

JUNE 2021

QUALITY IMPROVEMENT STRATEGIES FOR LATENT TUBERCULOSIS INFECTION TESTING AND TREATMENT FOR HEALTH CENTERS SERVING ASIAN, ASIAN AMERICAN, NATIVE HAWAIIAN, AND PACIFIC ISLANDER COMMUNITIES

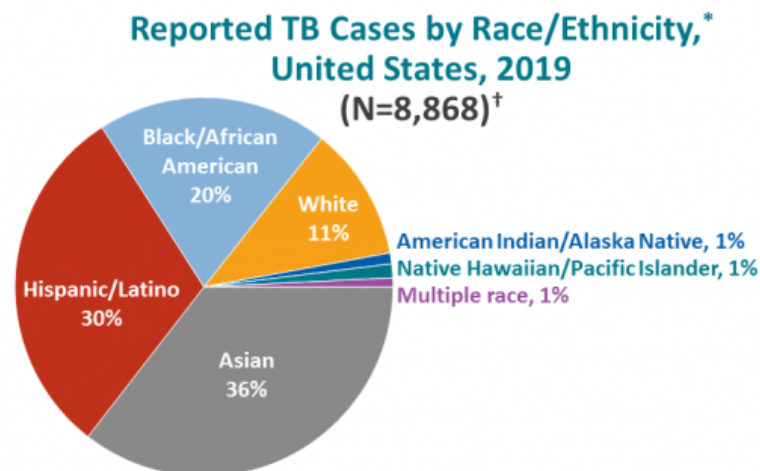
Association of Asian Pacific Community Health Organizations (AAPCHO)
Tuberculosis Elimination Alliance



A/AA AND NH/PI LANDSCAPE

Asian/Asian American (A/AA) and Native Hawaiian/Pacific Islander (NH/PI) communities continue to be impacted by tuberculosis (TB) at a greater rate compared to other racial and ethnic groups. Countries with the highest TB burden among non-U.S.-born Asians and Pacific Islanders include the Philippines, India, Vietnam, China, Myanmar, and the Marshall Islands ([CDC, 2021](#)).

In 2019, more than 8,900 cases of TB were reported in the United States. Pacific Islander populations have the highest TB incidence rate of 17.6 cases per 100,000 persons, and Asian populations have the second highest TB incidence rate of 16.7 cases per 100,000 persons. Incidence rates vary widely when A/AA and NH/PI subgroups are disaggregated. To address these TB incidence inequalities, the [TB Elimination Alliance](#) aims to conduct outreach to underserved A/AA and NH/PI communities most affected by TB; increase awareness and understanding of culturally and linguistically appropriate latent TB infection (LTBI) and TB testing and treatment strategies; share resources and best practices among providers; and develop partnerships to scale existing initiatives.



* All races are non-Hispanic; multiple race indicates two or more races reported for a person but does not include persons of Hispanic/Latino origin.

[†] Excludes unknown/missing values

Source: CDC Division of Tuberculosis Elimination, 2020

LEARNING COLLABORATIVE INITIATIVE

The Uniform Data System currently does not report on LTBI, and TB remains a clinical priority among health centers who serve the A/AA and NH/PI populations. To prioritize LTBI and TB disease management, AAPCHO and the TB Elimination Alliance organized an online Learning Collaborative from March-April 2021 for interdisciplinary healthcare providers and administrators from health centers, community-based organizations, and public health departments to explore quality improvement strategies for standardized LTBI testing and treatment data collection.

The Learning Collaborative goals include the development of enhanced electronic health record templates, education on the 12-dose regimen, guidance on TB as a national clinical quality measure, and training for clinical and enabling services providers who focus on LTBI testing and treatment.

This Learning Collaborative was supported by the Centers for Disease Control & Prevention (CDC) and the Health Resources & Services Administration (HRSA); and modeled after quality improvement initiatives created by TB Free California. AAPCHO and the TB Elimination Alliance would like to recognize the following TB Subject Matter Experts:

- **Amy Tang, MD**, *Director of Immigrant Health* at North East Medical Services (California)
- **Fayette Nguyen Truax, PhD, RN, CPNP-PC**, *Assistant Professor, Nurse Practitioner* at Loma Linda University (California)
- **Kara Green, FNP**, *Clinical Director, Family Practice and Continuous Quality Improvement Officer* at HOPE Clinic (Texas)

All TB Subject Matter Experts provided key insights on their efforts around LTBI and TB testing and treatment data collection.

For information about the TB Elimination Alliance, visit www.tbeliminationalliance.org.

LEARNING COLLABORATIVE GOALS AND LESSONS LEARNED

The Learning Collaborative focused on the following goals:

Develop local solutions to improve LTBI management

Build a transformative quality improvement agenda

Learn from Subject Matter Experts - challenges, best practices, and peer-to-peer learning

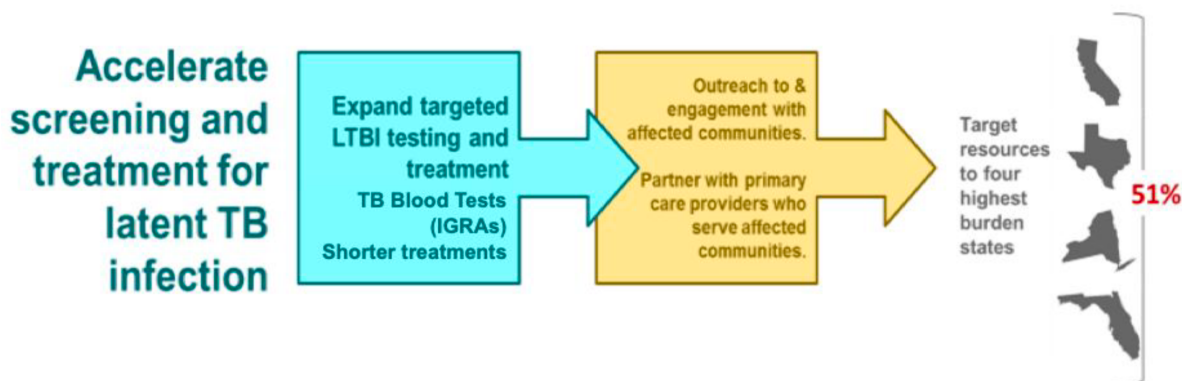
The Learning Collaborative provided educational resources on the following:

- Quality Improvement Tools (Page 5 and 6)
 - CDC Strategy for Addressing LTBI
 - LTBI Care Cascade
- Cause and Effect Diagrams (Page 7)
 - Root Cause Analysis
 - Fishbone Diagram

Health centers, community-based organizations, and public health departments are encouraged to utilize these resources to adopt continuous quality improvement strategies that can result in improved processes for LTBI and TB data collection.

QUALITY IMPROVEMENT TOOLS

CDC STRATEGY FOR ADDRESSING LTBI



Source: CDC Division of Tuberculosis Elimination, 2019

Regarding the *CDC Strategy for Addressing LTBI* diagram, here is one recommendation by Learning Collaborative participants and TB Subject Matter Experts:

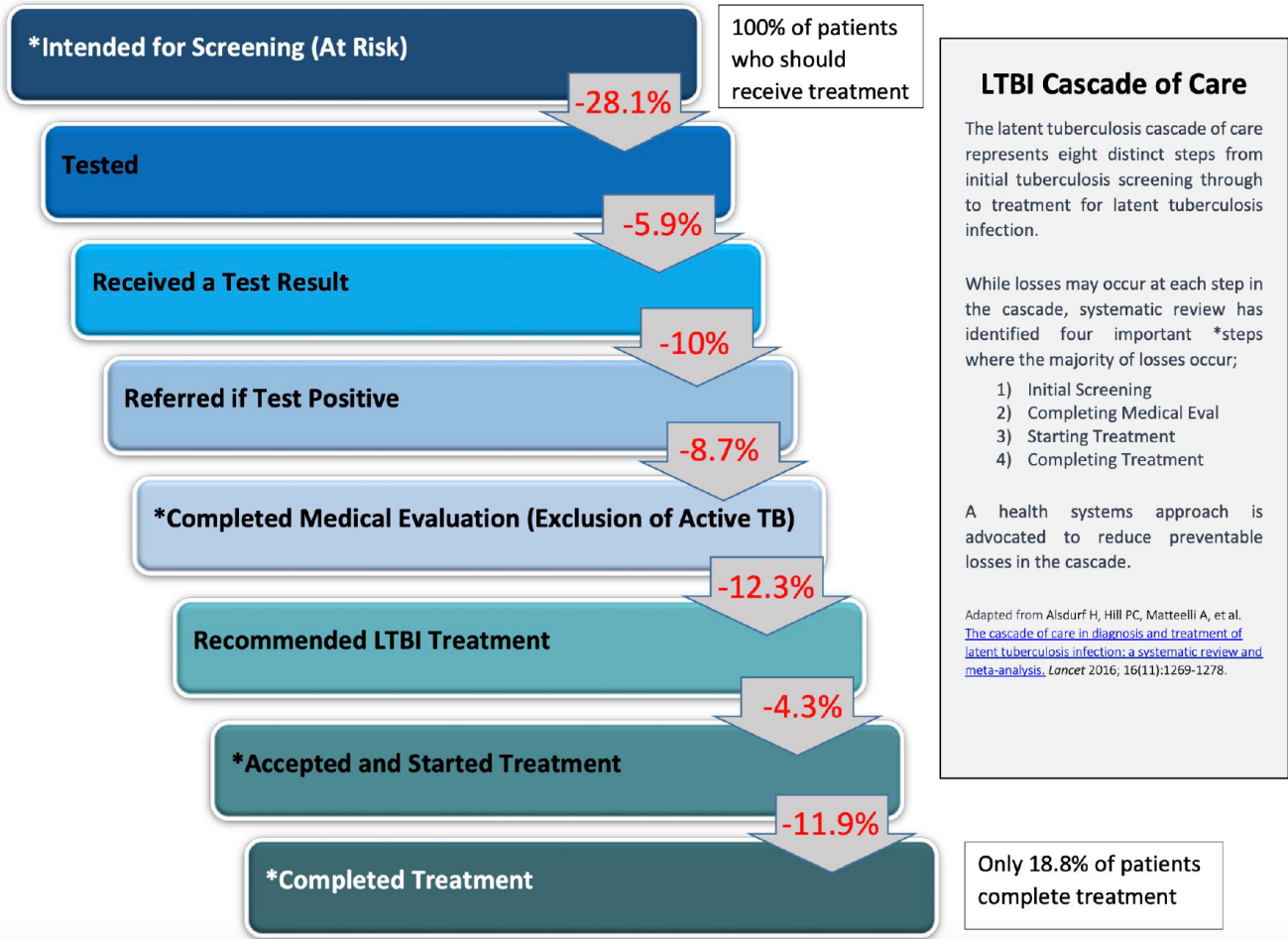
- Expanding the "expand targeted LTBI testing and treatment" approach to "expand targeted LTBI **screening**, testing, and treatment". Screening is a critical aspect of LTBI and TB care, prior to testing and treatment.

Additional Resources to Address LTBI

- For CDC's targeted testing and treatment recommendations, visit <https://www.cdc.gov/tb/publications/ltbi/ltbiresources.htm>.
- This guide is intended for primary care providers who care for individuals and populations who may be at risk for infection with *M. tuberculosis*: <https://www.cdc.gov/tb/publications/ltbi/pdf/LTBIbooklet508.pdf>.

QUALITY IMPROVEMENT TOOLS

LTBI CARE CASCADE

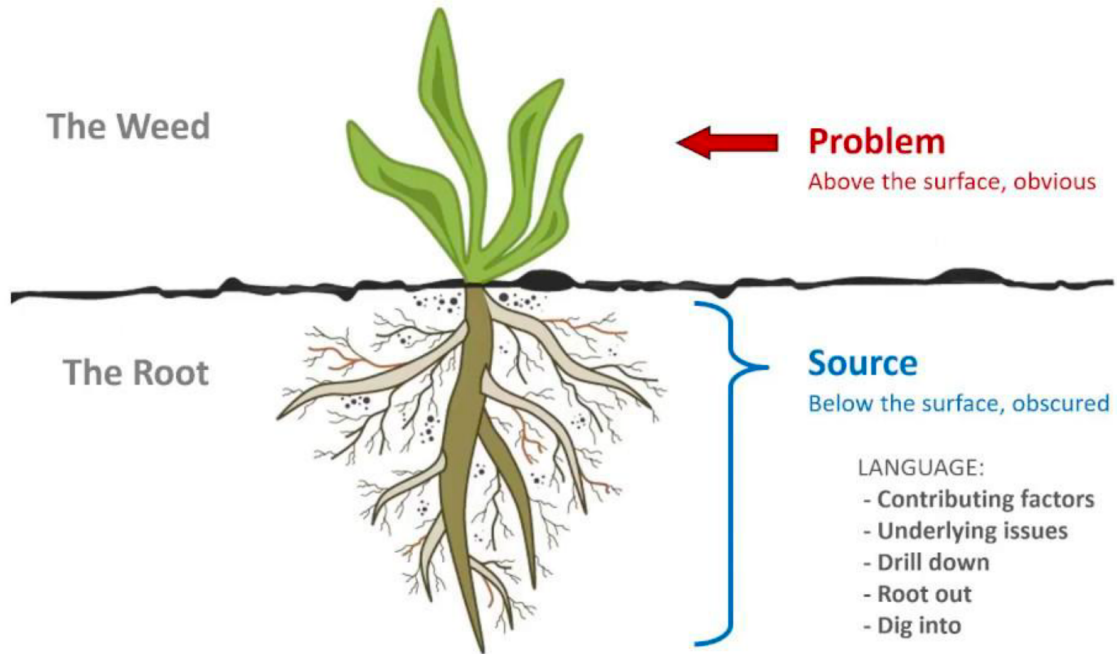


Source: IHS.gov

In order to provide quality care for persons with LTBI, it is necessary to understand the complex, multi-staged patient journey known as the LTBI cascade of care (Hannah & Dick, 2020). The LTBI cascade of care represents eight distinct steps from initial tuberculosis screening through to treatment for LTBI.

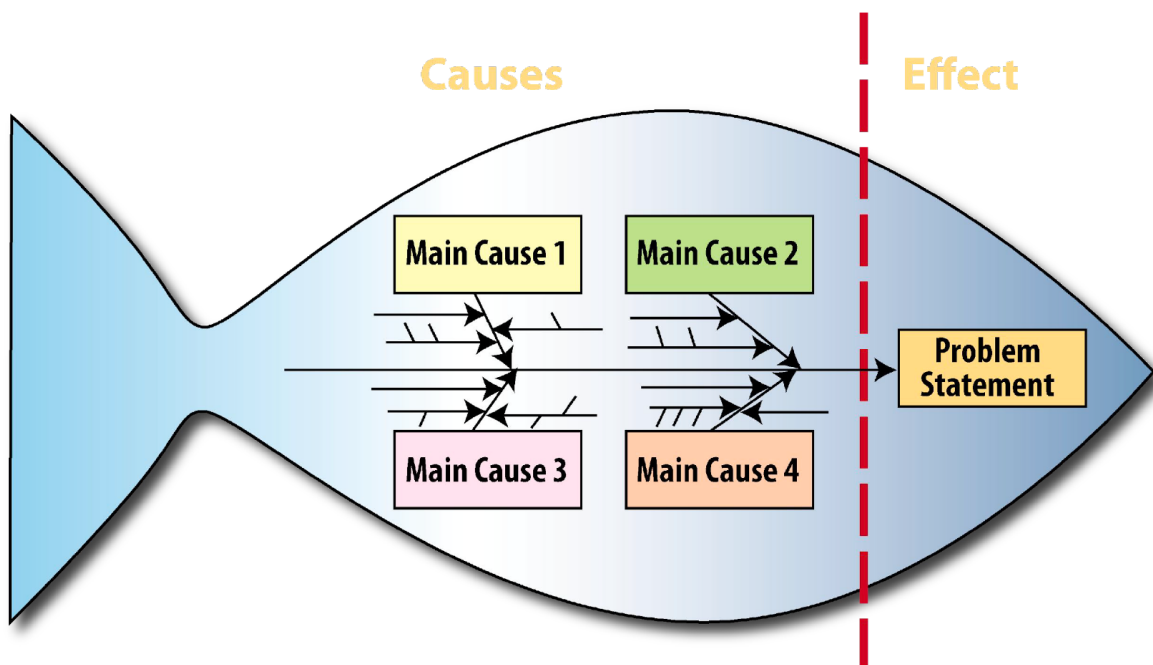
CAUSE AND EFFECT DIAGRAMS

ROOT CAUSE ANALYSIS - THE CONCEPT



Source: ThinkReliability, 2018

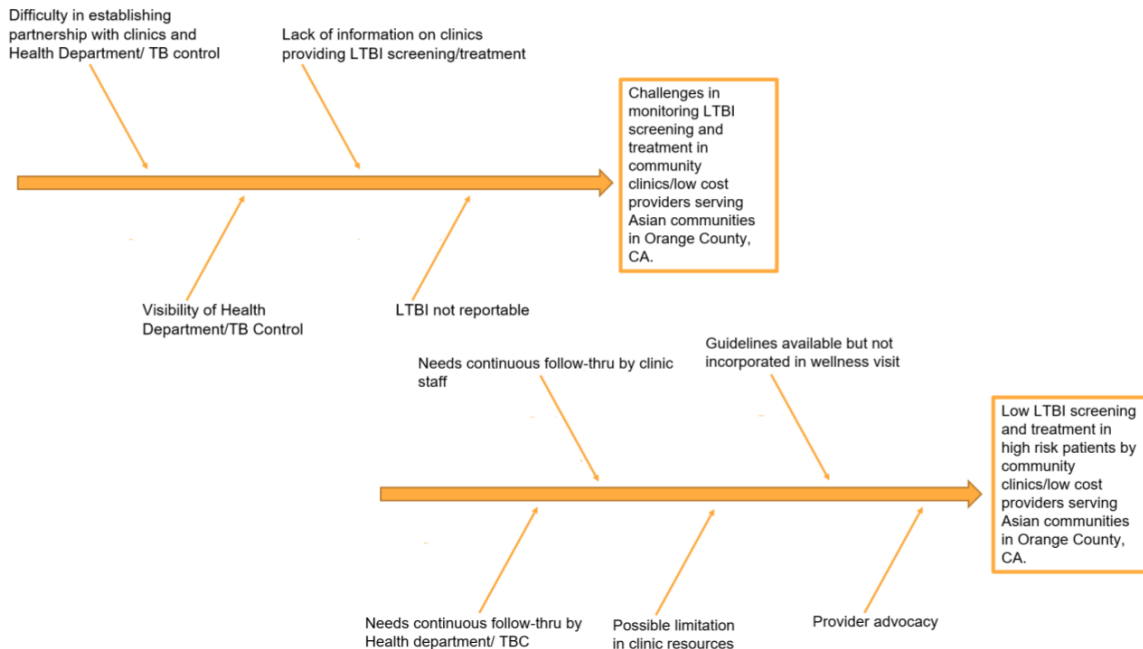
FISHBONE DIAGRAM



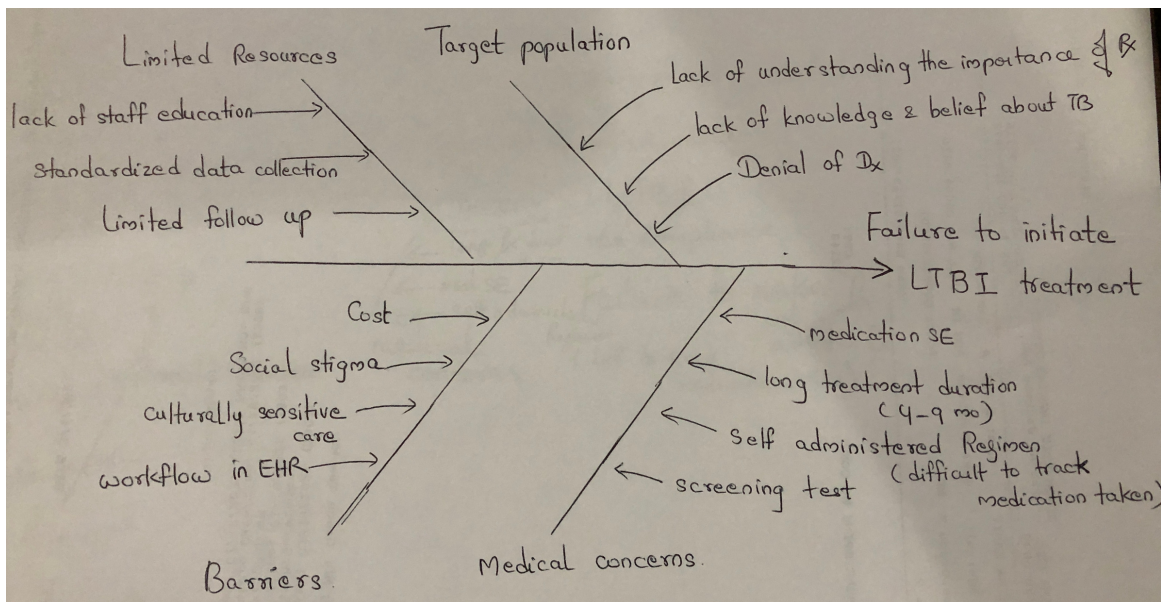
Source: AIDS Education & Training Centers, 2007

FISHBONE DIAGRAMS CASE STUDIES

The Learning Collaborative consisted of a cohort of healthcare providers and administrators from health centers, community-based organizations, and public health departments. The following are fishbone diagrams and SMART solutions developed by the cohort members.

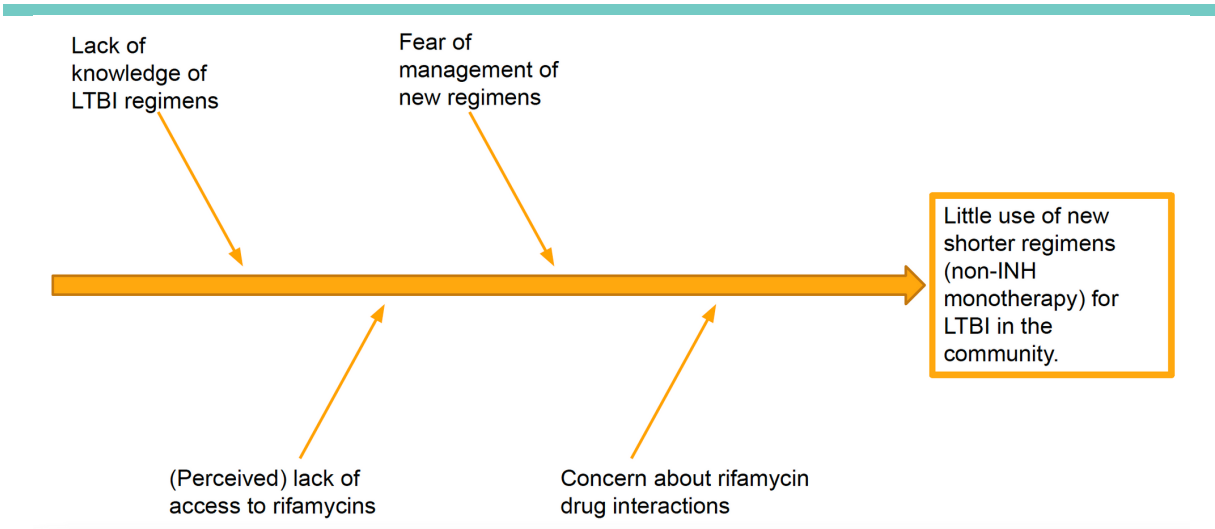


Case Study 1

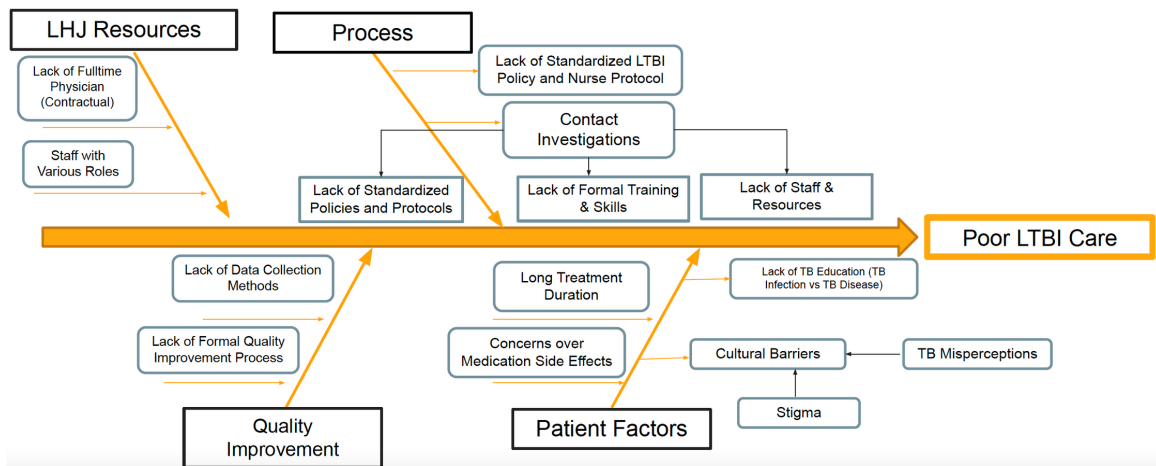


Case Study 2

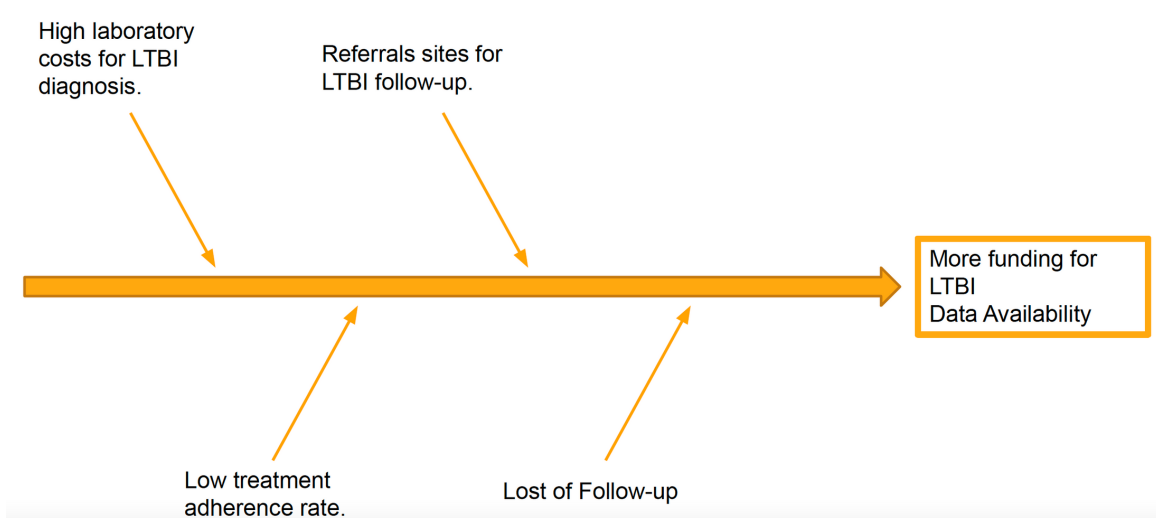
FISHBONE DIAGRAMS



Case Study 3



Case Study 4



Case Study 5

SMART SOLUTIONS

Main Cause	Specific	Measurable	Attainable/Achievable	Relevant (Yes/No)	Time Bound
Difficulty in establishing partnership w/ community clinics/ low cost providers	Identify target community clinic/provider	Present plan to health department program manager	Initiate contact with key personnel in community clinic (CFO/CMO), set appointments and follow-thru to build rapport	Yes	1 month
Visibility of health department/TB control	Create awareness in community clinic/ low cost providers	Discuss avenues, means/resources needed to program manager	Participate in community fairs, do house calls, provide literatures/posters of program and services provided	Yes	1 year
Lack of information on clinics providing LTBI screening/ treatment	Build a database, update list of community clinics, low cost providers that screen and treats LTBI	Tap various programs to obtain partner, existing community clinics/providers	Do call outs, provide TB education- advocate for LTBI screening/treatment beyond active TB disease management	Yes	2 months
LTBI diagnosis/treatment not reportable in general (CS/B waivers, contacts accounted for)	"Encourage" reporting in partner community clinic/low cost provider (until it becomes a must for all in OC, CA)	Present plan to health department program manager then collaborate with partner clinics, PCPs.	Establish screening/ treating/ documentation and reporting "system" with partners	Yes	1 Year(?)

Solutions for Case Study 1

Main Cause	Specific	Measurable	Attainable/Achievable	Relevant (Yes/No)	Time Bound
Limited Resources	Implementation of LTBI info in workflow and train staff to use daily	Increase number of providers and staff using guidelines (follow up with provider progress report to achieve department goal of 65%)	Provide available resources for providers within the organization	Yes – system level change	Short term within 3-6 months
Lack of population awareness	Need to provide LTBI educational materials and posters	Increase people awareness and ask for screening tests (data collection to identify the case)	Easily accessible in the clinic and website	Yes – knowledge about LTBI and understanding the importance of early testing and getting treatment	Within a year after COVID is well controlled

Solutions for Case Study 2

Main Cause	Specific	Measurable	Attainable/Achievable	Relevant (Yes/No)	Time Bound
Lack of knowledge of LTBI regimens	Providers will name regimens based on a post-education knowledge assessment	80% of providers will be able to name 3 LTBI treatment regimens	Yes	Yes	End of the educational session
Fear of management of new regimens	Providers will be more confident about prescribing based on post-education self-report assessment	80% of providers will be more confident in prescribing at least 1 short-course LTBI regimen	Yes	Yes	End of the educational session
(Perceived) lack of access to rifamycins	Providers will name way of procuring rifamycins based on a post-education knowledge assessment	80% of providers will be able to name 1 way of procuring rifamycins for LTBI treatment	Yes	Yes	End of the educational session
Concern about rifamycin drug interactions	Providers will be able to identify a resource based on a post-education knowledge assessment	80% of providers will be able to identify a 1 resource for rifamycin drug-drug interaction information	Yes	Yes	End of the educational session
	Providers will be more confident in managing rifamycin drug-drug interactions based on a post-education self-report assessment	70% of providers will be more confident in managing rifamycin drug-drug interactions themselves or through consultation			

Solutions for Case Study 3

SMART SOLUTIONS

Main Cause	Specific	Measurable	Attainable/Achievable	Relevant (Yes/No)	Time Bound
LHJ Resources	Need for FT TB Physician	Collaborate with Bureau Manager/ TB Controller	Assess departmental ability to hire FT TB physician	Y	Within 6 mos-1 year
Patient Factors: Long Treatment Duration	Recommend shorter regimens: 3HP/4R to LTBI patients	Improved LTBI initiation & completion rates	LTBI initiation to 75%- 90%; LTBI completion to 83%-93%	Y	Within 6 mos-1 year
Process: Contact Elicitation	Use of QFT	Increase rates of TB screening/examination of contacts	Increase examination rates from 88% to 94%	Y	Within 6 mos-1 year
Lack of Interclinic screening and referral?	Improve targeted testing within the LHD	Create a screening and referral process within LHD for targeted testing	Employing a TB risk questionnaire during the registration process; referral to TB clinic if high-risk	Y	Within 6 mos-1 year

Solutions for Case Study 4

Main Cause	Specific	Measurable	Attainable/Achievable	Relevant (Yes/No)	Time Bound
Increase funding for LTBI testing within African immigrants in NYC.	Report LTBI screening, testing and follow up.	90%	Data Accuracy. Reduce client lost of follow up. Advocacy.	Yes	June 2022

Solutions for Case Study 5

RECOMMENDATIONS

Health centers, community-based organizations, and public health departments are encouraged to pursue quality improvement strategies to systematically address key barriers and solutions for LTBI and TB data collection. With a continuous quality improvement framework, providers will be able to strengthen their LTBI Care Cascade to increase screening, testing, and treatment for vulnerable A/AA and NH/PI communities disproportionately impacted by LTBI and TB.

For more information about the TB Elimination Alliance and future training opportunities, visit <https://tbeliminationalliance.org/>.

Disclaimer

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