



Tuberculosis Control Branch Tuberculosis Outbreak Response Team

Background

An outbreak is generally defined as the occurrence of cases above the expected number, usually over a given period of time in a geographic area, facility, or within a specific population group.

Tuberculosis (TB) outbreaks represent disease transmission events that often occur among vulnerable populations and in high-risk settings. Investigation of TB outbreaks is a core public health function. Prompt follow-up is important to determine whether transmission is ongoing and to identify and implement prevention and containment measures.

TB genotype clusters with characteristics that suggest recent TB transmission or a high likelihood for becoming a future outbreak are high priority for investigation. Previously unidentified TB transmission sites and epidemiologically-linked high-priority TB contacts for TB evaluation and treatment can be identified through genotype cluster analysis.

TB contact investigations of exposed contacts provide an important opportunity to stop further spread of TB and to prevent TB outbreaks.

The State TB Outbreak Response Team Supports Local Efforts

Large or complex TB investigations can present significant challenges to TB control programs, including increased:

- workload and resource needs due to increased number of TB cases, suspect cases and contacts
- coordination and communications across many organizations
- collection and analysis of data

Suspecting an Outbreak

When assessing whether a cluster of TB cases represents an outbreak, factors to look for include:

- epidemiologic links or shared characteristics that explain where and when TB could have been transmitted between cases
- similar demographic and social features among cases
- isolates with identical or very similar genotype results
- isolates with matching drug resistance results

Reporting a TB Outbreak

The California Code of Regulations [Title 17, Section 2502(c)] directs local health officers to immediately report TB outbreaks to CDPH. When an outbreak is initially identified, it should be reported by phone to the TB Control Branch Outbreak Duty Officer at (510) 620-3000.

In California, the confirmed TB outbreak surveillance definition that should trigger reporting is **four or more TB cases occurring in California with:**

- **Definite epidemiologic links indicating all 4 cases are part of the same chain of transmission**
- **Matching TB genotypes** (Exception: a pediatric case less than 5 years of age without genotype results can be included as one of the 4 cases.)
- **Case 1 and Case 4 counted within three years of each other**

However, jurisdictions are also encouraged to report any situations for which state assistance may be useful even if it is not a confirmed outbreak.

If an outbreak is suspected, please report even if genotype results are pending.

For further information, please visit the Tuberculosis Control Branch online at <http://cdph.ca.gov/programs/tb>



Tuberculosis Control Branch Tuberculosis Outbreak Response Team

About the State TB Outbreak Response Team (ORT)

The ORT includes a public health nurse, epidemiologist, consulting physicians, a communicable disease investigator, a public health advisor, and a communicable disease manager. Available assistance can range from a one-time consultation to extensive support provided over a period of months and may involve conference calls, meetings, and/or onsite activities. Assistance is tailored to meet each request and may include any of the following:

- Investigation planning and prioritization
- Medical and nursing case management consultation
- Tracking of outbreak-associated genotypes
- Field assistance to conduct interviews, locate contacts, and refer patients to care
- Data collection and analysis
- Facilitation of interjurisdictional communication
- Staff training
- Access to specialized laboratory services
- Tools that can be tailored to specific outbreaks/exposure settings
- Technical assistance with media communications
- Fiscal resources

Whom do I call for assistance?

To request assistance for an outbreak, genotype cluster investigation, or a complex contact investigation, contact the TB Outbreak Duty Officer at (510) 620-3000. Requests can be made at any time during an investigation, although we encourage notification at the beginning of an investigation.

Who will be in charge of the investigation?

The LHD is the lead agency for responding to outbreaks and other complex TB investigations within its jurisdiction. The ORT will assist the LHD in an investigation, and each agency is generally responsible for overseeing its own staff.

What will happen next?

Several things could happen once the TBCB ORT receives an outbreak report or request for assistance from an LHD.

- A. The LHD decides that the outbreak is already contained or is likely to be contained using local resources and that no assistance from the ORT is required. In this case, the ORT will collect information needed for statewide TB outbreak surveillance purposes
- B. The LHD meets with the ORT to obtain consultation or discuss assistance.
- C. Discussion may include resources and assistance needs, number and characteristics of cases and contacts, exposure settings, interjurisdictional issues, and potential media involvement. Based on this information, the LHD and ORT will jointly determine the assistance the ORT shall provide.

For assistance, contact the TB Outbreak Duty Officer at 510-620-3000 (M-F 8am-5pm)

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