Outbreak ID (for CA TBCB use only): LHJ code ☐☐☐ Year ☐☐ Local ID ☐☐

CALIFORNIA TUBERCULOSIS OUTBREAK REPORT FORM

1. Outbreak status	**2. Report date**	**3. Related to prior outbreak?**	**4. Main genotype**
☐Suspect ☐Probable ☐Confirmed*	Month ☐☐ Day ☐☐ Year ☐☐☐☐	☐ Yes. If yes, year of prior outbreak (if known) ☐☐☐☐	_____

5. Reporting local health jurisdiction	**6. Outbreak location**
Contact name:_____ LHJ:_____	Primary LHJ:_____
Contact phone: ( )_____ Email:_____	Other LHJs:_____

7. Transmission settings

Check one (if applies):	**Check one (if applies):**	**Check all that apply:**				
☐ Single family	☐ Single household/residence	☐ Long-term care facility	☐Bar	☐ School/college	☐ Correctional facility	☐ Church/place of worship
☐ Multiple families	☐ Multiple households/residences	☐ Outpatient medical facility	☐ Daycare	☐ Hotel/SRO	☐ Drug network	☐ Homeless shelter/services
		☐ Alcohol or drug treatment facility	☐ Worksite	☐ Social network	☐ Other group setting, specify:_____	

8. Cases involved in outbreak (columns represent information on one case; use next page for additional cases)

State case number					
Name (first and last)					
DOB (mm/dd/yyyy)	**Gender**	☐M ☐F	☐M ☐F	☐M ☐F	☐M ☐F
Foreign born		☐ Yes ☐ No ☐ Unknown	☐ Yes ☐ No ☐ Unknown	☐ Yes ☐ No ☐ Unknown	☐ Yes ☐ No ☐ Unknown
Site of TB disease		☐Pulm ☐Laryngeal ☐Extra-pulm	☐Pulm ☐Laryngeal ☐Extra-pulm	☐Pulm ☐Laryngeal ☐Extra-pulm	☐Pulm ☐Laryngeal ☐Extra-pulm
Sputum culture-positive		☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done
Sputum smear-positive		☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done
Cavitary disease on chest x-ray		☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done
Drug resistance		☐ None ☐ INH ☐ MDR ☐ Other	☐ None ☐ INH ☐ MDR ☐ Other	☐ None ☐ INH ☐ MDR ☐ Other	☐ None ☐ INH ☐ MDR ☐ Other
Infectious period	**Start date**				
	End date				
Epi-linked cases	**State case no.**				
	Epi-link type†	☐Definite ☐Probable ☐Possible	☐Definite ☐Probable ☐Possible	☐Definite ☐Probable ☐Possible	☐Definite ☐Probable ☐Possible
	State case no.				
	Epi-link type†	☐Definite ☐Probable ☐Possible	☐Definite ☐Probable ☐Possible	☐Definite ☐Probable ☐Possible	☐Definite ☐Probable ☐Possible

Additional cases involved in outbreak

See outbreak report form instructions for more information

*Confirmed outbreak: ≥4 culture-confirmed California TB cases (exception: a culture-negative case less than 5 years of age whose definite epidemiologically-linked‡ source case is culture-confirmed can be included as one of the 4 cases) have definite epi-links† indicating cases are part of the same chain of transmission AND the same genotype counted within a three year time period (i.e. three years between case 1 and case 4)

†Definite epi-link: One of the cases named the other as a contact during one of the case's infectious period OR the two cases were at the same place at the same time during one of the case's infectious period.

Probable epi-link: The two cases were at the same place around the time of one of the case's infectious period; however the timing of when the two cases were at the same place, or the timing of the infectious period, was not certain enough to meet the definite epi-link criteria OR the two cases share social or behavioral traits that increase the risk of transmission.

Possible epi-link: The two cases share a common contact without naming each other as direct contacts OR the two cases are linked on a social network site or person-search database (e.g., Accurint) OR the two cases have at least one shared friend or associate on a social network site OR reside in the same locally defined neighborhood.

State case number					
Name (first and last)					
DOB (mm/dd/yyyy)	**Gender**	☐ M ☐ F	☐ M ☐ F	☐ M ☐ F	☐ M ☐ F
Foreign born		☐ Yes ☐ No ☐ Unknown	☐ Yes ☐ No ☐ Unknown	☐ Yes ☐ No ☐ Unknown	☐ Yes ☐ No ☐ Unknown
Site of TB disease		☐Pulm ☐Laryngeal ☐Extra-pulm	☐Pulm ☐Laryngeal ☐Extra-pulm	☐Pulm ☐Laryngeal ☐Extra-pulm	☐Pulm ☐Laryngeal ☐Extra-pulm
Sputum culture-positive		☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done
Sputum smear-positive		☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done
Cavitary disease on chest x-ray		☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done
Drug resistance		☐ None ☐ INH ☐ MDR ☐ Other	☐ None ☐ INH ☐ MDR ☐ Other	☐ None ☐ INH ☐ MDR ☐ Other	☐ None ☐ INH ☐ MDR ☐ Other
Infectious period	**Start date**				
	End date				
Epi-linked cases	**State case no.**				
	Epi-link type†	☐Definite ☐Probable ☐Possible	☐Definite ☐Probable ☐Possible	☐Definite ☐Probable ☐Possible	☐Definite ☐Probable ☐Possible
	State case no.				
	Epi-link type†	☐Definite ☐Probable ☐Possible	☐Definite ☐Probable ☐Possible	☐Definite ☐Probable ☐Possible	☐Definite ☐Probable ☐Possible

State case number					
Name (first and last)					
DOB (mm/dd/yyyy)	**Gender**	☐ M ☐ F	☐ M ☐ F	☐ M ☐ F	☐ M ☐ F
Foreign born		☐ Yes ☐ No ☐ Unknown	☐ Yes ☐ No ☐ Unknown	☐ Yes ☐ No ☐ Unknown	☐ Yes ☐ No ☐ Unknown
Site of TB disease		☐Pulm ☐Laryngeal ☐Extra-pulm	☐Pulm ☐Laryngeal ☐Extra-pulm	☐Pulm ☐Laryngeal ☐Extra-pulm	☐Pulm ☐Laryngeal ☐Extra-pulm
Sputum culture-positive		☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done
Sputum smear-positive		☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done
Cavitary disease on chest x-ray		☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done	☐ Yes ☐ No ☐ Not Done
Drug resistance		☐ None ☐ INH ☐ MDR ☐ Other	☐ None ☐ INH ☐ MDR ☐ Other	☐ None ☐ INH ☐ MDR ☐ Other	☐ None ☐ INH ☐ MDR ☐ Other
Infectious period	**Start date**				
	End date				
Epi-linked cases	**State case no.**				
	Epi-link type†	☐Definite ☐Probable ☐Possible	☐Definite ☐Probable ☐Possible	☐Definite ☐Probable ☐Possible	☐Definite ☐Probable ☐Possible

9. Comments

California Department of Public Health

Tuberculosis Control Branch

Tuberculosis Outbreak Report Form Instructions

Introduction

This document includes instructions for LHJs on how to complete the Tuberculosis (TB) Outbreak Report Form. The purpose of the TB Outbreak Report Form is to characterize outbreak frequency, size, populations, and transmission settings in California. Analysis of TB outbreak data enables the California Tuberculosis Control Branch (TBCB) and local health jurisdictions (LHJs) to identify areas to focus interventions and to monitor outbreak trends. In addition, California law mandates the reporting of outbreaks by healthcare providers and laboratories to local county health departments, and subsequent reporting of outbreaks from the local to the state health department (CCR, Title 17, Sections 2500 and 2502).

The TBCB Outbreak Response Team (ORT) is available to provide assistance when LHJs need and request support to respond to TB outbreaks, complex TB investigations, or other events of interest. When an outbreak is initially suspected or identified, it should be reported to the TBCB Outbreak Duty Officer (510-620-3000) by phone. Once the outbreak has been reported by phone and it meets the confirmed TB outbreak definition (see definition below), please complete the Tuberculosis Outbreak Report Form. If assistance is needed to complete the outbreak report form, please contact the TBCB Outbreak Duty Officer at 510-620-3000.

Please securely fax (510-620-3035) the form to the TBCB ORT (see to the CTCA directory for more information: http://www.ctca.org/fileLibrary/file_509.pdf).

1. Outbreak Status

Primary Purpose: Surveillance**. Please complete outbreak report form for outbreaks that meet the confirmed outbreak definition.**

However, please have a *low threshold* to report to TBCB any transmission events or clusters that do not meet the confirmed outbreak definition because data is pending (e.g., epidemiologic-links or genotypic-links) or because the number of cases (e.g., ≤ 3 cases) is too low (Table). In addition, please call TBCB for technical assistance or to report all transmission events or clusters that are suggestive of recent transmission in sensitive settings (e.g., homeless shelters, schools, healthcare facilities) or among high risk vulnerable populations (e.g., HIV infected persons).

Confirmed outbreak definition (must meet all three criteria)

(1) ≥4 California TB cases* with the same genotype† WITH

(2) Definite epidemiological links indicating cases are part of the same chain of transmission‡ AND

(3) Cases were counted§ within three years of each other (i.e. three years between case 1 and case 4)

* Exception: One clinical TB case aged <5 years old whose definite epidemiologically-linked‡ source case is culture-confirmed can be included as one of the 4 cases.
† Same genotype: All cases have identical spoligotype and 24-locus mycobacterial interspersed repetitive unit-variable number of tandem repeat, MIRU-VNTR, result (same GENType assigned by CDC's TB genotyping information management system). However, cases that have a 1-digit discrepancy in the 24-locus MIRU-VNTR (i.e., MIRU and MIRU2), but have the same spoligotype, may be included if a definite epidemiological link has been established between two cases.
For example, the following MIRU-VNTR sequences of two case's isolates has a 1-digit discrepancy (the fifth loci):
MIRU-VNTR sequence from TB case #1: 2534**5**3352213
MIRU-VNTR sequence from TB case #2: 2534**8**3352213

If these two cases have a definite epidemiologic‡ and identical spoligotypes then both cases should be considered part of the outbreak.
More information on genotyping can be found at: http://www.cdc.gov/tb/publications/factsheets/statistics/GenotypingTerminology.pdf

‡ Definite epidemiologic link definition: One of the cases is identified as a contact during one of the case's infectious period OR the two cases were at the same place at the same time during one of the case's infectious period.

§ The date counted as a TB case by the count authority. More information can be found in the RVCT instruction manual: http://www.cdc.gov/tb/programs/rvct/InstructionManual.pdf

Table. List of example situations that meet and do not meet the confirmed outbreak definition

Situation	Meet confirmed outbreak definition?	Recommend report to TBCB
Four California TB cases have the same genotype (e.g. G00001) with count dates within three years of each other. Transmission occurred within a household for three cases. Transmission to the fourth TB case occurred at a worksite.	Yes	Yes
A LHJ conducts a contact investigation involving five homeless TB cases, counted within three years of each other, with the same genotype. However, the LHJ cannot establish definite epidemiological links between cases.	No	Yes
Three recent California TB cases have occurred within a school but genotyping results are still pending.	No	Yes

Please call (510) 620-3000 and ask to speak with the TBCB Outbreak Duty Officer if you are not certain if an outbreak, cluster, or investigation meets the confirmed TB outbreak definition.

2. Report Date

Primary Purpose: Surveillance and outbreak management. Data will be used to determine when the outbreak was first reported or when new outbreak cases occur.

Include the month, day, and year. The date should reflect when the completed form was submitted to TBCB.

3. Related to Prior Outbreak

Primary Purpose: Surveillance and outbreak management. Data will be used to link cases in the current outbreak to cases from a prior outbreak. Information on the cases and transmission settings related to a prior outbreak may be recorded in the comments section at the end of the form.

Check the Yes (Related to prior outbreak) box if:

1. At least one of the cases in the outbreak has genotypic and any epidemiologic links to a prior outbreak, and
2. It has been ≥ 3 years since the count date of cases with genotypic and definite epidemiologic links in the prior outbreak*

* If it has been less than 3 years since the count date of cases with genotypic and definite epidemiologic links in the prior outbreak, then the cases in the new outbreak should be considered to be part of the prior outbreak.

Year of Prior Outbreak: Enter the four digit year in which the prior outbreak was first reported, if known.

4. Main Genotype

Primary Purpose: Surveillance and outbreak management. Data will be used to connect genotypically-linked cases who may not be epidemiologically-linked to the current outbreak.

A genotyped TB patient's isolate is assigned a GENType (combination of spoligotype and 24-locus MIRU-VNTR results) by the National Tuberculosis Genotyping Service which is formatted as "G" followed by five digits (e.g. G00001). Enter the GENType, which may be obtained through a genotype report provided to the local health department by the California Department of Public Health or through CDC's TB genotyping information management system (http://www.cdc.gov/TB/programs/genotyping/tbgims/default.htm). Occasionally, a definite epidemiologically-linked case in an outbreak may have a GENType that differs from the outbreak GENType; however, in these instances there is usually only a one digit discrepancy between the two isolate's 24-locus MIRU-VNTR. In such occasions, list the GENType assigned to the majority of the cases in the outbreak.

5. Reporting Jurisdiction

Primary Purpose: Surveillance and programmatic function. Data will be used to document the jurisdiction reporting the outbreak to TBCB.

Contact Name: The point of contact from the LHJ if there are questions regarding information recorded on the outbreak report form.

Contact Phone Number: The phone number for the contact person for the reporting jurisdiction.

Contact Email Address: The email address for the contact person for the reporting jurisdiction.

6. Outbreak Location

Primary Purpose: Surveillance and outbreak management. Data will be used to identify the LHJ(s) in which transmission between outbreak cases has occurred.

Primary LHJ: The LHJ where the majority of the outbreak-associated cases reside and where the primary intervention efforts have been implemented.

Other LHJs: All other (non-primary) LHJs where other outbreak-associated cases reside or where transmission outside of the primary LHJ is thought to have occurred.

7. Transmission Settings

Primary Purpose: Surveillance. Data will be used to categorize outbreaks based on the settings in which transmission may have occurred between cases.

Single family or **Multiple families:** Check one (if one applies):

1. **Single family:** Check this box if transmission in the outbreak has likely occurred among members of a single family*.
2. **Multiple families:** Check this box if transmission in the outbreak has likely occurred among members of a more than one family*.

* Because what constitutes a family can vary greatly (e.g., blood relatives, domestic partners, etc.), the definition of family member will be left to the interpretation of the interviewed patients and the LHJ.

Single household/residence or **Multiple households/residences**: Check one (if one applies):

1. **Single household/residence:** Check this box if transmission in the outbreak has likely occurred within a single household** or at a single residential address.
2. **Multiple households/residences:** Check this box if transmission in the outbreak has likely occurred within more than one household** or at more than one residential address.

**A single household/residence should share the same front door regardless of relationship. A household may consist of a person living alone or of multiple unrelated individuals or families living together.

Other transmission settings: Check all that apply.

- **Long-term care facility:** Check this box if transmission has likely occurred among patients, staff, or visitors of a long-term care facility. Long-term care facilities provide permanent or temporary overnight housing or accommodations and include facilities such as nursing homes, hospital-based facilities, residential facilities providing personal care or supervision to its residents, mental health residential facilities, or other long-term care facilities. Other long-term care facilities are facilities that are designed for treatment of 30 days or longer and the facility type is not unknown. Alcohol and drug treatment facilities should <u>not</u> be included as long-term care facilities on this form.
- **Alcohol or drug treatment facility:** Check this box if transmission has likely occurred among residents, staff, or visitors while at an inpatient or outpatient alcohol or drug treatment or rehabilitation facility.
- **Outpatient medical facility:** Check this box if transmission has likely occurred among patients, staff, or visitors while at an outpatient medical or other health care facility. Outpatient medical facilities do not provide overnight accommodations for patients and include, but are not limited to, facilities such as dialysis centers, emergency rooms, private provider offices, and outpatient surgical centers.

- **Homeless shelter/services:** Check this box if transmission has likely occurred among residents, staff, visitors, or volunteers while at a facility providing daytime, meal, or overnight housing services to the homeless.
- **Hotel/SRO:** Check this box if transmission has likely occurred among residents, staff, or visitors while at an extended stay hotel or single room occupancy building (SRO).
- **Day care:** Check this box if transmission has likely occurred among attendees, staff, or visitors while at a child or adult day care facility.
- **School/college:** Check this box if transmission has likely occurred among students, faculty, staff, or visitors while at a pre-school, elementary school, middle/intermediate school, high school, or college/university.
- **Correctional facility:** Check this box if transmission has likely occurred among inmates, staff, or visitors while at a federal prison, state prison, local jail, juvenile correctional facility, or other correctional facility (includes Immigration and Customs Enforcement [ICE] detention centers, Indian reservation facilities [e.g., tribal jails], military stockades and jails, federal park police facilities, police lockups [temporary holding facilities for persons who have not been formally charged in court], or other correctional facilities that are not included in the other specific choices).
- **Worksite:** Check this box if transmission has likely occurred among employees or visitors while at a worksite.
- **Church/place of worship:** Check this box if transmission has likely occurred among attendees or staff while at a church, synagogue, mosque, or other place of worship.
- **Bar:** Check this box if transmission has likely occurred among patrons or employees at an establishment where people go to purchase and drink alcoholic beverages prepared and served by a bartender or the words “Bar” or “Pub” are in the name of the establishment. Food might or might not also be available.
- **Social network:** Check this box if transmission has likely occurred among friends who reside at different addresses, members of social clubs, e.g. bible/religious study groups that meet at locations outside of the church/place of worship, video game network, or attendees of other social gatherings.
- **Drug network:** Check this box if transmission has likely occurred among people who gather to use injecting or non-injecting drugs together.
- **Other group setting (specify):** Check this box if transmission has likely occurred between cases in another community group setting that is not specified above. *Acute* inpatient hospital settings should be categorized in this field. Please specify the setting.

8. Cases involved in the outbreak

Primary Purpose: Surveillance and outbreak management. Data will be used to link involved cases to their RVCT data.

State case number: Please provide the state case number (i.e., RVCT number) for each involved case if a state case number has been assigned. If the state case number has not yet been assigned, please enter "pending." If the case is a high suspect TB case and is not yet a verified TB case, then please enter "high suspect."

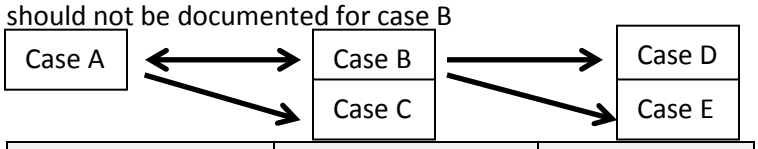
- **Name:** Please provide the first and last name of each involved verified or high suspect case.
- **DOB:** Please provide the date of birth of each involved verified or high suspect case (mm/dd/yyyy).
- **Infectious Period Start Date and Infectious Period End Date:** Infectious period start and end dates are important for establishing epidemiologic links and determining when and where transmission might have occurred.*

  At a minimum, record month and year for both the infectious period start date and the infectious period end date. If possible, also record the day.

  *Note: Please see the TB outbreak case definition technical instructions for instructions on how to define the infectious period [CDC TB contact investigation instructions: http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5415a1.htm].

- **Epi-linked cases:** Please provide the state case number. If the state case number is unknown or not yet assigned, then provide the first and last name and DOB of up to two epidemiologically linked cases.*
- **Epi-link type:** Please specify if the case meets the definite, probable, or possible epidemiologic link definition† to the listed case.

*Note: If an epidemiologic-link was already documented on the form, it does not need to be documented for subsequent cases. For example, if case A has epidemiologic-links with cases B and C, then these links should be noted for Case A. In addition, if case B has epidemiologic-links with cases A, D, and E, then enter the epidemiologic-links for Cases B, D, and E. Since the epidemiologic link between Case A and Case B was previously documented for Case A, this should not be documented for case B



Case	Case A	Case B
Epi-linked case 1	Case B	Case D
Epi-linked case 2	Case C	Case E

†Epidemiologic link definitions:
Definite epi-link: One of the cases is identified as a contact during one of the case's infectious period OR the two cases were at the same place at the same time during one of the case's infectious period.
Probable epi-link: The two cases were at the same place around the time of one of the case's infectious period; however the timing of when the two cases were at the same place, or the timing of the infectious period, was not certain enough to meet the definite epi-link criteria OR the two cases have one or more contacts in common.
Possible epi-link: The two cases share social or behavioral traits that increase the risk of transmission (e.g. injection drug use, homelessness, etc.) OR the two cases reside in the same locally-defined neighborhood OR the two cases are linked on a social network site or person-search database (e.g., Accurint) OR the two cases have at least one shared friend or associate on a social network site.

- **Pulmonary, laryngeal, or extra pulmonary TB:** Check all boxes that apply based on the patient's site(s) of TB disease.
- **Sputum smear-positive:** Check yes if any of the patient's sputum smear examinations were positive for acid-fast bacilli (AFB). Otherwise, check no if smears were negative for AFB or not done if sputum was not collected or smears were not performed.
- **Sputum culture-positive:** Check yes if any of the patient's culture results from sputum. Otherwise, check no if smears were negative for AFB or not done if sputum was not collected or smears were not performed.
- **Cavitary disease on chest x-ray:** Check yes if any of the patient's initial chest radiograph(s) showed evidence of 1 or more lung cavities, otherwise check no.
- **Drug resistance:** Check all applicable boxes from the choices below. Drug susceptibility can be detected by phenotypic drug susceptibility test or molecular testing (e.g. pyrosequencing assay, GeneXpert)
    - **None:** Check this box if the patient's TB is pan-susceptible
    - **INH:** Check this box if the patient has mono-isoniazid resistant TB.
    - **MDR:** Check this box if the patient has isoniazid and rifampin resistant TB.
    - **Other:** Check this box if the patient has TB resistant to drugs other than, or in addition to, isoniazid or rifampin.

9. Comments

Primary Purpose: Surveillance and outbreak management. Information on the cases and transmission settings related to a prior outbreak may be recorded in the comments section. Additional comments will provide important relevant information about the outbreak that is not captured by other fields.