



Public Health
Communicable Disease Section

Tuberculosis Update 2018

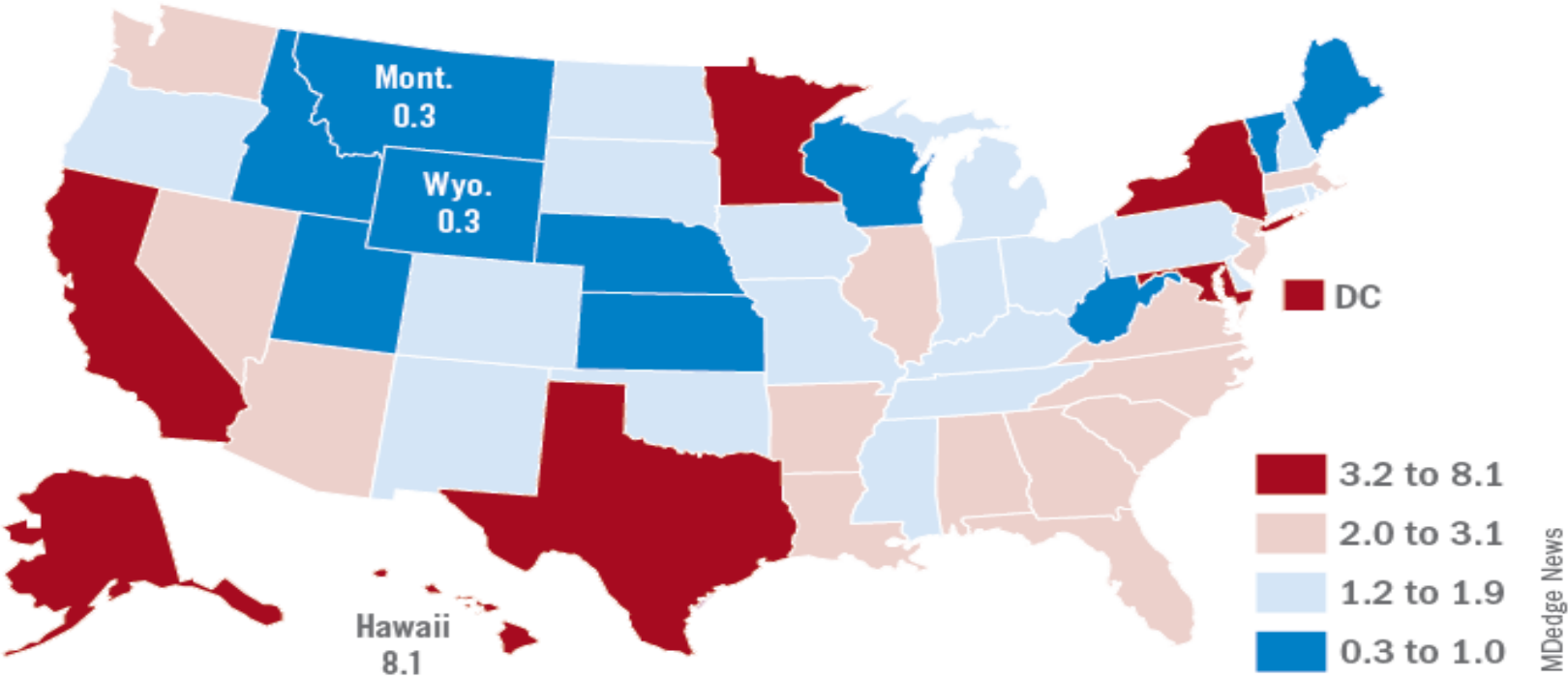
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April 24th, 2018 and May 9th, 2018

- Geographical distribution
- TB case rate and Statistical trends
- Differences between TB disease and TB infection
- TB Myths and Misconceptions
- Latent Infection Impact on TB Elimination
- Goals for TB Elimination
- Available Tests and Techniques
- Some recommendations and guidelines
- Latent Infection Treatment
- How and what to report to Public Health TB Control

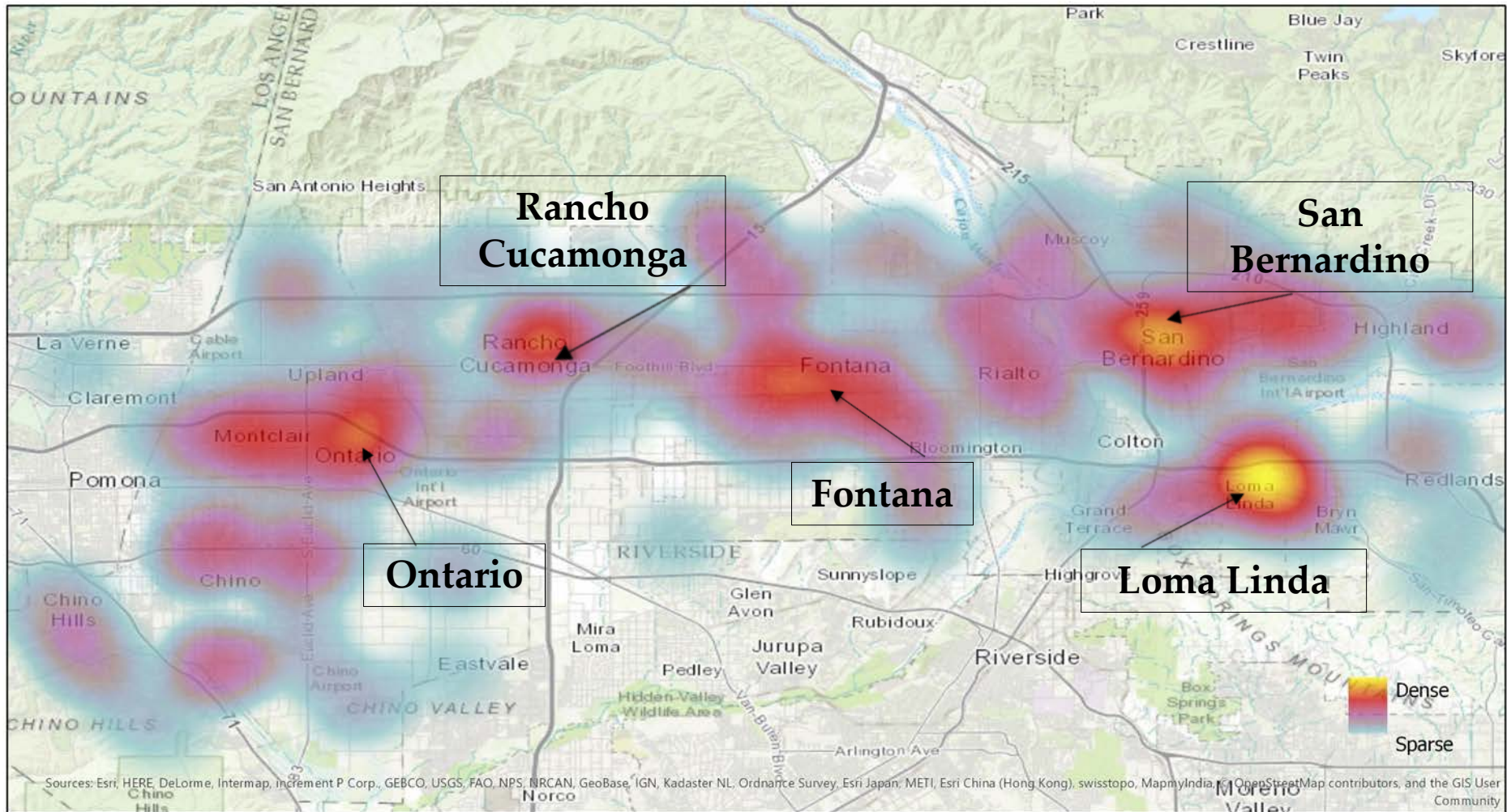


Tuberculosis incidence per 100,000 persons, 2017

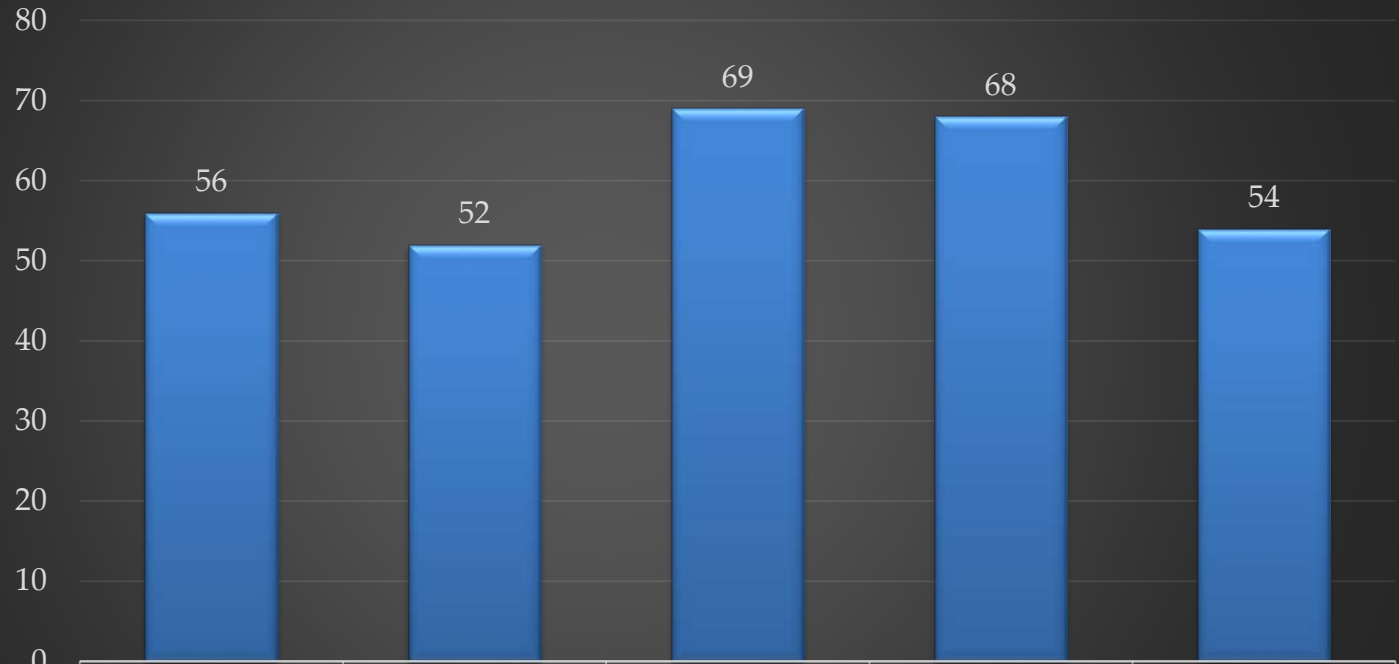


Note: Based on cases reported to the National Tuberculosis Surveillance System.
Source: MMWR. 2018 Mar 23;67(11):317-23

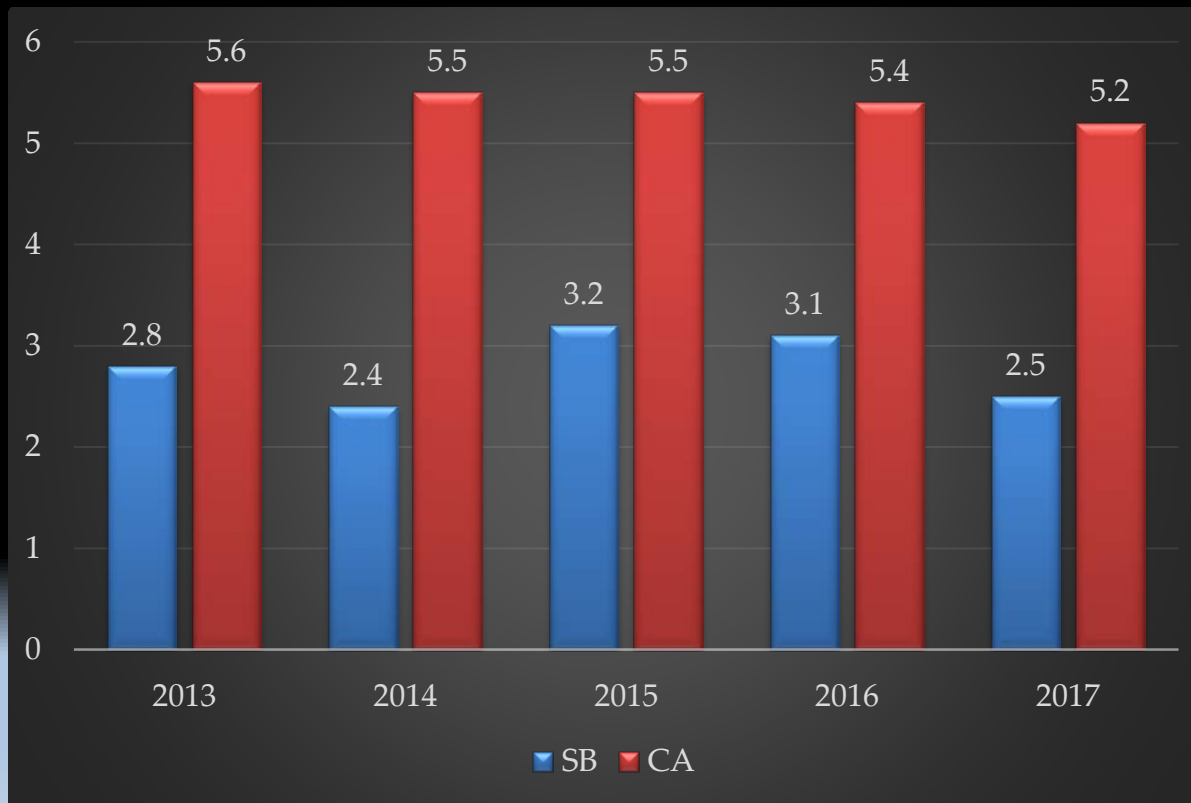
TB Hotspots in San Bernardino County



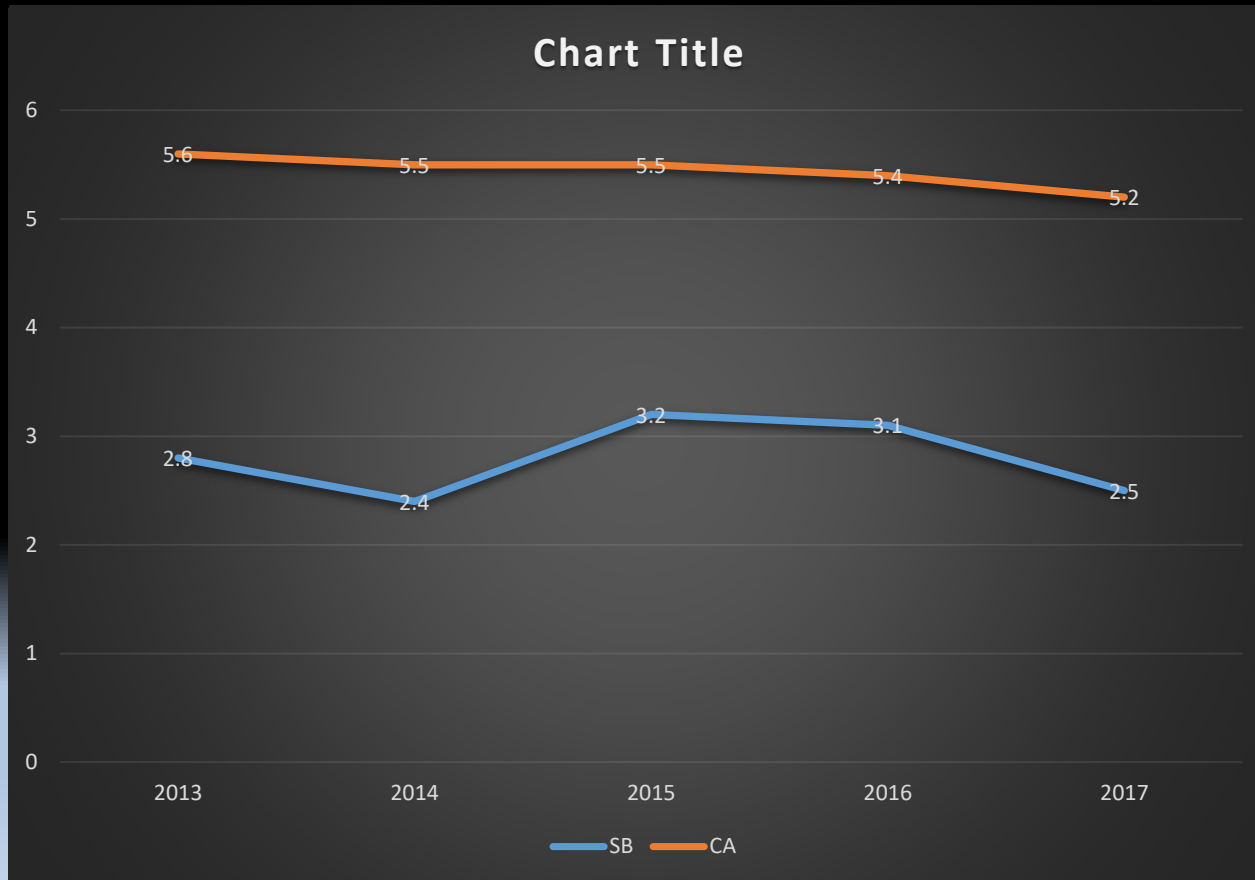
TB Case Count



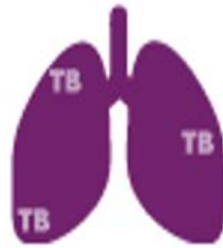
	2013	2014	2015	2016	2017
■ TB Case Count	56	52	69	68	54



TB Case Rate Per 100,000 Population



Latent tuberculosis infection (LTBI) is the presence of *M. tuberculosis* organisms without signs and symptoms or radiographic or bacteriologic evidence of tuberculosis (TB) disease.^{1, 2}



Latent TB Infection



TB Disease

TB Infection

- The TB bacteria is present in their body.
- The person is not sick.
- They cannot spread the bacteria to others.



TB Disease

- These people are sick.
- They usually have one or more of the classic TB symptoms.
- They can spread the infection to others.

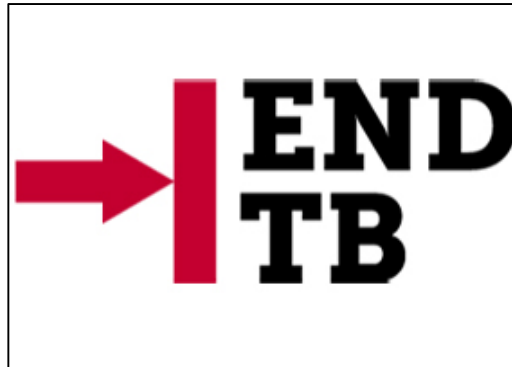


- Anyone over 30 years old should not be treated for LTBI
- Newly arrived immigrant are at higher risk for disease
- All TB patients are infectious
- TB is easy to catch and highly infectious
- You can't get TB more than once
- TB is just a lung disease



- In 2018, TB remains the world's leading infectious disease killer
- The US has comparatively low incidence of active TB
- More than 2 million Californians are infected with latent TB
- On average 1 in 10 will convert to active TB disease
- About 80% of all TB cases in California arise from reactivation LTBI

- TB elimination by 2100, a sustained annual decline of 3.9% is required
- Increases in LTBI testing and treatment completion would accelerate progress toward TB elimination
- Developing comprehensive and innovative approaches to diagnosing, treating, and monitoring LTBI



- TB elimination will not be achieved without steadfast engagement among public health partners and sustained prevention and control programs.
- Several accepted treatment regimens are available for Latent TB Infection (LTBI)

- 1. TST (Tuberculin Skin Test)
 - A TST is an acceptable alternative in settings where an IGRA is unavailable, too costly, or too burdensome.
- 2. IGRA (Interferon-Gamma Release Assays)
 - Recommended for individuals 5 years or older

**TAKE ON
LATENT TB
INFECTION**

Treating latent tuberculosis (TB) infection prevents TB disease.

**A TB skin test or
TB blood test can
find TB infection.**

www.cdc.gov/tb

CDC Centers for Disease Control and Prevention
National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention

The graphic features a purple background with white and yellow text. It includes an illustration of a hand with a syringe icon on the forearm labeled 'TB SKIN TEST' and three test tubes labeled 'TB BLOOD TEST'.

Mantoux: TB skin test, tuberculin skin test, and PPDs

- Use a tuberculin Syringe
- TST is an intradermal injection
- Apply 0.1 ml of mantoux solution
Into the inner surface of the forearm
- Goal is to make a wheal
- Gloves are not required



Reading TST



≥ 5 mm of induration

- Known or suspected to have HIV infection
- Recent contacts to an active case of pulmonary or laryngeal TB
- Fibrotic changes seen on chest radiograph consistent with TB
- Immunosuppressed individuals

≥ 10 mm of induration

- Individuals with no known underlying conditions

IGRA Interferon-Gamma Release Assays *Blood Tests for TB Infection₁*

- QuantiFERON®-TB Gold
- T-SPOT®.TB test (T-Spot)



- U.S. Preventive Services Task Force recommends testing for TB as a part of standard preventive care for certain at-risk groups
 - Populations at increased risk for LTBI include persons who were born in, or are former residents of, countries with increased tuberculosis prevalence¹
 - Persons who live in, or have lived in, high-risk congregate settings (e.g., homeless shelters and correctional facilities)
- CDC recommends treatment of LTBI to reduce the number of persons developing TB disease

- Persons with silicosis, diabetes mellitus, chronic renal failure, gastric bypass
- Contacts to active cases
- People with weakened immune system ¹
- People who have symptoms of TB disease ²
- People who live or work where TB disease is more common ³
- People who use illegal drugs

- 9-months Isoniazid (INH) Regimen Daily¹
- 12-Dose (3 months) Isoniazid and Rifapentine [RPT] Regimen- Once weekly²
- 4-months Rifampin (RIF) Regimen Daily³
- There are certain restrictions for each of these regimen



- Health care providers can submit a report of a TB infection, such as a positive skin tuberculin test or interferon-Gamma Release Assay (IGRA) using a Confidential Morbidity Report (CMR).
- Any active or suspect cases must be reported using the forms outlined in “Report a Case of Tuberculosis” section. These types of cases will not be accepted on a CMR form.



- Health care providers must report **suspected** or **confirmed cases** of TB to the Tuberculosis Control Program. using the forms (Initial TB case report form) outlined in “Report a Case of Tuberculosis” section within 24hrs.

These types of cases will not be accepted on a CMR form

- Please follow the [TB Health Facility Discharge Planning Guidelines](#) for your hospitalized or clinic patients.
- Fax all records and completed forms to (909) 387-6377.
- Follow up with a phone call to one of our TB nurses at (800) 722-4794.

- Visit the Centers for Disease Control website for updated information
www.cdc.gov/tuberculosis
- Visit the California Department of Public Health website for information
www.cdph.ca.gov/programs/tuberculosis.
- Visit the San Bernardino Public Health Department general information
<http://wp.sbcounty.gov/dph/programs/cds/>
- CTCA-California Tuberculosis Controllers Association
www.ctca.gov
- SNTC-Southeastern National Tuberculosis Center
www.sntc.medicine.ufl.edu/

- <https://academic.oup.com/cid/article/64/2/111/2811357>
- https://www.huffingtonpost.in/urvashi-prasad/busting-five-popular-misc_b_8210240.html
- <https://choma.co.za/articles/403/myths-and-misconceptions-about-tb>
- <https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/TBCB-TB-Provisional-Tables-2017.pdf>
- <https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/TB-Disease-Data.aspx>
- NIH – National Institute of Health
- NTCA - National Tuberculosis Controllers Association
- Stewart RJ et al. MMWR 2018 Mar 23;67(11):317-23



Tuberculosis Control

- *Call-in number: 1-800-722-4794*
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- *Email: Oteiko@dph.sbcounty.gov*