

Tools to Assist in Determining the Need for Contact Investigation and Prioritizing Public Health Response

The investigation of those exposed to infectious cases of active tuberculosis (TB) disease is an important strategy in the control and elimination of TB in the United States.

Whenever a new TB case/suspect is identified, action should be taken to determine the need for a contact investigation as well as to prioritize the identification and evaluation of contacts. **In any investigation, high priority contacts should be identified and evaluated before a decision is made to expand the investigation to other lower risk contacts.** A decision to expand should always be based on the results of testing of those most at risk for acquiring TB infection before addressing any additional contacts.

The tools below are provided to assist in conducting and prioritizing contact investigation.

1. Using Table 1, locate the row that includes the case characteristics for the case/suspect for which an investigation is being considered.
2. Identify all high priority contacts using the criteria listed in the High Priority column. Use Box 1 for guidance for cumulative exposure times spent in each type of environment with the infectious case.
3. Expansion to identification and evaluation of medium priority contacts should only be done based on the evaluation results from initial screening and testing and if resources are available to adequately perform the investigation and ensure follow up and treatment of medium and low risk contacts. Consult with TB Control to discuss the need to expand any investigation beyond high priority contacts.
4. If the investigation is expanded beyond High Priority contacts, use Box 2 for guidance for cumulative exposure times spent in each type of environment with the infectious case. Contact exposure that does not meet the environmental limits in either Box 1 or Box 2, depending on contact priority, should not be screened and tested based a short duration exposure period.

Box 1

VDH recommendations for amount of cumulative exposure during the infectious period needed to be considered a High Priority Contact		
Cumulative time exposed	Space size	Example
8 hours or more	Very small	Car, small office, 150 square feet
24 hours or more	Small/medium	Classroom, meeting room
50 hours or more	Medium/large	Cafeteria, small church
100 hours or more	Large	Gymnasium, auditorium

Box 2

VDH Recommendations for amount of cumulative exposure during the infectious period needed to be considered a Medium Priority Contact		
Cumulative time exposed	Space size	Example
4 to less than 8 hours	Very small	Car, small office, 150 square feet
12 to less than 24 hours	Small/medium	Classroom, meeting room
25 to less than hours	Medium/large	Cafeteria, small church
50 to less than 100 hours	Large	Gymnasium, auditorium

Table 1

VDH Recommendations for Determining Need for a Contact Investigation and Priority for Evaluation of Contacts			
Case Characteristics	Investigation and Evaluation Priority		
Pulmonary, pleural or laryngeal	High Priority	Medium Priority	Low Priority
<ul style="list-style-type: none"> • AFB smear pos. <p style="text-align: center;"><u>OR</u></p> <p>Any of the following scenarios:</p> <ul style="list-style-type: none"> • Cavitory CXR • Smear neg/culture pos • ABN CXR consistent with TB/non-cavitory • Rapid test pos or neg, culture pos 	<ul style="list-style-type: none"> • All household contacts • Anyone under 5 yrs old • Contacts with Medical Risk Factors: HIV, TNF alpha blockers, ESRD, long-term steroid use, cancer treatments or other immune compromising condition • Contacts exposed during a medical procedure: Bronchoscopy, sputum induction or autopsy • Contacts in a congregate setting (LTC, Detention facility) • Contacts exceeding environmental exposure limits for high priority contacts (Box 1) 	<ul style="list-style-type: none"> • Anyone 5-15 yrs old • Contacts exceeding environment exposure limits for medium priority contacts (Box 2) 	Anyone other than those listed; only considered if expansion is warranted
<p>Any of the following scenarios:</p> <ul style="list-style-type: none"> • Suspected TB with Abn CXR, not consistent with TB • AFB neg., rapid test neg., culture neg. 	<ul style="list-style-type: none"> • Anyone under 5yrs old • Contacts with Medical Risk Factors: see above • Contacts exposed during a medical procedure: see above 	<ul style="list-style-type: none"> • All household contacts • Contacts in a congregate setting • Contacts exceeding environment exposure limits for medium priority contacts (Box 2) 	Anyone other than those listed; only considered if expansion is warranted
Extra-pulmonary	High Priority	Medium Priority	Low Priority
<ul style="list-style-type: none"> • Non-pulmonary TB with pulmonary disease ruled out 	None	None	None