



62ND ANNUAL

Denver TB Course

MARCH 25-27, 2026

 National Jewish
Health

Contact Investigations

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No conflicts of interest

Objectives

Be able to describe:

1. When and how to begin a TB contact investigation
2. When to expand a contact investigation
3. Considerations when communicating with partners, community, media

What this is not:

- Interviewing skills course

Patient #1: "Steven," 26 M

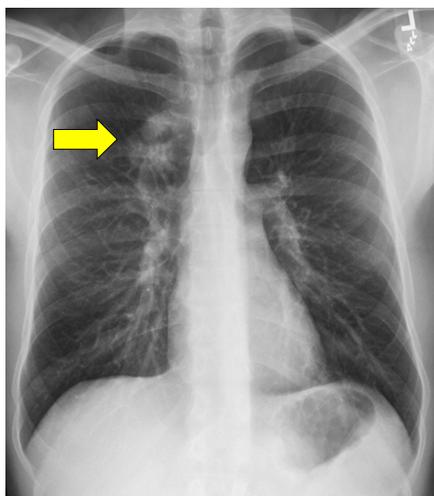
HPI: Intermittent cough for a month, productive for 1 week.

- *No night sweats, weight loss or hemoptysis.*

PMH: None

Social Hx: U.S. born, no international travel; lives with a roommate

Work Hx: worked in a TB clinic in CO; currently working in an HIV clinic



Referred to TB Clinic – sputum for AFB and QFT pending

Sensitivity of TB diagnostic tests

- Sputum AFB smears - ~ **50%** positive in pulmonary TB
- Nucleic Acid Amplification Tests (NAAT)
 - ~ **98%** sensitive if AFB **smear-positive**
 - ~ **60%** sensitive if AFB **smear-negative**
- Interferon-gamma Release Assays (IGRAs) - **85-90%** positive in active TB

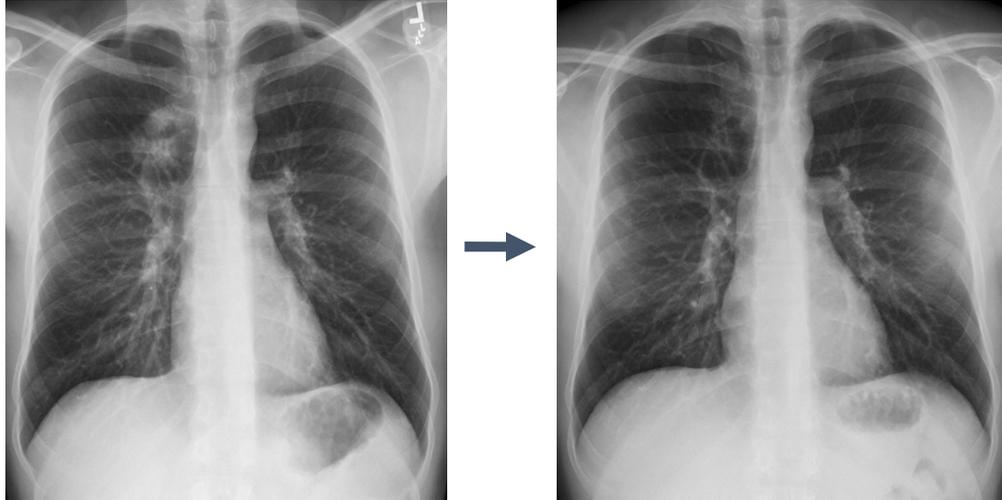
Audience response

PCP: “What should I tell my staff and patients about getting tested for TB?”

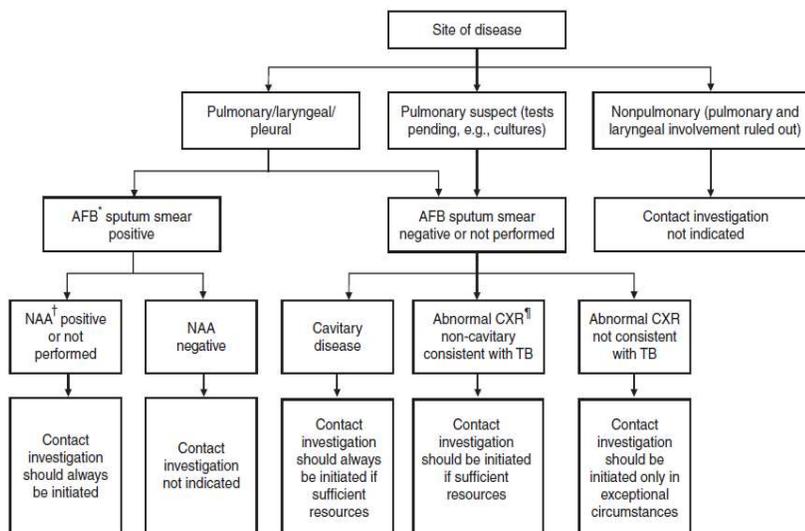
What would you do?

1. Get the information and contact staff and patients
2. Start an investigation if AFB smear positive
3. Start if the Quantiferon is positive regardless of other tests
4. Hold off on an investigation unless TB is confirmed (PCR or culture)

After 2 weeks of Augmentin...

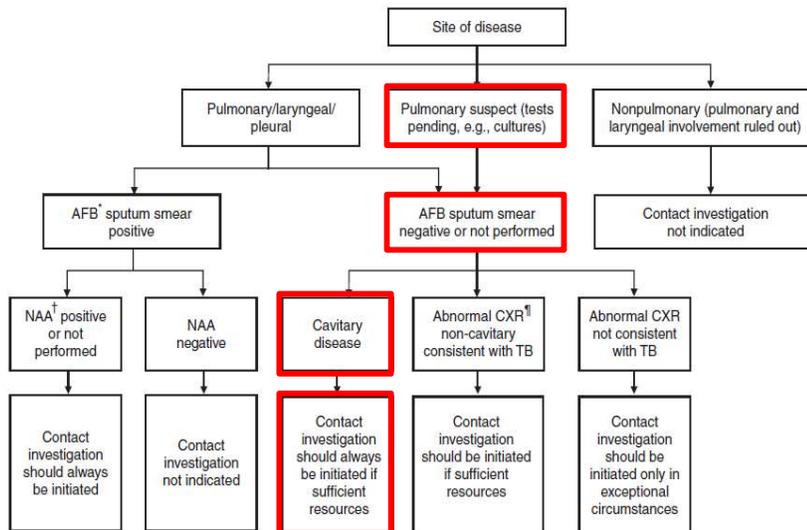


When to Initiate a TB Contact Investigation



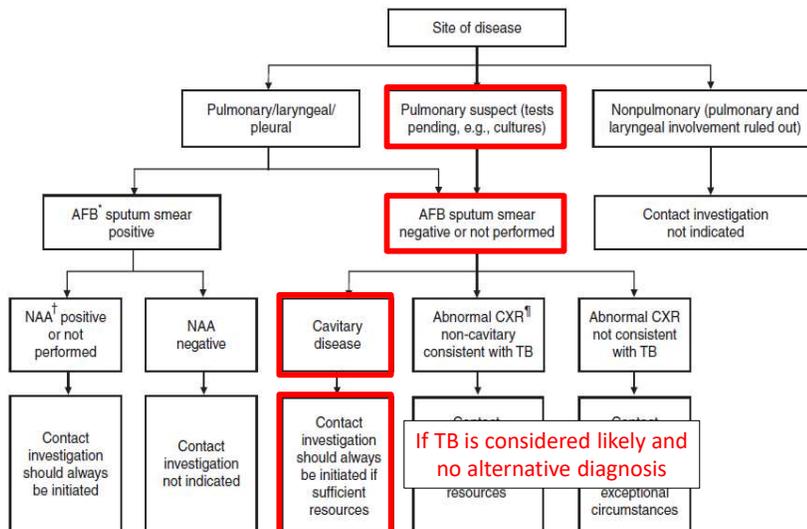
NTCA and CDC Guidelines MMWR 2005;54(No. RR-15)

When to Initiate a TB Contact Investigation



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When to Initiate a TB Contact Investigation

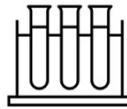


NTCA and CDC Guidelines MMWR 2005;54(No. RR-15)

Goals of a contact investigation



Identify and treat
people with active TB
(~ 1% of contacts)



Diagnose and treat
latent TB infection (LTBI)



Educate individuals
and communities
about TB

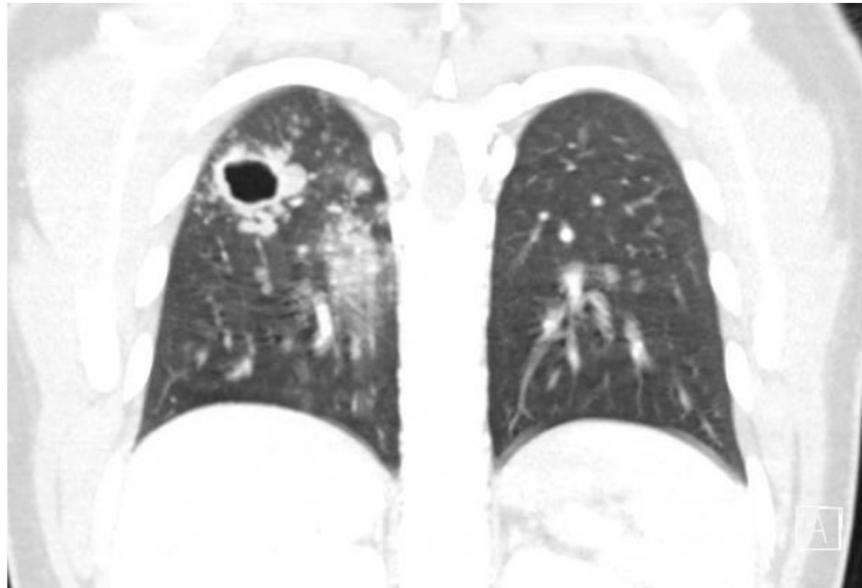
Patient #2: "Oscar," 16 M

HPI: Intermittent cough for a month, hemoptysis for 1 week.

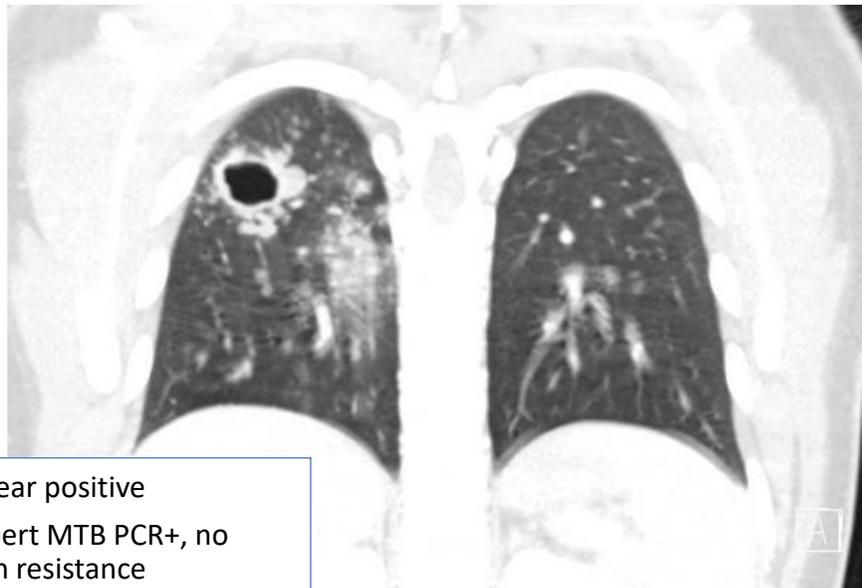
PMH: None

Social Hx: Recent immigrant from South America; lives with family, attends high school full-time

Patient #2: "Oscar," 16 M

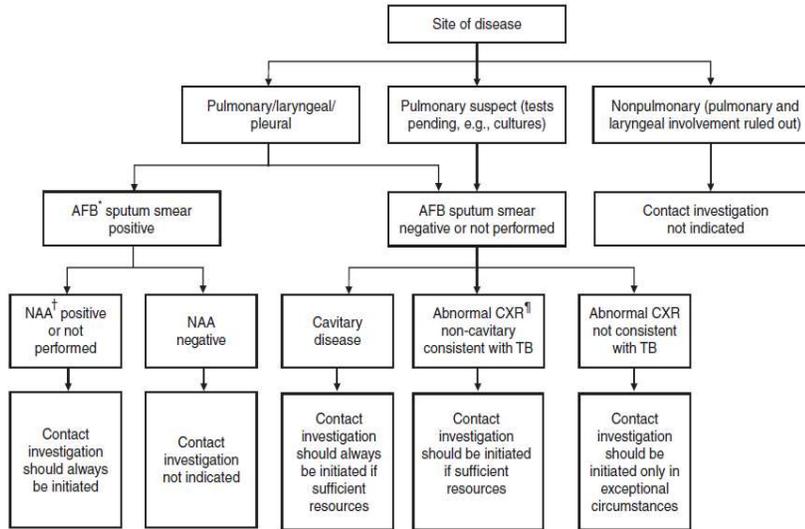


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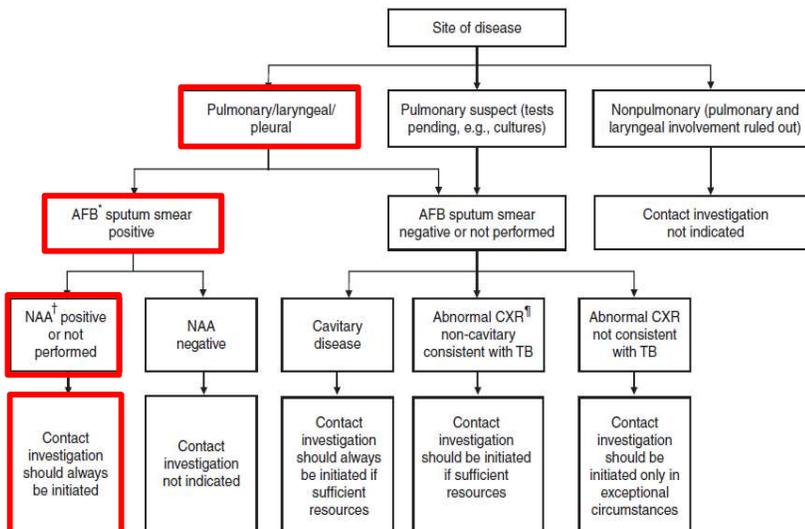
AFB smear positive
GeneXpert MTB PCR+, no
rifampin resistance

When to Initiate a TB Contact Investigation



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When to Initiate a TB Contact Investigation



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Small group questions

1. Who, when and where would you start interviewing?
2. How do you define contact?
 - Beginning and end of the infectious period
 - Types and duration of exposure

Who, when, and where do you interview?

- Interview the **patient or a proxy** as soon as possible

Who, when, and where do you interview?

- Interview the **patient or a proxy** as soon as possible
- Always do at least two interviews (**one or more in the home**)
 - First interview often involves TB education, trust-building
 - Explain the purpose of contact investigations
 - Assure them that you will not be revealing their identity or discussing their treatment without their permission

Building your contact list

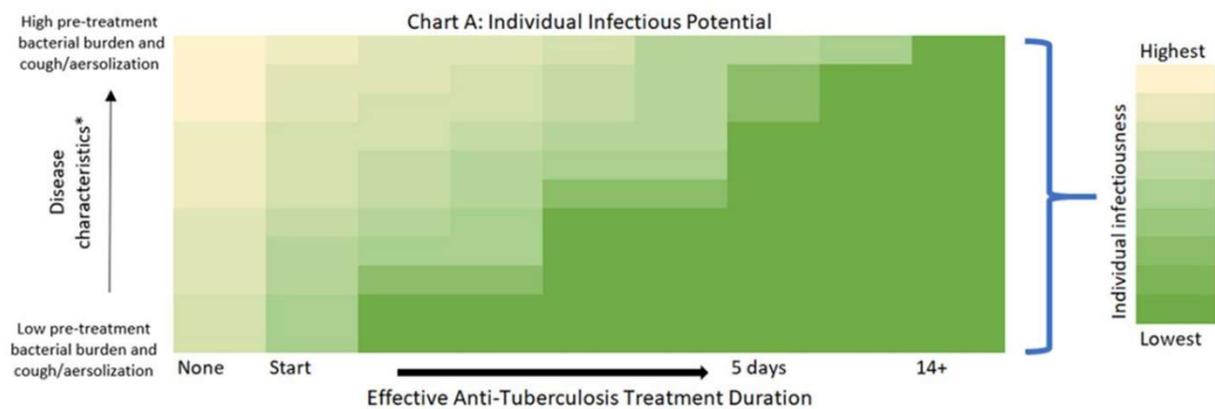
- Name
- Age
- Locating information
- Where was the exposure (ex. home, school)
- Exposure timing, type, and duration (average continual, calculate total)
- Medical risk factors

Defining the infectious period

TB Symptoms	AFB Smear (+)	Cavitary CXR	Estimated Infectious Period
Yes	Yes/No	Yes/No	3 months before symptom onset or first positive finding for TB (e.g., abnl CXR) whichever is longer
No	Yes	Yes	3 months before the first positive finding
No	No	No	1 month before the date TB was suspected

MMWR 2005; 54 (RR-15): 1-37

End of infectious period



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Risk for infection, progression, and TB severity

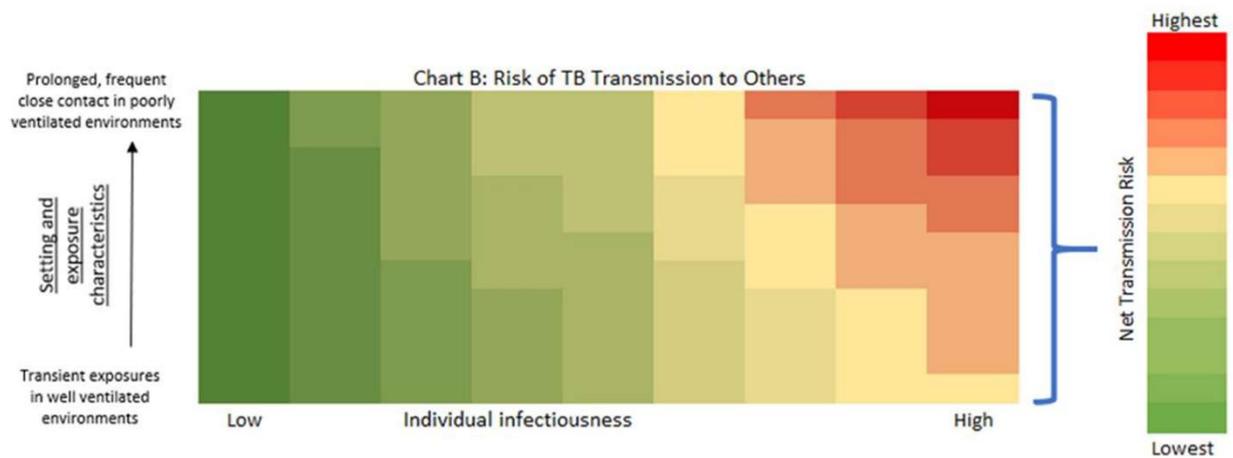
Risk for infection

- Total duration of contact
- Timing of exposure relative to symptoms, smear positivity
- Exposure setting (e.g., vehicle, bedroom)
- Special risk situations
 - Caregiver
 - Invasive procedure
 - Transplant recipient (e.g., bone grafts)

Risk for progression or severe disease

- Age <5 yo
- Immunocompromising conditions or medications
- Structural lung disease, e.g., silicosis

Type and duration of exposure

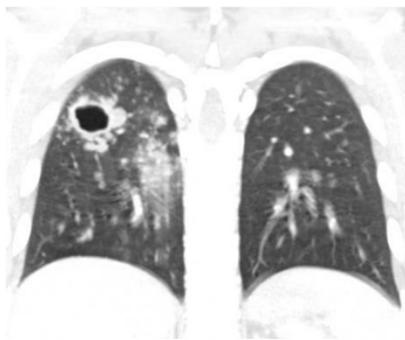


Prioritizing contacts by duration

	Hours per week	Continuous Hours	Total Hours
Priority 1	≥ 15	≥ 10	≥ 180
Priority 2	5-14	8-9	90-179
Priority 3	< 5	< 8	< 90

Adapted from Reichler, et al. JAMA 2002;287:991-5.

Patient #2: "Oscar," 16 M



AFB smear positive
GeneXpert MTB PCR+, no
rifampin resistance

- Diagnosed in the fall
- Home: mom, dad, brother (20) and brother (4)
- Shared his class schedule
- Involved in band/choir

Small group questions: 20 minutes

1. How do you start?

- Who do you contact at school, what information is shared, and what questions do you ask?
- What is your initial communication strategy?
 - For staff
 - For students and families
 - For media inquiries

2. What is your testing strategy?

- Whom to test at the school, when, with what type of TB test?

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- Met with school administration to plan communication (principal, operations, school nurse, media relations, superintendent)
- Site visit to assess ventilation and plan testing
- Offered to meet with staff first
- Contacted students who need to be tested first, scheduled on-site testing
- Notified all families by the next day

Disseminating information

- Phone, email, other electronic platforms can be effective in delivering urgent information; paper less so

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- Consider townhalls for people to ask questions directly
- Some people will be upset no matter what you do

Sample Messaging Tools



Tuberculosis (TB) Fact Sheet

What is TB?

Tuberculosis, also referred to as TB, is a disease that usually affects the lungs but sometimes other parts of the body. TB is spread through the air from one person to another. Getting infected with TB typically requires many hours of contact with a person who is sick from TB.

How Does TB Spread?

TB is spread through the air from one person to another. It is not spread by touching surfaces like doorknobs, sharing food or drinks, or shaking hands. Important facts to know:

- Most people who are exposed to TB do not get infected.

Phone script for calling parents and guardians

"Hello, may I speak with _____. Are you the parent or guardian for _____. My name is _____ calling for the TB Clinic at Denver Health.

We are working with _____ High School and the _____ School District to share important information with you. We diagnosed a person with tuberculosis who spent time at _____ High School this fall. Some students and staff were exposed to them before they were diagnosed. There is not any ongoing risk for TB exposure at the school known at this time. Students are safe to attend school and activities as usual.

Your student is someone who was exposed. We want to inform you about this situation and discuss testing your child for tuberculosis.

We need for you to sign a consent form to have your child tested next week. **(Work with the school on how they manage consent forms for other situations)**

Pros/cons of notifying the media

Pros

- Give accurate information and provide education
- Raise awareness about TB
- Demonstrate the role of public health
- Reach people who need testing

Cons

- May increase general anxiety
- Some may seek testing who don't need it
- Risk of disclosing confidential information
- You can't control how it gets reported

Guiding principles for communication

- Be transparent; share the facts

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- Consider internal and external audiences

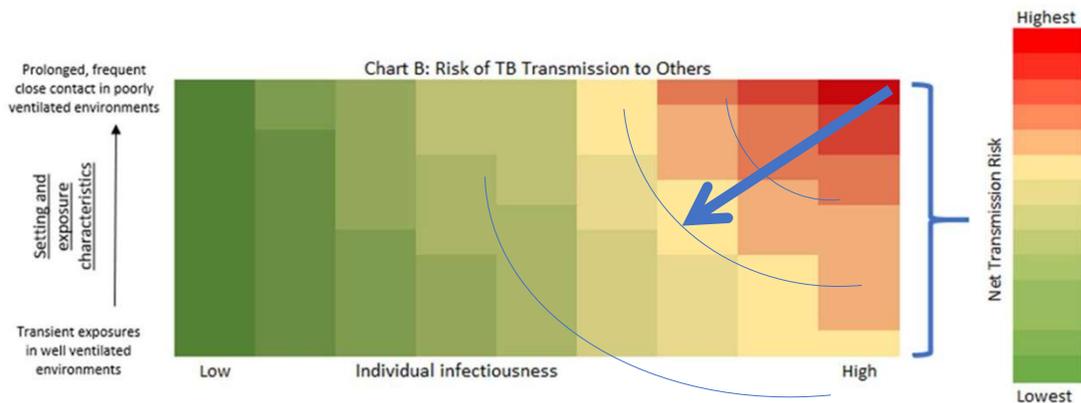
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- Be transparent; share the facts
- Consider internal and external audiences
- Recruit staff as advocates and educators
- Respect local knowledge

Whom to test?



Choice of TB test



IGRAs:
T-SPOT.TB (T-SPOT) and
QuantiFERON-TB Gold
Plus (QFT)



Tuberculin skin test (TST)



Logistical planning matters



Oscar: more information

Mycobacterium tuberculosis complex

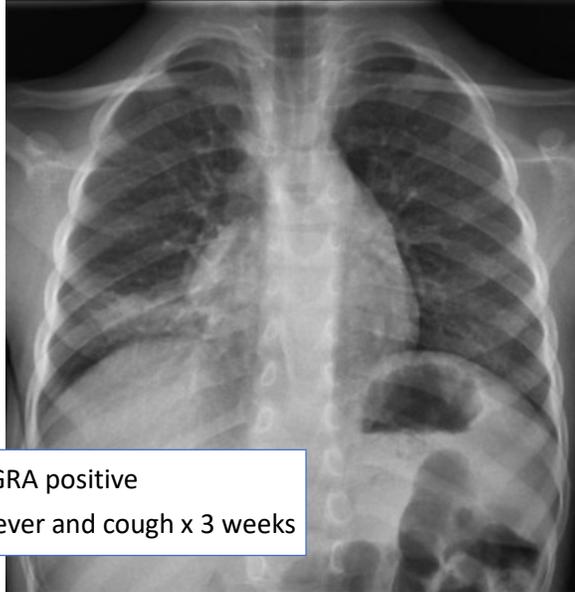
Ethambutol	Susceptible
Isoniazid	Resistant (C)
Pyrazinamide	Susceptible
Rifampin	Susceptible
Streptomycin	Susceptible (C)

Oscar: more information

What do you need to do differently for the contact investigation?

1. Individually counsel contacts with positive tests about appropriate preventive treatment
2. Expand testing to include individuals with lower-risk exposures
3. Draft a press release about drug-resistant TB exposure
4. 1 and 2 only
5. All of the above

Oscar: 4yo sibling



IGRA positive
Fever and cough x 3 weeks

Oscar: 4yo sibling

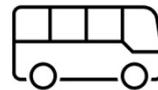
What steps need to be taken for the sibling's contact investigation?

1. Start a second contact investigation at the preschool
2. Start 15 preschool classmates on window prophylaxis with rifampin
3. Contact CDC
4. 1 and 2 only
5. None of the above

What if Oscar traveled by plane or bus?



Notify CDC (DGMH) with the flight details. They get the passenger list and locating information



Do not routinely keep passenger manifest; driver may be the only identifiable person

When to expand your investigation?

Identified for testing	173
Total tested in first round	165
Total tested in second round	136
Active TB	0
TB infection	5
Definite conversions	0

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Total tested in first round	165
Total tested in second round	136
Active TB	0
TB infection	5
Definite conversions	0

Should we expand this investigation?

1. Yes
2. No
3. I need more information

When to expand your investigation?

1. Is there evidence of recent transmission?

- an unexpectedly high rate of infection or
- infection in contacts age < 5 y/o
- active TB in high priority contacts
- converters between baseline and follow-up testing

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- an unexpectedly high rate of infection or
- infection in contacts age < 5 y/o
- active TB in high priority contacts
- converters between baseline and follow-up testing

2. Are high and medium priority contacts completing an evaluation and initiating treatment?

When to expand your investigation?

Background rate of TB infection in U.S.

Non-U.S. born persons

IGRA (+) 15.9% (13.5–18.7)

TST (+) 20.5%; 16.1–25.8)

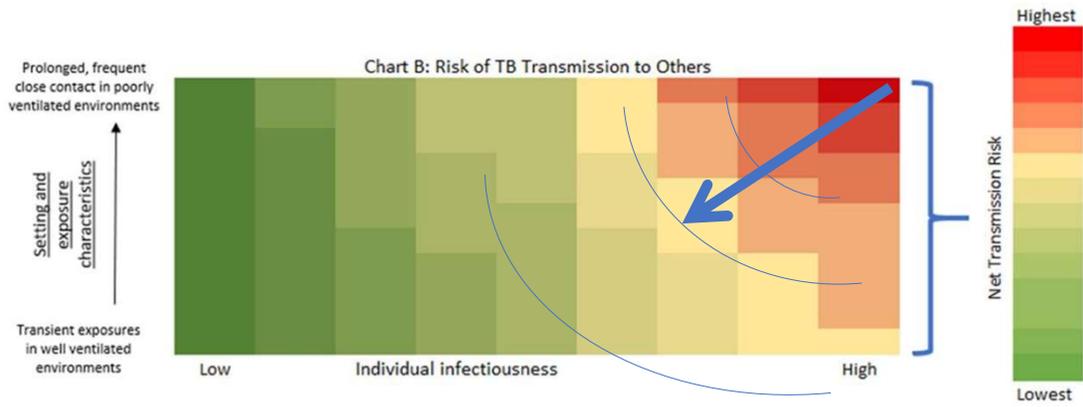
U.S. born

IGRA (+) 2.8% (2.0–3.8)

TST (+) 1.5%; 0.9–2.6).

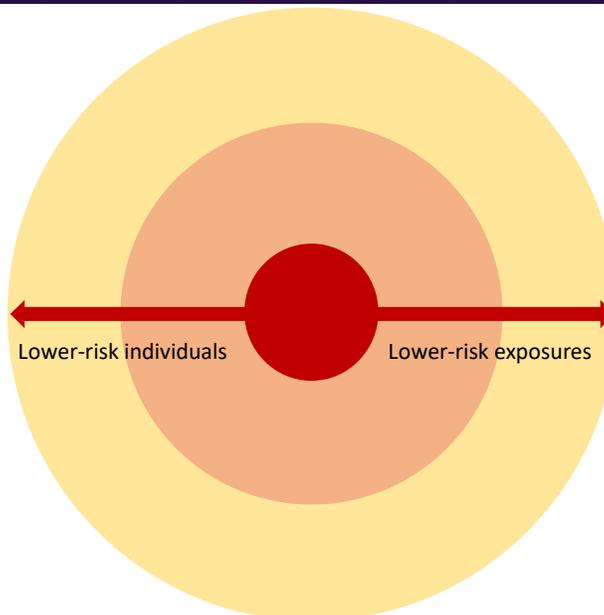


Exposure characteristics



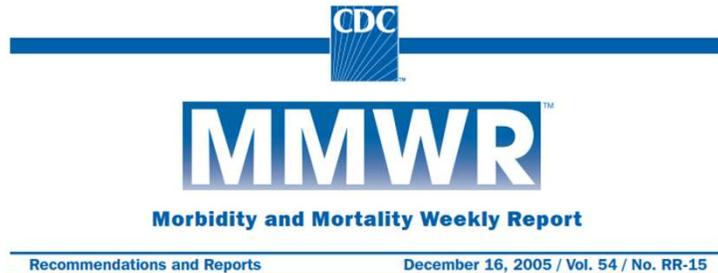
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When to expand your investigation?



Further resources

<https://www.cdc.gov/mmwr/pdf/rr/rr5415.pdf>



**Guidelines for the Investigation of Contacts
of Persons with Infectious Tuberculosis**
Recommendations from the National Tuberculosis
Controllers Association and CDC

Further resources

<https://stacks.cdc.gov/view/cdc/146285>



Developed by CDC with the TB Centers of Excellence (COE)

- Curry International TB Center
- Heartland National TB Center
- The Global TB Institute at Rutgers
- Southeastern National TB Center

Multi-day facilitator guide to training that can be used as a self-study

We Are TB

Dedicated To: Nora Rodriguez

In 2015 the first Tuberculosis communications training was held in Denver, CO with six survivors. When Nora Rodriguez walked in, she did not know why she was there or how this experience would change her life. Nora thought she would learn more about the disease and meet some fellow fighters who had experienced TB. What she didn't know was that she would become a resonating voice for *we are TB* and her legacy would help raise awareness and drive change in the advocacy efforts in years to follow.

Nora was still undergoing treatment for MDR-TB when she started advocating on behalf of *we are TB*. Though she had lost most of her energy, much of her hearing, and even her balance at times, she was committed to play a part and share her story so that the U.S. could once again know about Tuberculosis, the people it affects, and the help the community needs to defeat it. Following the communications training in 2015, Nora visited Washington, D.C. to speak to her representatives, an annual event that has taken place every year since. Nora also kicked off the 2016 National TB Controller's Conference with her gentle presence while receiving the TB Advocacy Award.

In 2016, much too soon, and just weeks shy of her final treatment, Nora, the core of *we are TB*, passed away tragically from complications of TB. Her legacy lives on through her two beautiful daughters, her family and friends, her community, and her *we are TB* family.



Questions?

