 1 positive TST (17 mm)
  - > 1 negative TST (0mm)

Things aren't always the way you expect

# Looking for a Source

- Look in the opposite direction
- ▶ Look for source of infection for a child <2
- Parents and guardians are "informants"
- Focus attention to look for ill "associates"
- Begin with close associates household contacts, etc.

### **Symptomatic Contact**

- ▶ Hearing a "name"
- Confirming with the Index Case
- Reaching out
- Meeting at the door
- The x-ray and evaluation
- Another contact investigation!

#### **Source Case**

- Young adult male, white, non foreign born

- Chest x ray report —
  LUL infiltrates
  bilateral per hilar infiltrates
  LLL infiltrates
  pneumonia but suspicious for active TB
- Sputum Smear
- 2+ positive PCR TB: MTB Complex DNA detected on smear Culture positive MTB Complex @ day 14
- PPD 3 mm
- Symptoms
- productive cough x 9 months chest discomfort ("feels like something is in there") shortness of breath x 4 years decreased appetite x 9 months

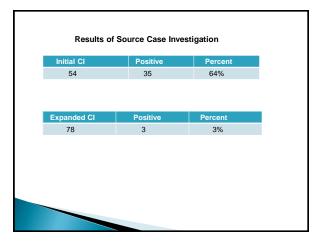
# **Initial Source Case Investigation** Initial contact list: 54 > 35 PPD Positive Ages 6mo to < 5 years > 5 PPD Positive Ages 5 to 18 years > 9 PPD Positive It may not be over yet

# Time to expand the CI?

- > Unexpected high rate of TB disease infection in highpriority contacts
- TB disease in low priority contacts
- Infection of contacts <5 years</p>
- Contacts with change in skin test status from negative to positive
- Review results from initial investigation
- Call Julie and Dr. Stout!
- Seek assistance

# The Expanded Investigation

- WorkplaceFirst Team
- Class classroom
- Repeated exposures, small area
- Sent letter to attendees
- "Tavern" private club
  - Site visit
  - Meeting
  - Screening the members



# **Treating the contacts**

- > Started 9 months of treatment-29 contacts
  - 11 children DOPT school & community
    - · 6 school age
  - · 5 toddlers/preschool
  - 18 in TB Clinic
- ▶ Completed treatment-27
- Incomplete treatment- 2 (adults)



Challenges	Successes
Contagious case	Site visits
Complex social life	Face to face interviews
Age	Partnership
Environment	Team
Volume	Tools

# Partnering with your contacts

- Listen to your contacts
- ▶ Educate them about TB
- Ask for help identifying high risk and symptomatic contacts









#### Resources

- North Carolina TB Control Manual
- CDC, 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)
- Southeastern National Tuberculosis Center,
  TB Program Management Course May 12-14, 2009