A Story of Tuberculosis in Contra Costa County

Mario was 18 years old in 1938 when he was diagnosed with tuberculosis (TB). His illness was discovered during a school health screening at his high school in Martinez. At that time, one in nine adults died of TB and there were no medications to treat it. Mario was sent to Alum Rock sanatorium in San Jose. He was put on bed rest (he was only allowed to get up to go to the bathroom), required to eat a large amount of healthy food daily, and had air pumped into his chest cavity to collapse the part of his lung that was most affected by the TB infection. When he was sent home two months later, he continued on a strict regimen of diet and rest. He went to his doctor regularly to make sure his lung remained collapsed for the next 4 years, though he was able to return to school in the fall of 1939.

Mario continued to report to the Contra Costa County Health Department for yearly chest x-rays until 1977 when he was 57 years old. If Mario contracted TB today, he would be one of only 40 cases in the county. The rate of people who get TB in California has decreased 24 fold since 1938. Mario would take 6-9 months of medications for his TB in his community instead of having to leave his family and suffer a painful procedure far from home. He would have to stay home from school for 2-3 weeks instead of 11/2 years. Due to the hard work of scientists, healthcare professionals, and the public health workforce, in the past 100 years, TB has gone from a terrifying disease that was the number one cause of death and disability in the US, to an illness that is treatable and curable. We are lucky here in Contra Costa County to have access to the benefits of TB care and prevention that are still not available in many parts of the world today.

Public Health Department Role in Managing Tuberculosis

The Contra Costa Public Health Department TB Control Program is responsible for protecting the health of both individuals and our community. We are charged with investigating persons with known or suspected TB disease as well as persons exposed to TB to ensure successful TB treatment and to prevent the spread of TB in our community. The team of Public Health Nurses (PHN) and Disease Intervention Technicians monitor each person closely to ensure those with TB disease receive effective treatment, and those exposed to TB disease or are new Americans from TB-endemic countries (B-Immigrants) are located and receive prompt evaluation and treatment services. This is accomplished by intensive case management, thorough contact investigations and daily home visits to provide Directly Observed Therapy (DOT).

Tuberculosis and COVID-19

Among persons with TB disease in California in 2020, 141 (8.3%) also had COVID-19 infection identified in 2020. TB and COVID-19 occurred within 120 days among 81 cases. Most persons who had both TB and COVID-19 in 2020 were Hispanic (n=80, 56.7%) or Asian (n=49, 34.8%), and 122 (86.5%) were born outside of the U.S., demonstrating the overlap of communities disproportionately affected by COVID-19 and TB. Patients with TB/COVID-19 co-infections are thought to have poorer treatment outcomes.

Racial and Ethnic Disparities

Country or Region of Birth for Persons with TB Disease, Contra Costa County, 2017-2021

<table>
<thead>
<tr>
<th>Country or Region of Birth</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Philippines</td>
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<td>India</td>
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</tbody>
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*TB in California: 2021 Snapshot, TBCD/CDPH (see attached)
In Contra Costa, high-risk communities with demonstrated disparities in healthcare access continue to bear a significant burden of TB disease.

The TB rate in Contra Costa was 5x higher in persons born outside the U.S. than the rate among U.S. born persons.

The majority of TB cases in Contra Costa County come from the highest burden countries in the world—The Philippines, India, Mexico, China.

According to CDPH, only about 10% of the State’s cases are due to recent transmission in the United States.

**Risk Factors and Their Effect on Progression to Disease 2017-2021**

- Diabetes
- Immunosuppressed
- Contact to person with infectious TB
- Renal Disease
- Substance Abuse
- Resident of Long Term Care Facility
- LTBI Incomplete RX
- Homelessness
- Post Organ Transplant

Diabetes is increasingly recognized as a risk factor for progression to TB disease as well as requiring longer treatment duration. Blood sugar control is essential to improving TB disease outcomes.

**Resources for Management of Tuberculosis in Contra Costa**

- Tuberculosis Client Services (TBCS) at Contra Costa Public Health 925-313-6740
  - [cchealth.org/tb](http://cchealth.org/tb)
- Curry International TB Center (CITC) Warmline 877-390-6682 or email [currytbcenter@ucsf.edu](mailto:currytbcenter@ucsf.edu)
- California Department of Public Health Tuberculosis Control Branch (510) 620-3000 or [tbcb@cdph.ca.gov](mailto:tbcb@cdph.ca.gov)

*TB in California: 2021 Snapshot, TBCB/CDPH (see attached)