

Ethical Access To Care in TB

John Scott Milton, MD
April 16, 2026

Screening and Treating Tuberculosis Infection • April 16, 2026 • Midland, Texas

John Scott Milton, MD

Has the following disclosures to make:

- No conflict of interests
- No relevant financial relationships with any commercial companies pertaining to this activity

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Department of State Health Services
Public Health Region 1

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Objectives

- Discuss tuberculosis as a disease with global impact.
- Recognize the stigma associated with TB.
- Discuss tuberculosis access to care and funding.
- Identify ethical issues in tuberculosis prevention, care and control.



Burden of TB in the US & Globally

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Global:

2 billion TB Infection

10 million TB Disease

1.23 MILLION DEATHS


*USA:

13 million TB Infection

10,260 TB Disease

600 - 800 DEATHS






Global tuberculosis report 2025

Global TB Burden, 2024


- Estimated **10.7 million** people fell ill with TB worldwide
- Estimated **1.23 million** people died from TB
- Around **87% of new TB cases** occurred in the **30 high TB burden countries**, with more than two-thirds of the global total in India, Indonesia, the Philippines, China, Pakistan, Nigeria, the Democratic Republic of the Congo, and Bangladesh



TEXAS Health and Human Services
Texas Department of State Health Services

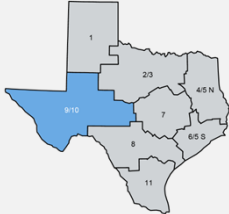
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TB Burden and Response, 2024



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- TB is the leading cause of death from a single infectious agent
- TB is the leading killer of people with HIV
- TB is a major cause of deaths related to antimicrobial resistance



Who carries the burden of tuberculosis?



...the most vulnerable

TB spreads in poor, crowded & poorly ventilated settings



TB linked to HIV infection, malnutrition, alcohol, drug and tobacco use, diabetes



1.23 million people died from TB in 2024



Migrants, prisoners, minorities, refugees face risks, discrimination & barriers to care



Social Justice

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- Social justice is a fundamental principle of public health,
- Focuses on protecting and improving the health of populations.
- Social determinants of health, significantly impact health outcomes.
- Therefore, addressing social injustices is crucial for achieving optimal public health.

Gostin LO, Powers M. What does social justice require for the public's health? Public Health Ethics and Policy Imperatives. Health Aff (Millwood) 2006; 25(4):1053-60.

Slide from presentation given by Erin Corriveau, MD, MPH in July 2024 at a TB Intensive, *A Discussion of Ethics in TB Care*



**SOCIAL JUSTICE
IN PUBLIC HEALTH
AND HEALTHCARE**

Social Justice

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- Concerned with inequalities and with the fair distribution of advantages and burdens among people
- Social inequalities drive TB, and TB drives many people deeper into poverty.
- Ending TB and addressing social determinants of health are interdependent.

<https://journalofethics.ama-assn.org/article/call-service-social-justice-public-health-issue/2014-09>



Roles of Social Justice in Public Health

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- **Identifying and addressing health inequities:**
Recognizing and challenging systemic inequalities that disproportionately affect marginalized communities.
- **Promoting health equity:**
Ensuring that all people have equal access to healthcare, resources, and opportunities to improve their health.
- **Advocating for policy changes:**
Influencing policies and regulations that support social justice and improve health outcomes for vulnerable populations.

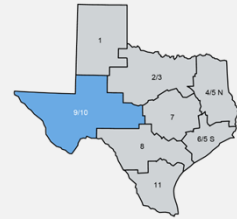


Types of Stigma

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- **Social stigma:** Patient may be rejected or discriminated against
- **Self-stigma (internalized):** Patient may feel guilt, shame or self-blame leading to isolation and depression
- **Institutional stigma:** Discrimination can occur in healthcare settings, employment, or housing policies

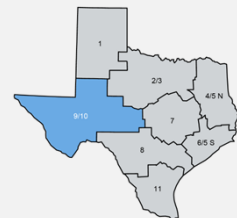


Why TB carries Stigma

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- **Association with poverty**
 - People link TB with poor-living conditions
- **Fear of infection; TB is contagious**
 - People often avoid those with TB
- **Association with HIV/AIDS**
 - In many countries TB is strongly linked with HIV, which carries its own stigma
- **Historical perceptions**
 - TB has long been seen as a shameful and dirty disease

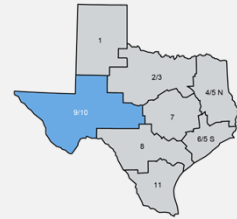


Consequences of Stigma

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- **Delayed diagnosis:** People may avoid testing because they don't want to be labeled as "having TB"
- **Treatment non-adherence:** Fear of being seen taking TB medication may cause patients to stop or hide treatment
- **Mental health burden:** Anxiety, depression and loss of self-worth are common
- **Economic impact:** Stigma may lead to loss of employment or educational opportunities



TB Photo Voice Participant

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Brenda, a TB Photo Voice participant: "We need to put an end to stigma, discrimination, negligence and indifference. We have the science, the medication and everything it takes to STOP TB. What is keeping us from doing this?"

"Stop the stigma, discrimination and negligence"

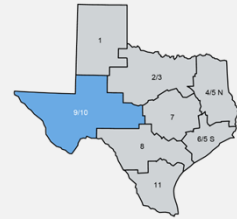


TB is a Unique & Painful Experience

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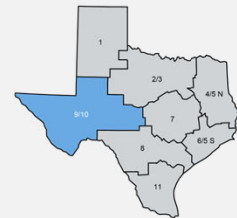
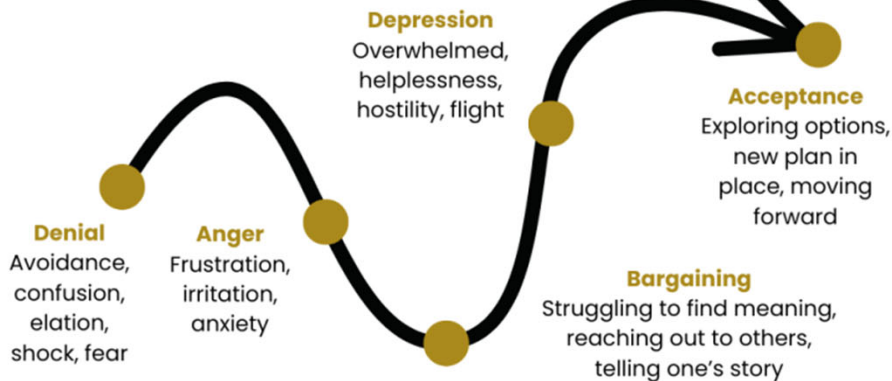
- Patients believe that TB is always an interruption in life (Physically, psychologically, economically and socially)
- People with TB are more likely to develop mental and psychological problems
- Following initial shock of diagnosis, a period of denial is followed by anger and depression



Kubler Ross Stages of Grief

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Mental Illness and TB

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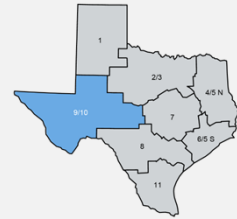
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Shared Risk Factors:

- Housing insecurity
- Alcohol, tobacco, or substance use
- Limited access to healthcare

Patients with mental illness and TB:

- **Higher risk** of TB acquisition and transmission
- **Poor adherence to** TB treatment
- After TB diagnosis risk of mental illness increases



TB research and treatment;2013;Article ID 489865

Depression is Common in TB Patients

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Shared Symptoms

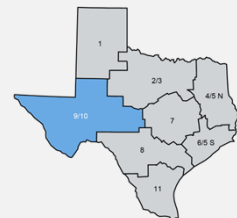
- Fatigue, weakness, low appetite, and low energy

TB Medications can affect mental health

- Drugs like **cycloserine** may cause confusion, mood changes, or even psychosis

Impact of Depression:

- Makes it harder to adhere and complete TB treatment
- Can **worsen disability**



Untreated Depression in TB Patients

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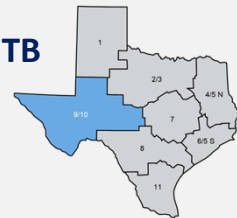
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Worsens TB outcome

Leads to:

- Lower quality of life
- More disability
- Higher risk of treatment failure
- Increased risk of death

Mental health screening and treatment should be part of TB treatment



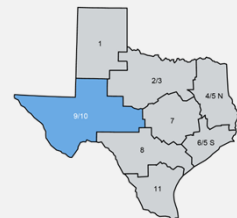
Bull World Health Organ 2018,96:243-25

Isolation

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- Feeling lonely, confined, and abandoned
- Shame from wearing a mask
- Feeling “dirty” or stigmatized- like a leper
- Social isolation: Distanced from family/friends
- Harmful myths: Needing separate dishes, clothes, or laundry



Chang B. Quality of life in TB: A review of English literature

TB Photo Voice Participant

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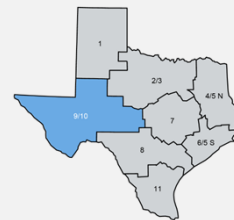
“Burning this mask was very important to me. I wore it for several months and it was very painful. My peers didn’t know what my face and smile looked like. When I burned the mask, it was like getting rid of the stigma (associated with Tuberculosis). I felt free.”



Resistance, co-infection, and other data...

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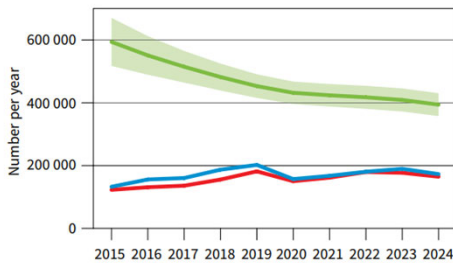


Drug Resistant TB

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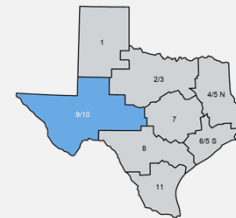
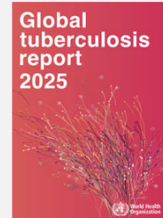
FIG. 24

Global number of people diagnosed with MDR/RR-TB (blue) and number enrolled on an MDR-TB treatment regimen (red), compared with estimates of the global number of incident cases of MDR/RR-TB (95% uncertainty interval shown in green), 2015–2024^a



^a The time period corresponds to the period for which estimates of the incidence of MDR/RR-TB are available.

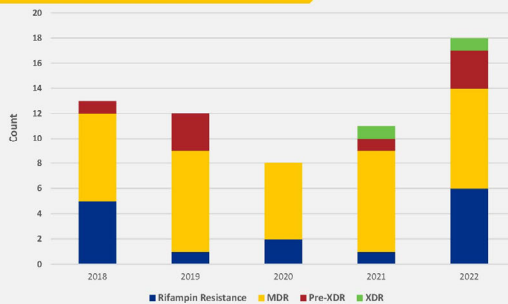
- 83% tested for rifampicin resistance
- 42% of MDR/RR-TB patients started treatment
- 71% of MDR/RR-TB are treated successful
- 97 countries use 6-month BPaLM regimen



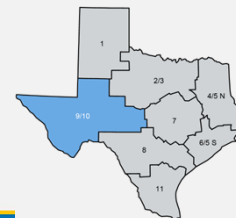
Drug Resistant TB in Texas

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Multi-Drug Resistant TB Cases in Texas, 2018 – 2022*



* Includes the following drug resistance patterns:
 Rifampin resistance: resistance to rifampin excluding MDR, pre-XDR, and XDR-TB.
 MDR TB: resistance to at least isoniazid and rifampin.
 Pre-XDR TB: resistance to isoniazid, rifampin, and a fluoroquinolone or second-line injectable.
 XDR TB: resistance to isoniazid, rifampin, a fluoroquinolone, and:
 A. A second-line injectable
 B. Bedaquiline or linezolid

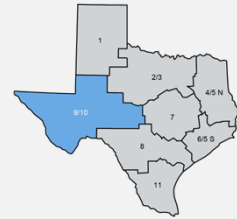


Spread of MDR-TB Greater than AIDS?

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- Unlike HIV, Tuberculosis is Airborne and Highly Contagious
- TB spreads through **casual, airborne contact**
- HIV spreads through **specific behaviors** (e.g., IV drug use, unprotected sex)
- TB poses a **greater risk** to the public

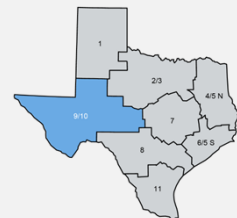


HIV and TB Co-Infection

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- People with HIV are **18x more likely** to develop active TB disease
- Progression from latent to active TB: **10% lifetime** without HIV **10% per year** with HIV
- TB is the **most common presenting illness** and **leading cause of death** in people living with HIV

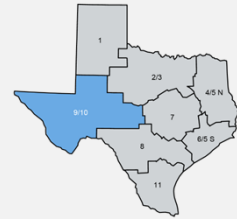


The Co-Epidemics of TB & HIV

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- **80%** global HIV testing among people with TB
- **56%** of people newly diagnosed with TB and HIV received ART (Antiretroviral Therapy)
- **13%** of all TB deaths were due to HIV co-infection
- In some high-burden countries, HIV prevalence among people with TB exceeds **40%**

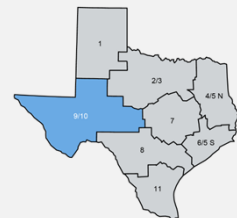


Effects of HIV on TB

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- **HIV and TB – AIDS-defining illness**
- HIV **accelerates** TB progression
- HIV **increases the risk** of extra pulmonary and disseminated TB
- TB is **more difficult to diagnose** in HIV infected patients
 - Sputum often AFB smear negative
 - CXR may be normal



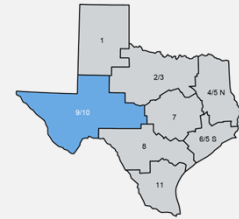
Neil A. Martinson; Proc Am Thorac Soc Vol 8. pp 288–293, 2011

Effects, cont.

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- TB **increases** risk of death in HIV infected patients
- TB **increases** HIV viral load
- TB **worsens** HIV infection outcome



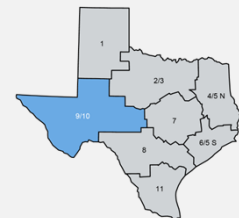
Badri M, Association between tuberculosis and HIV disease progression Int J Tuberc Lung Dis. 2001;5(3):225.

Case Management of Co-Infection

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- **Consult** an expert in management HIV and TB
- **Ensure** adherence to ART and TB meds
- **Monitor** drug-drug interactions
- **Beware** of IRIS (Immune Reconstitution Inflammatory Syndrome)
- **Manage** side effects of medications
- **Prevent** TB treatment failure and relapse

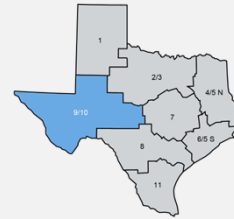
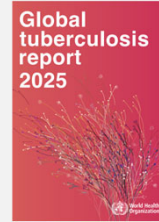


<https://www.cdc.gov/tb/publications/factsheets/treatment/treatmenthivpositive.htm>

Socio-Economic Factors of TB

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- Average total cost of treatment expenses: **\$78 - \$3,800**
- Up to **92%** of TB patients face financial hardship
- **50%** experience catastrophic costs (>**20%** of income)
- Delayed care **increases** severity and cost
- Many patients must **choose** between **treatment** and **work**

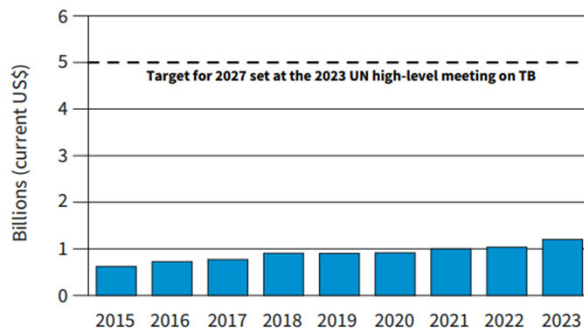


Funding Research & Development

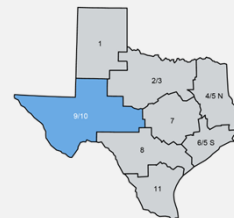
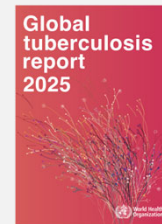
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FIG. 37

Funding for TB research, 2015–2023



Source: Treatment Action Group, Stop TB Partnership. Tuberculosis research funding trends 2005–2023. New York: Treatment Action Group; 2024 (<https://www.treatmentactiongroup.org/resources/tbrd-report/tbrd-report-2024/>)

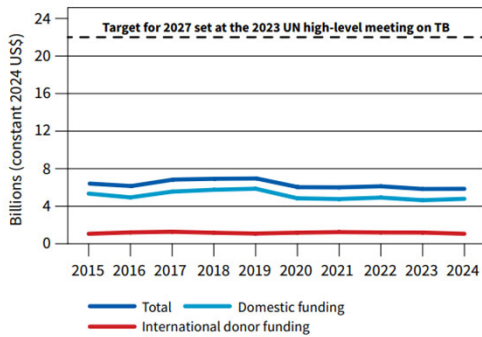


Funding Gaps

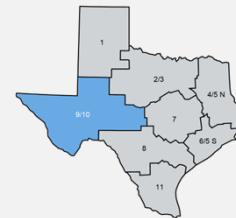
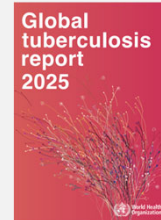
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FIG. 27

Funding available for TB prevention, diagnostic and treatment services in 131 low- and middle-income countries by source, ^{a,b,c} 2015-2024



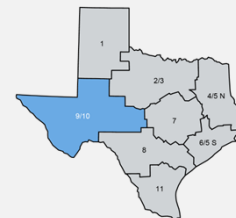
- Funding gap of **\$16.3 billion (2023)**
 - Critical for patient services and program delivery



Why Are TB Patients Missed?

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- **No Access:**
Distance to care, poverty, stigma, limited facilities, financial barriers, conflict
- **No Diagnosis:**
Lack of molecular testing, culture, susceptibility
- **No Documentation:**
Weak reporting, lack of notification
- **No Treatment:**
Lack of meds and poor links between services



Importance of Investing in Missed Pts

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- TB is **curable** with six-month treatment course
- TB **respects no borders** – it spreads across communities and countries
- Every **\$1 invested** in TB control yields a **\$39 return** in economic benefits
- **1 person** with active TB can infect **up to 10-15 people per year**



Menzies et al., PLOS Glob Public Health, 2023

Other Needs to Address

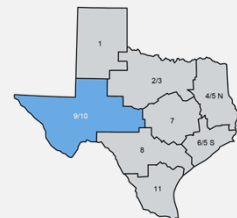
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Failure to Address Psychosocial Needs Leads to:

- Decrease adherence to treatment
- Ongoing transmission
- Higher mortality rates

Addressing psychosocial factors and mental health needs is necessary to ensure positive treatment outcomes



Risks & Benefits in TB Diagnosis

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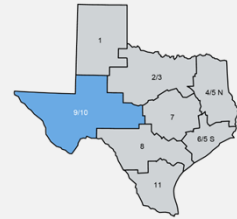
Benefits:

- Knowledge of condition
- Make life plans
- Prevent transmission
- Treatment?

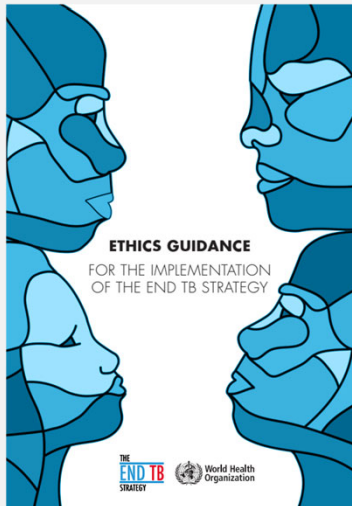


Risks:

- Stigma
- Discrimination
- Anxiety
- Isolation



WHO Ethics Guidance



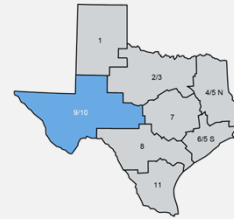
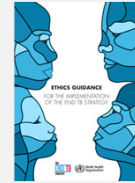
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A Matter of Social Justice

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- **Social inequalities** fuel the spread of TB globally
- TB drives many people deeper into poverty
- The **right to health** is a fundamental human right

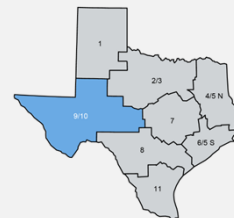


Government's Role in Access to Care

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- **Patient-centered** approach means treatment is
 - Accessible
 - Acceptable
 - Affordable
 - Appropriate

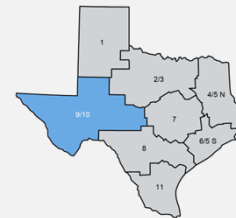


Government Obligation: Free & Universal TB Care

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- Ensure **appropriate diagnosis and treatment of MDR/XDR-TB**
- Everyone with TB deserves **access to innovative tools and services**
- TB treatment benefits both individuals and communities by:
 - **Improving health outcomes**
 - **Stopping the spread** of highly infectious disease

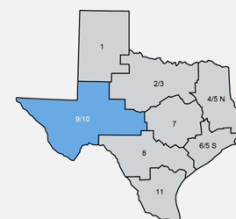
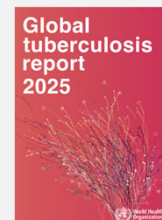


Adopting New TB Diagnostics & TXs

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- Adoption of shorter, all-oral regimens for MDR-TB is expanding
 - e.g. BPaLM (Bedaquiline, Pretomanid, Linezolid and Moxifloxacin)
- New TB drugs are replacing older, toxic treatments
 - Bedaquiline, Pretomanid
- **64%** of pulmonary TB cases were bacteriologically confirmed in 2024
- **54%** received WHO-recommended rapid diagnostic tests
 - (goal: 100% by 2027)

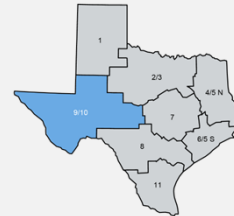


Free Diagnostic Access for All TB Patients: Susceptible & Resistant

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- Prevents patients from receiving ineffective treatment to which they are resistant
- Prevents additional spread of infection
- Prevents further development of drug-resistance
- Ensures patients are cured

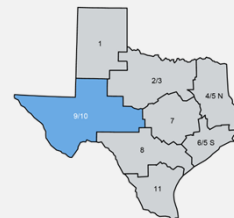


Diagnosis in the Absence of Treatment

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- Gap between **diagnosis** and **access** to treatment
- Should patients be diagnosed when treatment is **unavailable**?
- Patients should receive **true** informed consent before testing



Promoting Diagnosis in the Absence of Treatment

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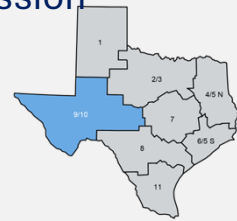
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• Risks:

- Stigma
- Discrimination
- Anxiety
- Isolation

• Benefits:

- Knowledge of condition
- Make life plans
- Prevent transmission
- Seek treatment



Goal: Maximize benefits, minimize risks

Core Aspects of TB Programs

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Public Health Region 9/10 Serving You

- TB services **are not** just about science of treatment; they are about something more fundamental:

- **Dignity**
- **Social fairness**
- **Social justice**
- **A willingness to serve**

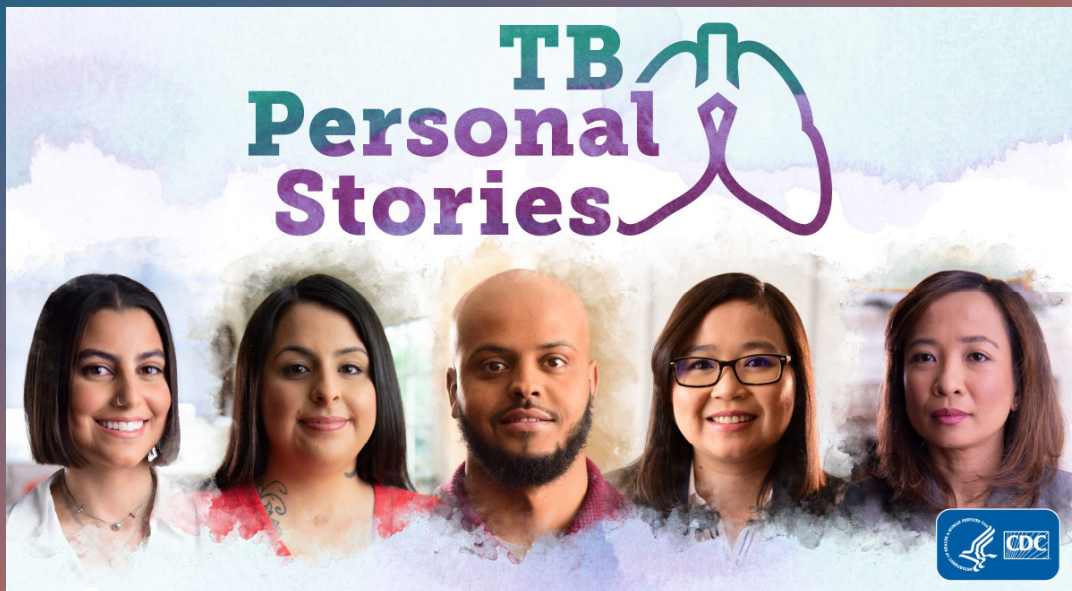


Wrap-Up & Questions

- TB causes major **human and economic suffering**
- TB treatment must be delivered **with dignity and compassion**
- **Wealthy nations** have an **ethical duty** to support care in low-resource countries
- **Infectious diseases fail to respect borders**
 - Inadequate health care systems in poor countries threatens global public health
- **MDR/XDR-TB** is a serious global threat
- Urgent need for **universal access** to diagnosis and patient-centered treatment



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Thank you!

Ethical Access to Care in TB

John Scott Milton, MD

