Overview of Contact Investigation Guidelines

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TB Contact Investigation
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Kathryn Yoo, MPH has the following disclosures to make:

- No conflict of interests
- No relevant financial relationships with any commercial companies pertaining to this educational activity

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Objective

- Discuss impact of the CDC guidelines on existing contact investigation (CI) procedures

TB Contact Investigation Guidance

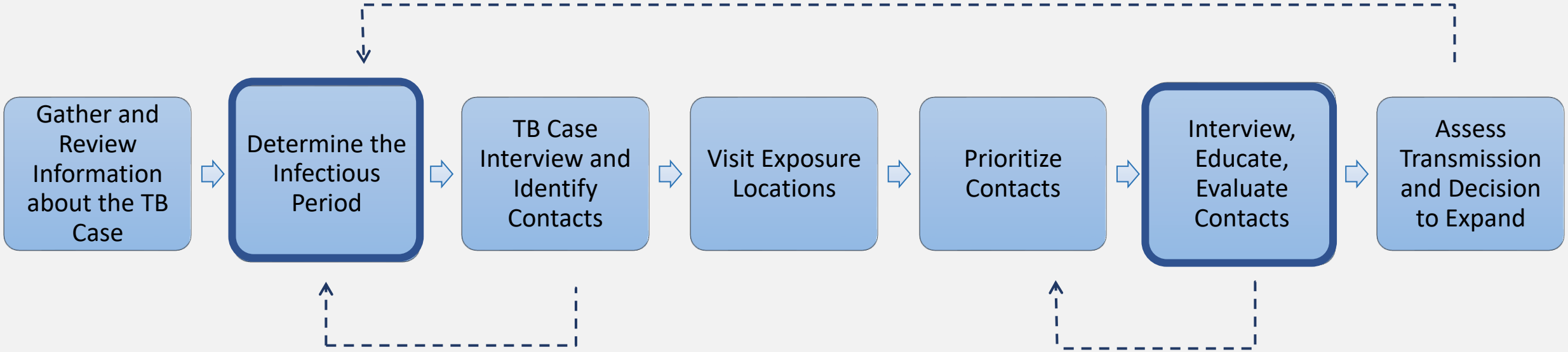
- In 2005 CDC published "Guidelines for the Investigation of Contacts of Persons with Infectious Tuberculosis"
  - First joint recommendation from the then National Tuberculosis Controllers Association (NTCA) and CDC
  - Based on a review of relevant epidemiologic and other scientific studies and established practices available at the time
  - Established a standard framework for assembling information and using the findings to inform decisions for contact investigations

What is a Contact Investigation?

The goal of a contact investigation is to reduce transmission of TB disease. This is done by:

- Identifying persons who were potentially exposed to a person with infectious TB
- Screening and medically evaluating contacts at increased risk of TB infection or developing TB disease.
- Diagnosing contacts who have been infected and promptly initiating treatment.

Steps in a TB Contact Investigation



Contact Investigation vs. Source Case Investigation

Contact Investigation

- A process to identify, test, and treat persons exposed to infectious TB disease
- Looking for persons exposed to TB who may or may not have been infected

Source Case Investigation

- A process to identify the source of recent transmission of infectious TB disease
- Looking for a person with TB disease who is the likely source of infection for others

Step 1: Gather and Review Information About the Index Case

- Site of Disease
- Bacteriology (Smear, NAAT, Culture, DST)
- Radiology/Imaging Studies
- Symptoms
- Age
- Behavioral and Social Risk Factors
- Environmental Factors
- Concerning Locations

Step 2: Determine the Infectious Period

Index Case Characteristics			Infectious Period Start Date
Respiratory TB Symptoms	**Smear Positive Sputum**	**Cavitary Chest X-ray**	
Yes	Yes	Yes	3 months before symptom onset or first finding consistent with TB disease, whichever is first
Yes	No	No	
No	Yes	Yes	3 months before first finding consistent with TB disease
No	No	No	1 month before date of suspected diagnosis

Step 3: Case Interview and Contact Elicitation

- Collect and/or verify the following information for the case
  - Patient's name, aliases, date of birth
  - Address and phone number
  - Family members and others in the household
  - Work history
  - Behavioral and social risk factors
  - TB history
  - Relevant medical information
- Collect contact names and information
- Conduct the initial patient interview within three working days of the patient being reported to the TB program

Step 4: Visit Exposure Locations

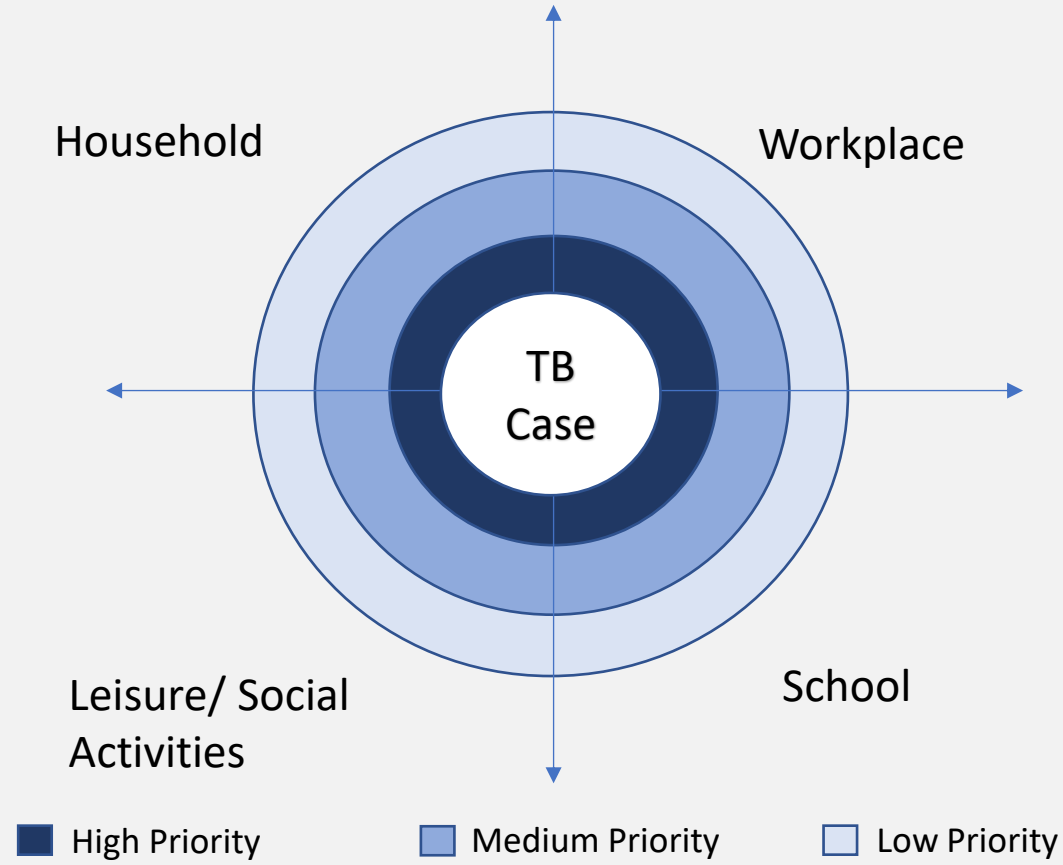
- Visiting exposure locations can help assess likelihood of transmission
- During a site visit assess:
  - Crowding
  - Ventilation
  - HEPA filters
  - UV lights
- Check for signs of previously unidentified contacts
- A site visit to the patient's primary residence should be conducted within three working days

Step 5: Prioritizing Contacts

Contacts should be prioritized as high, medium, or low risk based on:

- Infectiousness of index case
- Duration of exposure
- Location and environmental factors of exposure
- Contact's medical and social risk factors

Concentric Circle Approach for Contact Evaluation and CI Expansion



Step 5: Prioritizing Contacts

- Table 9 from the Texas TB Manual combines index case and contact characteristics to help prioritize contacts

- Contact prioritization should ***always*** occur before first round testing starts

Table 9: Guidelines for Prioritizing Contacts

Index Case Characteristic	Contact Prioritization

Pulmonary, laryngeal, or pleural TB
• Cavitary lesion on CXR; *or*
• AFB sputum smear positive
	High Priority
	• All household contacts; *or*
	• Contact in a congregate setting (schools, correctional and detention facilities, etc.); *and* with significant frequency and duration of exposure
	• **Any hours of exposure for:**
	  • Children <5 years; *or*
	  • Contact with medical risk factors (e.g., HIV, immune compromising condition); *or*
	  • Contact exposed during specific medical procedures (bronchoscopy, sputum induction *or* autopsy)
	Medium Priority
	• Anyone 5–15 years who does not meet one of the high priority criteria; or
	• Contacts with significant frequency and duration of exposure
	Low Priority
	• Only consider if expansion is warranted.

Suspected or confirmed pulmonary or pleural TB
• Abnormal CXR consistent with TB disease; *and*
• AFB sputum smear negative; *and*
• Might be NAAT positive and/or AFB culture positive
	High Priority
	• All household contacts; and
	• Contacts with significant frequency and duration of exposure
	• **Any hours of exposure for:**
	  • Children <5 years; *or*
	  • Contact with medical risk factors (e.g., HIV, immune compromising condition); *or*
	  • Contact exposed during specific medical procedures (bronchoscopy, sputum induction *or* autopsy)
	Medium Priority
	• Contact in a congregate setting (schools, detention facilities, etc.); *and*
	• Contacts with significant frequency and duration of exposure
	Low Priority
	• Only consider if expansion is warranted.

Step 6: Interview Contacts

Collect and/or verify the following information for the contacts:

- Patient's name, aliases, date of birth
- Address and phone number
- Is the contact having symptoms consistent with active TB?
- Does the contact have a history of LTBI or TB disease?
- Does the contact have any medical risk factors?

Step 6: Educate Contacts

- Transmission of TB disease
- Importance of getting tested
- Importance of preventive treatment

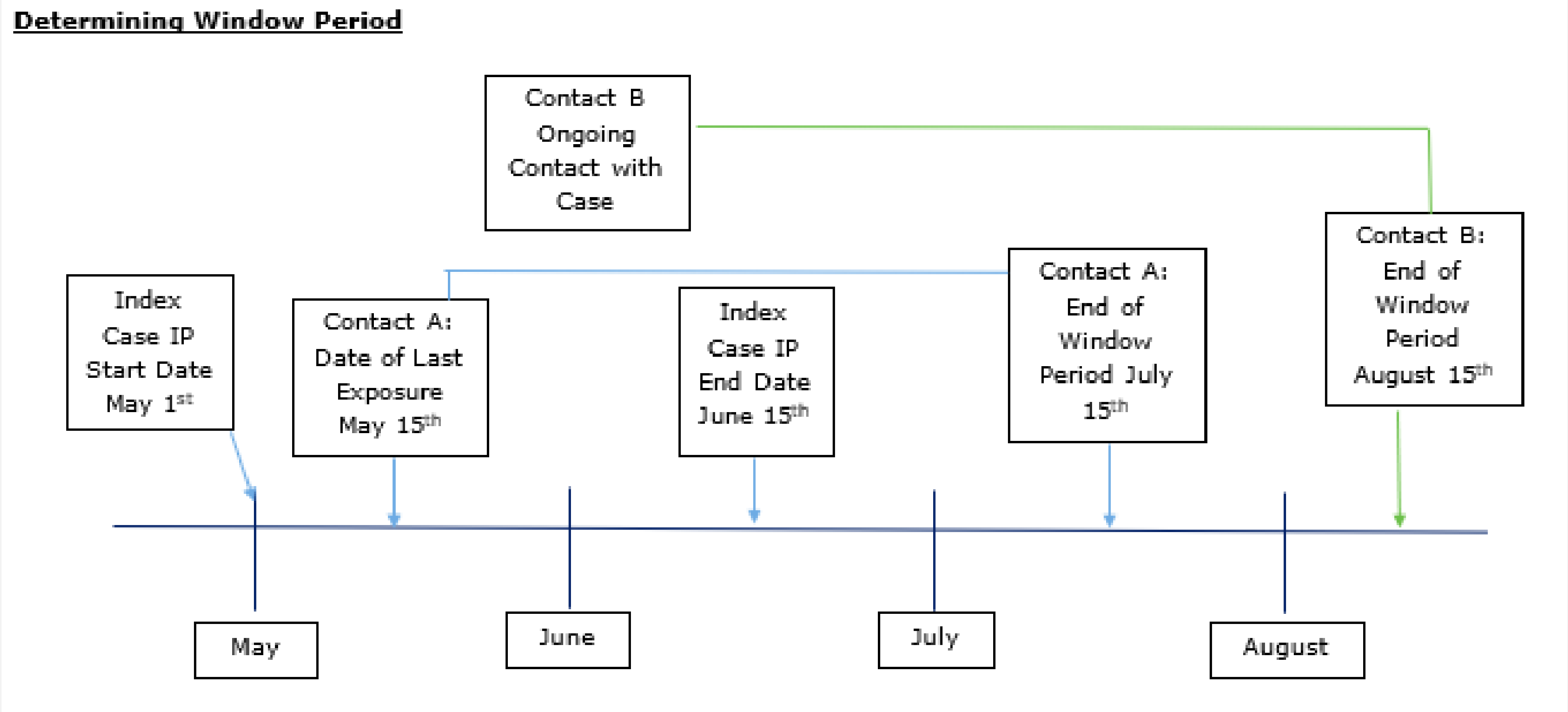
Step 6: Evaluate Contacts

- Review Texas TB Standing Delegation Orders for full contact evaluation requirements, including but not limited to:
  - Signs and symptom screening
  - TST or IGRA
  - Chest X-ray (as indicated)

- Initiate first round screening for high-priority contacts

- Contacts should receive second round screening 8-10 weeks after the contact's last exposure to the index case *or* the end of the index case's infectious period
  - Second round screening is not required for Source Case Investigations

Determining Window Period
Example



Step 7: Assess Progress and Decide to Expand

Review evaluation results among contacts

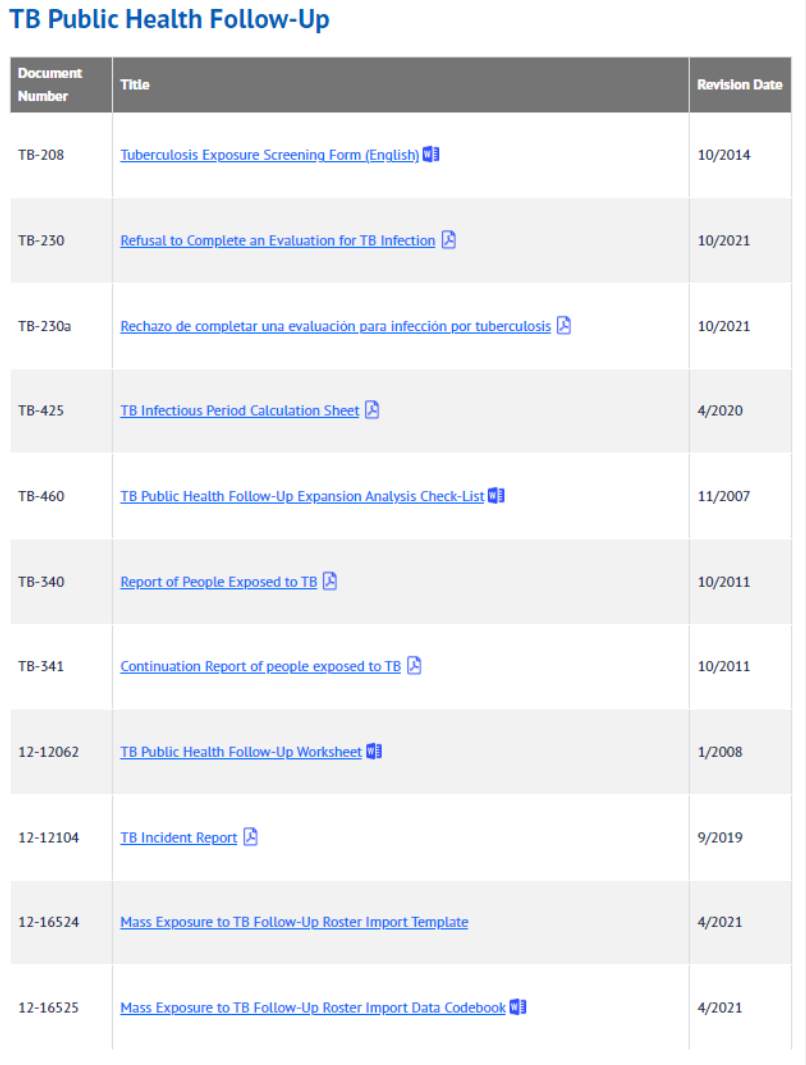
If transmission is observed, expand testing to the next layer of the concentric circle

The CI should be expanded if any of the following are observed:

- Infection among contacts <5yo
- Contacts diagnosed with TB disease
- Higher than expected infection rate
- Conversions from first to second round testing
- Infection among low-risk contacts

Texas TB Unit Forms and Resources

- Texas TB Work Plan
- Texas DSHS Standing Delegation Orders for TB Clinical Services
- Texas DSHS TB Forms Resources



TB Public Health Follow-Up

Document Number	Title	Revision Date
TB-208	Tuberculosis Exposure Screening Form (English)	10/2014
TB-230	Refusal to Complete an Evaluation for TB Infection	10/2021
TB-230a	Rechazo de completar una evaluación para infección por tuberculosis	10/2021
TB-425	TB Infectious Period Calculation Sheet	4/2020
TB-460	TB Public Health Follow-Up Expansion Analysis Check-List	11/2007
TB-340	Report of People Exposed to TB	10/2011
TB-341	Continuation Report of people exposed to TB	10/2011
12-12062	TB Public Health Follow-Up Worksheet	1/2008
12-12104	TB Incident Report	9/2019
12-16524	Mass Exposure to TB Follow-Up Roster Import Template	4/2021
12-16525	Mass Exposure to TB Follow-Up Roster Import Data Codebook	4/2021

Additional Resources

- CDC Effective TB Interviewing for Contact Investigations Self-Study Modules
- CDC MMWR: Guidelines for the Investigation of Contacts of Persons with Infectious Tuberculosis
- CDC MMWR: Prevention and Control of Tuberculosis in Correctional and Detention Facilities
- CDC Self-Study Modules on Tuberculosis, Module 8: Contact Investigations for Tuberculosis
- Rutgers Global Tuberculosis Institute: Effective Interviewing for Tuberculosis Contact Investigation
- Rutgers Global Tuberculosis Institute: Interviewing for Contact Investigations

Questions?

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