Notable changes (effective 9/1/2017):

- Reporting requirements for contact investigation data have changed.
- Local Public Health Authorities (LPHAs) are required to enter contact investigation information directly into the Contact Investigation tab in Orpheus.
- LPHAs are no longer required to submit the TB Contact Investigation Form to the State TB Control Program.
- LPHAs are free to use the TB Contact Investigation Form to 1) prioritize the follow-up of contacts and 2) track the evaluation and treatment of contacts, however, use and submission of the form is not required.
- The paper-based form will remain available at the State TB Control Program website at: https://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/Tuberculosis/Documents/formdoc/contactformRIF.pdf

General Information

The following instructions for direct data entry into Orpheus are not a substitute for guidelines about TB diagnosis, treatment, or control. Please refer to “Guidelines for the Investigation of Contact of Persons with Infectious Tuberculosis” (MMWR December 16, 2005 vol. 54, no. RR-15) for the current CDC guidelines on conducting a contact investigation. As always, feel free to consult with the TB Program, OHA for technical assistance or advice in conducting a contact investigation.

Timeline for Tuberculosis Contact Investigation Data Entry

**Initial Data:**
Enter preliminary data, including names, contact information, and demographic information for all contacts within 4 weeks of case report and after first round screening (< 8 week TST/QFT) is complete for all contacts.

**Follow-up Data:**
Enter follow-up data within 4 months of case report, after evaluation is complete for all contacts.

**Final Data:**
Enter final data after all contacts who started treatment for LTBI have completed treatment or have stopped treatment for other reasons.
How to Determine Whether a Contact Investigation is Needed
The State TB Epidemiologist will review each case of active TB and assign a Contact Investigation Need level (CI Need). This information is located in the pink “State Use Only” box on the case’s main Orpheus page.

Priority level for a contact investigation is assigned on the basis of disease characteristics and lab test results.

- **High**: Case is sputum-smear positive and/or has X-ray confirmed cavitary disease and/or laryngeal disease. Contact investigations should always be initiate in these cases.
- **Medium**: Case has sputum-smear negative, culture positive pulmonary and/or laryngeal disease. Contacts investigations should always be initiated if sufficient resources are available.
- **Low**: Case has sputum-smear negative, culture negative pulmonary or pleural disease. Contact investigations should be initiated only if resources allow or in exceptional circumstances.
- **None**: All others, pulmonary involvement ruled out. Contact investigation is not indicated.
How to Enter Contact Investigation Data

Contact Investigation information is located within the Case’s Orpheus record, on the “Contacts” tab.

The Contacts pane is split into three parts:
A. Case information
B. Contact information
C. Contact list

Entering Essential Case Information

1. Enter essential case information:
   a. Start and end of infectious period (see guidelines below)
   b. Dates Submitted (see Timeline, above)
Estimating Infectious Period Start and End Dates

**Infectious Period Start Date**
A conservative method to estimate the start date is to use the date three months prior to either the onset of symptoms or the first positive finding consistent with TB disease, whichever is first. Positive findings consistent with TB include, but are not limited to: positive AFB smear, positive NAAT, positive culture for MTB, abnormal CXR consistent with TB, and initiation of treatment for TB.

**Infectious Period End Date**
The end date should meet the following criteria: treatment for at least 2 weeks with clinical improvement and 3 consecutive sputum-smear negative specimens or 3 negative cultures, whichever comes first. Note: this end date is for the purposes of contact investigations only; clinical decisions for removing patients from isolation may differ from the above.

Adding Contacts

2. Add a contact by clicking + Contact above the contact list.

3. Enter name, address, sex, and date of birth. Click Create Contact.

Repeat as needed until all contacts are entered. Contacts will appear on contact list in order entered.

In a large contact investigation, contact the TB Epidemiologist for assistance creating and uploading a contact list.
Contact Information Pane Overview

The Contact Information pane contains five tabs:
A. Info & Risks: Demographic and Exposure Information
B. Evaluation: Prior TB history and current evaluation results
C. Treatment & Final Status: treatment of contacts diagnosed with LTBI and final status of evaluation for all contacts.
D. Historical (currently unused)
E. Notes: Miscellaneous notes regarding contact

Entering Contact Information, Tab-by-Tab

1. Demographic Info: Complete all fields for each contact.
Contact Risk is divided into two categories indicating high or low risk of infection for the contact. Level of risk relates directly to the contact’s exposure to the case and the individual contact’s medical conditions or other risks.

“High Risk of Infection” usually indicates the contact has either
a) significant exposure to the case, or
b) a medical risk that increases the contact’s chances of becoming sick with TB after infection.

For example, if a contact is a member of the case’s household, in most situations this indicates a great deal of direct exposure to the case and the contact’s risk of infection would be high. Likewise, while an HIV-positive contact may have had less exposure to the case than a household contact, the fact that the contact is HIV-positive means the contact’s personal risk of developing TB disease is high.

Contacts assigned to the “High Risk of Infection” category should receive prioritization in contact follow-up. Note: Contacts initially classified as “Low” may be moved into the “High” group as the investigation progresses or expands. This is likely to occur when the case is highly infectious and you suspect lower levels of exposure are causing infection (evidence of >10% latent infection rate among contacts tested, or evidence of secondary active cases).
Risk Categories Explained

**Household:** Contact lives in the same residence as the case.

**Age<5:** Contact is <5 years old. After infection, TB disease is more likely to occur in younger children. Contacts <5 years of age should be started on window treatment.

**HIV/AIDS:** Contact is HIV positive or has AIDS. Contacts with HIV/AIDS should be started on window treatment and considered for completion of a full course of treatment for LTBI. HIV infection results in the progression of TB infection to TB disease more frequently and rapidly than any other known factor.

**CXR c/w Inactive TB:** CXRs that may indicate prior TB are apical fibronodular infiltrations. Contacts with CXRs indicating healed primary TB (e.g. a calcified pulmonary nodule) are not at higher risk for later developing active TB disease.

Note: The activity of TB CANNOT be determined from a single CXR, and unless there are previous CXRs showing the abnormality has not changed, it is recommended sputum be sent for examination to assess the possibility of active TB disease. Once active TB disease is excluded by sputum culture, these patients are high priority for treatment for LTBI.

**Congregate setting:** Exposure to the case occurred in a congregate setting, either occupational or residential (e.g. high school, correctional facility, homeless shelter, nursing home, workplace). If you believe that the contacts in a congregate setting fall into the category of “Low Risk of Infection”, please check the box “Other Low Risk” in the next column and write the setting in the space provided. Please consult with the State TB Control Program for assistance in determining if contacts are at high or low risk of infection if you have any questions. The State TB Control Program is available for onsite and/or technical assistance with all investigations in congregate settings.

**Exceeds exposure limits:** Contact is an otherwise healthy individual age ≥5 with exposure to the case that exceeds exposure limits (i.e., you believe the risk is high enough that the contact’s level of exposure could result in infection). Examples of exceeds exposure limits might include a close friend, a coworker that shares an office with the case, daily carpool member, etc.

The North Carolina TB Control Program Manual ([http://epi.publichealth.nc.gov/cd/lhds/manuals/tb/toc.html](http://epi.publichealth.nc.gov/cd/lhds/manuals/tb/toc.html)) specifies exposure limits to assist in determining if a contact “exceeds environmental limits”. These limits are provided below should you wish to use them in your contact investigation. **A contact is not required to meet the limits below, these are for guidance only.**
- ≥ 4 cumulative hours in small, poorly ventilated space such as a car or enclosed room
- ≥ 8 cumulative hours in small well-ventilated space such as an apartment
- ≥ 12 cumulative hours in a large space such as a classroom or house
- ≥ 50 cumulative hours in large open area such as an auditorium or church

**Other medical risk factor:** Contact has a significant medical risk (other than HIV/AIDS).

**Examples:**
- Those on immunosuppressive agents, including multiple cancer chemotherapy agents, antirejection drugs for transplants, TNF-alpha antagonists
- Someone receiving >15 mg of prednisone or its equivalent for >4 weeks
- Those with silicosis, uncontrolled diabetes mellitus, gastrectomy or jejunoileal bypass surgery, etc.

All patients taking prednisone or a TNF-alpha antagonist inhibitor (Enbrel, Remicade, Humira) should be treated during the window period. Consider starting all other contacts with significant medical risk(s) on treatment during the window period.

**Other:** Check this box if you believe the contact has a risk factor that contributes to their high risk of infection and progression to TB disease that is not listed above. Write in the risk factor in the space provided.

**No Risk** Contact has no known risk factors, i.e., no actual exposure to the case.

**Other Low Risk:** Contact has limited exposure to the case, and you believe the risk of infection is truly low. Please note the exposure setting in the space provided. An example might be contacts from a school investigation (congregate setting) with little or no exposure to the case, and no other medical risks, that were tested as part of the investigation. Please feel free to consult with the State TB Control Program for assistance in determining if a contact’s risk of infection is high or low.
3. Evaluation:

A. Check “Symptomatic” if contact is showing signs and symptoms of TB such as cough, fever, night sweats, hemoptysis, weight loss, etc. If the contact is symptomatic, work up for TB disease.

B. Enter prior TB history.

C. Enter results of 1st-round and 2nd-round testing in the respective spaces. If TST tests are used, enter date placed and the induration diameter. If QFT or T-Spot tests are used, enter date and result. Chest X-ray results should also be entered, as appropriate.

If the contact has a history of TB or LTBI and you believe adequate prior treatment was completed for TB disease or LTBI, mark the box for “Prior Tx”. In absence of a documented course of therapy, some questions to ask the patient to assess whether treatment was adequate include:

- Where were you treated?
- What drugs did you receive?
- How many different drugs? How many pills each day? What size and color were the pills/capsules?
- How long were you on treatment?
- Did you take medications daily? Every pill?
- Did you miss medication sometimes? How often?
- Did health care workers observe you taking your medications?

Note: contacts with prior TST/QFT positive and/or prior treatment should, at a minimum, be screened for symptoms. A chest x-ray is recommended for contacts with medical risks or symptoms, or if the case is highly infectious (i.e., in an outbreak situation). Consider offering LTBI to prior positives who have not completed therapy.
Complete these steps for all contacts until the contact investigation is completed. Contact TB Program, OHA for assistance.

4. LTBI Treatment:
Complete for all contacts for whom LTBI treatment has been initiated. This may include persons with newly diagnosed LTBI, persons on window treatment, prior positives, and persons with HIV/AIDS being treated with a full course of preventive therapy (regardless of TST/QFT).

When treatment complete, enter Final Status 9-
Completed LTBI treatment.

4. Final Status: Complete for all contact as follows:
0-Completed Evaluation: One or two rounds of testing, plus chest X-ray if needed.
1-Active TB diagnosed
2-Died
3-Moved
4-Refused (either evaluation or treatment)
5-Lost to follow-up
6-Provider decision: toxicity
7-Provider decision: other
9-Completed LTBI Treatment

Use this area to enter any details or complications of treatment, details about incomplete evaluations, explanation for Final Status 7-Provider decision: other, etc.

If contact moved out of the jurisdiction, please submit an “Interjurisdictional Transfer Notification” see form: https://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/Tuberculosis/Documents/fomdoc/ijnnotification.pdf

Complete these steps for all contacts until the contact investigation is completed. Contact TB Program, OHA for assistance.