

Expanding Access to Tuberculosis Prevention to Vulnerable Californians

SUMMARY

Tuberculosis (TB) disease is an illness caused by the bacteria *Mycobacterium tuberculosis*. TB usually affects the lungs and spreads through the air when a person sick with TB coughs. Not everyone infected with the bacteria becomes sick. People that have been infected but are not sick have latent tuberculosis infection (LTBI). People with LTBI can become sick with TB disease in the future if they are not treated.

TB disease has profound medical and economic consequences. In 2021, California reported 1,750 new TB cases, approximately 4 out of every 100,000 California residents; nearly double the national TB incidence. Among people with TB disease, half are hospitalized and one in six dies within five years of diagnosis. TB hospitalizations are twice as expensive as and four times longer than hospitalizations for other conditions, usually about 11 days. Medical and societal costs of TB reached \$203 million in California in 2021.

TB disease does not impact Californians equally. Those born in countries where TB is endemic, and those living in economically disadvantaged communities, are more often impacted by TB disease. The TB disease rate among people born outside the U.S. is 12 times higher than U.S.-born persons. TB disease rates among people who are non-U.S.-born Asian or Black are 52 and 40 times higher, respectively, than White people born in the U.S. The TB disease rate among non-U.S.-born Hispanic people is 23 times that of U.S.-born Hispanic, White people. Persons living in census tracts with low socio-economic status (SES) have higher TB rates than those living in high SES census tracts, whether measured by education level, poverty, crowding or California Healthy Places Index quartiles. Additionally, persons with TB disease who experience homelessness are 30% more likely to die with TB disease.

In 2021, an estimated 87% of TB cases were attributable to progression of LTBI to active TB disease, while an estimated 3% of cases were in persons who arrived in California with active TB disease from outside the United States, and another 10% resulted from recent transmission. More than two million Californians (6% of the population) have LTBI, and only 20% are aware of their infection. Because the vast majority of TB cases occur due to progression from LTBI, treating LTBI will prevent many TB disease cases in California.

The United States Preventive Services Task Force (USPSTF), the leading national agency for assessing prevention, recommends screening for LTBI in populations at increased risk and has established LTBI testing and treatment as standard of care. In addition, targeted testing and treatment has been shown to be cost effective.

TB prevention is far less costly than TB treatment. The cost to treat LTBI is low (\$857) compared with the cost of diagnosing and treating someone with active TB disease (\$43,900). Because TB disease is contagious, preventing TB disease for someone with LTBI means preventing potential transmission to their family and friends.

The Coalition for a TB-free California respectfully requests a one-time allocation of **\$12 million General Fund over 5 years** to enable the California Department of Public Health TB Control Branch (TBCB) and local health jurisdictions (LHJ) to establish up-to five TB prevention projects targeting geographic areas with populations vulnerable to TB disease. Partnerships will be established with community-based organizations (CBO) and community health centers (CHC).

THE PROBLEM

Despite annually costing California hundreds of millions of dollars in medical and societal expenses, a significant burden of disease, and the availability of simple, efficient, and effective prevention treatments, TB has been underfunded and overlooked for decades. When it comes to TB, treatment is prevention. The disease is only contagious when it is in active disease form. When TB is in its inactive or latent form (LTBI), which can be detected with a TB skin or blood test, it is not contagious. Treatment of LTBI can prevent active cases of TB, and the consequences of infecting others. Most California TB disease cases arise from reactivation of LTBI acquired in the past, often outside the U.S. Public Health is currently funded to find, test, and treat active TB disease and to screen and treat, if necessary, close contacts to active TB disease cases. There is no funding currently to find, test and treat those with LTBI in the communities at highest risk for developing TB disease despite the health and economic cost savings this could manifest.

THE SOLUTION

The Coalition for a TB-free California respectfully requests a one-time allocation of **\$12 million General Fund over five years** to enable TBCB and LHJs to establish up-to five TB prevention projects targeting geographic areas with populations vulnerable to TB disease. Partnerships will be established with CBOs and CHCs to scale-up LTBI outreach, education, screening, testing, and treatment in communities disproportionately impacted by this deadly preventable airborne infectious disease.

The goals will be to:

- Increase TB awareness and demand for LTBI screening, testing and treatment
- Ensure appropriate patient referrals/linkage to care and follow-up
- Increase provider adoption of LTBI testing and treatment best practices
- Increase patient acceptance of LTBI treatment initiation and completion
- Monitor, evaluate and improve project outcomes

TBCB role/activities:

- Project selection and coordination to prevent duplication of effort at the local level
- Technical assistance for provider adoption and patient awareness campaigns
- Technical assistance for CBO and CHC staff TB prevention training and education
- Technical assistance for LHJ
- Analyze barriers to scale-up and mitigate them with partners
- Establish, monitor, and evaluate project outcomes

LHJ role/activities:

- Create project team to increase CBO and CHC commitments and activities for TB prevention
- Provide training to CBO staff
- Provide training and clinical consultation to CHC staff
- Provide epidemiological technical assistance to CHCs
- Establish, monitor, and report on project outcomes

CBO role/activities:

- Partner with LHJ to conduct LTBI awareness and education campaigns in high-risk communities
- Support high-risk patients' access to prevention activities (i.e., linkage to care for screening, testing, and treatment, if indicated)
- Increase community engagement for patient acceptance of LTBI treatment initiation and completion

CHC role/activities:

- Scale-up TB prevention services, e.g., LTBI screening, testing and treatment
- Increase provider adoption of LTBI testing and treatment
- Increase patient acceptance of LTBI treatment initiation and completion
- Track and monitor patients on LTBI treatment to ensure treatment completion
- Collaborate with local TB program epidemiologists to measure steps in the LTBI care cascade and implement iterative quality improvement assessments to maximize LTBI linkage to care and treatment completion

STAFFING

TBCB: (up to \$0.5M annually until the five-year funds are depleted for this TB prevention expansion effort)

- Full-time project director to provide project selection, coordination to prevent duplication of effort at the local level and ensure continuity, and technical assistance to all partners
- Full-time health educator to develop materials, implement learning collaboratives/communities of practice, and other trainings
- Part-time public health medical officer for providing clinical technical assistance and training
- Part-time epidemiologist to establish, monitor, and evaluate project outcomes and provide technical assistance

LHJs: (up to \$2.5 M annually until five-year funds are depleted for this TB prevention expansion effort)

- Five project teams to each include hiring full or part-time clinician, epidemiologist, and health educator

PUBLISHED DEMONSTRATION PROJECTS

Truax, Fayette Nguyen PhD; Low, Julie MD; Mochizuki, Tessa MPH; Asfaha, Setie MPH; Nguyen, Tu Ngoc DNP; Carson, Michael MSPM; Katrak, Shereen MD, MPH; Shah, Neha MD, MPH; Nguyen, Duc DO Latent Tuberculosis Infection Testing and Treatment at a Federally Qualified Health Center in Southern California, J Nurs Care Qual. 2022 Apr-Jun;37(2):155-161. doi: 10.1097/NCQ.0000000000000579.

<https://pubmed.ncbi.nlm.nih.gov/34261089/>