



Tuberculosis Control Branch MDR TB Service Fact Sheet

Mission Statement:

The California Multidrug-Resistant Tuberculosis (MDR TB) Service assists local health departments and providers in ensuring the best chance of cure for each person with drug-resistant TB while minimizing the risk of persistent adverse effects and halting transmission of drug-resistant TB in California. The MDR TB Service also stays informed about and contributes to evidence and guidance supporting safe and effective diagnosis and treatment for drug-resistant TB in California and the United States.

What is MDR TB?

Multidrug-resistant tuberculosis (MDR TB) is defined as TB disease caused by bacteria that are resistant to at least isoniazid and rifampin, two of the most potent first-line anti-TB drugs. According to CDC, extensively drug-resistant TB (XDR TB) means TB resistant to isoniazid, rifampin, a fluoroquinolone, and a second-line injectable, or resistant to isoniazid, rifampin, a fluoroquinolone, and bedaquiline or linezolid. Pre-XDR TB means MDR TB plus resistance to either a fluoroquinolone or a second-line injectable.

Background/Need

Despite a decline in TB incidence in California over the past 30 years, MDR TB remains a challenge to TB control efforts and a threat to communities. On average, 1-2% of California's patients diagnosed with TB are MDR. Nearly half of those patients have substantial additional resistance (i.e., XDR, pre-XDR, or resistance to all four first-line drugs). Because MDR TB has become more common globally, the proportion of patients with MDR TB in California might increase in future years. During 2016-2020 there were 106 patients diagnosed with MDR TB, more than 20% of all MDR TB cases diagnosed in the United States during this period.

Consultation with an expert in the management of MDR TB is recommended by CDC. Because of higher morbidity and mortality, potential extended duration and cost of treatment, and overall complexity

associated with patients with MDR TB, local health jurisdictions (LHJs) face greater challenges with the management of MDR TB than with drug-sensitive disease.

Familiarity and experience with providing care for patients with MDR TB, access to timely drug susceptibility testing, second-line drug procurement, and ability to minimize other case management challenges in the long term have been associated with prompt identification and successful treatment of patients with MDR TB in California. Patients managed through consultation with the MDR Service have good outcomes with more than 90% of patients achieving cure.

Additionally, the landscape of treatment and management of patients with MDR TB is now evolving rapidly. With the approval of a new TB drug, pretomanid, and increased use of newer, short-course drug regimens for MDR and XDR TB (e.g., bedaquiline, pretomanid, and linezolid or BPaL), new research and recommendations continue to develop. California is contributing to CDC's surveillance of BPaL implementation in the United States and participates in the national BPaL Implementation Group, a community of practice focused on the implementation and outcomes of using a short-course regimen. The CA MDR Service remains a source of up-to-date information on the latest research findings and clinical practice for the LHJs in California.

For further information, please visit the Tuberculosis Control Branch online at [Tuberculosis \(ca.gov\)](https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Tuberculosis)



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Purpose

In an effort to support the local response to providing care for patients with MDR TB, the TB Control Branch (TBCB) seeks to learn of each new case as soon as possible after MDR is diagnosed. The TBCB developed the MDR TB Service in 2002 to help local TB programs ensure that transmission of MDR TB is interrupted and each patient has the best chance of cure. The Service provides support to LHJs on surveillance, clinical and case management, laboratory services, and access to medications for treating MDR TB. Consultation is provided on both public health and clinical aspects pertaining to the care of patients with MDR TB and their contacts. The Service will also provide consultation on patients that require an MDR regimen due to intolerance to rifampin.

MDR TB Service Team

Physicians and nurse consultants comprise the MDR TB Service. As a team, they bring a diverse set of skills, a multidisciplinary approach to the management of MDR TB and over 30 years of TB experience including:

- Front-line public health TB case management
- Understanding of local, state, and national laboratory processes
- Global public health perspectives
- Working relationship with a network of national MDR TB experts
- TB/HIV clinical and program experience
- Cultural humility
- Board certification in Internal Medicine, Pediatrics, and/or Infectious Diseases

Services

- Clinical consultation by videoconference with comprehensive written recommendations
- Assistance obtaining and interpreting molecular and phenotypic drug susceptibility results
- Genotype interpretation for MDR cases
- Respiratory isolation recommendations to reduce transmission
- Recommendations for evaluating contacts and treating latent MDR TB infection
- Ongoing assistance in management of side effects, toxicity monitoring, and treatment adherence, with a goal of timely culture conversion and cure
- Information on obtaining second-line drugs and accessing patient assistance programs
- Consultations with other clinical experts on challenging treatment decisions
- Information and referral to other State resources (e.g., civil detention program, TB Medi-Cal, special needs funds, outbreak response team assistance)

Resources

- MDR TB “tools”: drug-o-gram, clinical monitoring checklists, toxicity and bacteriology monitoring charts
- Clinical references related to specific challenges, e.g., treatment of contacts, use of fluoroquinolones in children, interpretation of drug levels, others
- Contact and cost information for laboratories that perform susceptibility testing and therapeutic drug monitoring

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What is expected from you?

At a minimum, for each new MDR TB case in California TBCB requests that LHJs provide the following information via secure email or fax:

- Completed MDR/XDR TB report form
- Results of contact investigation

If full consultation is requested, TBCB will periodically request copies of:

- Treatment records, bacteriology, radiology, laboratory reports, and contact evaluation results

To obtain an MDR TB Consultation, contact:

Reiko Okada (Reiko.Okada@cdph.ca.gov), MDR Service Coordinator,
or Rebecca Wang (Rebecca.Wang@cdph.ca.gov), MDR Service Project Specialist

MDR Service Team Contact Information

Pennan Barry, MD, MPH
(510) 620-3041
Pennan.Barry@cdph.ca.gov

Shereen Katrak, MD, MPH
(510) 412-5838
Shereen.Katrak@cdph.ca.gov

Chris Keh, MD
(510) 620-3056
Chris.Keh@cdph.ca.gov

Scott Nabity, MD, MPH
(510) 620-3029
Scott.Nabity@cdph.ca.gov

Kristen Wendorf, MD, MS
(510) 620-3735
Kristen.Wendorf@cdph.ca.gov

Leslie Henry, RN, PHN
(510) 620-3040
Leslie.Henry@cdph.ca.gov

Reiko Okada, RN, PHN, MS
(510) 620- 3033
Reiko.Okada@cdph.ca.gov

Rebecca Wang
(510) 620-3004
Rebecca.Wang@cdph.ca.gov

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