

PATH's work in tuberculosis

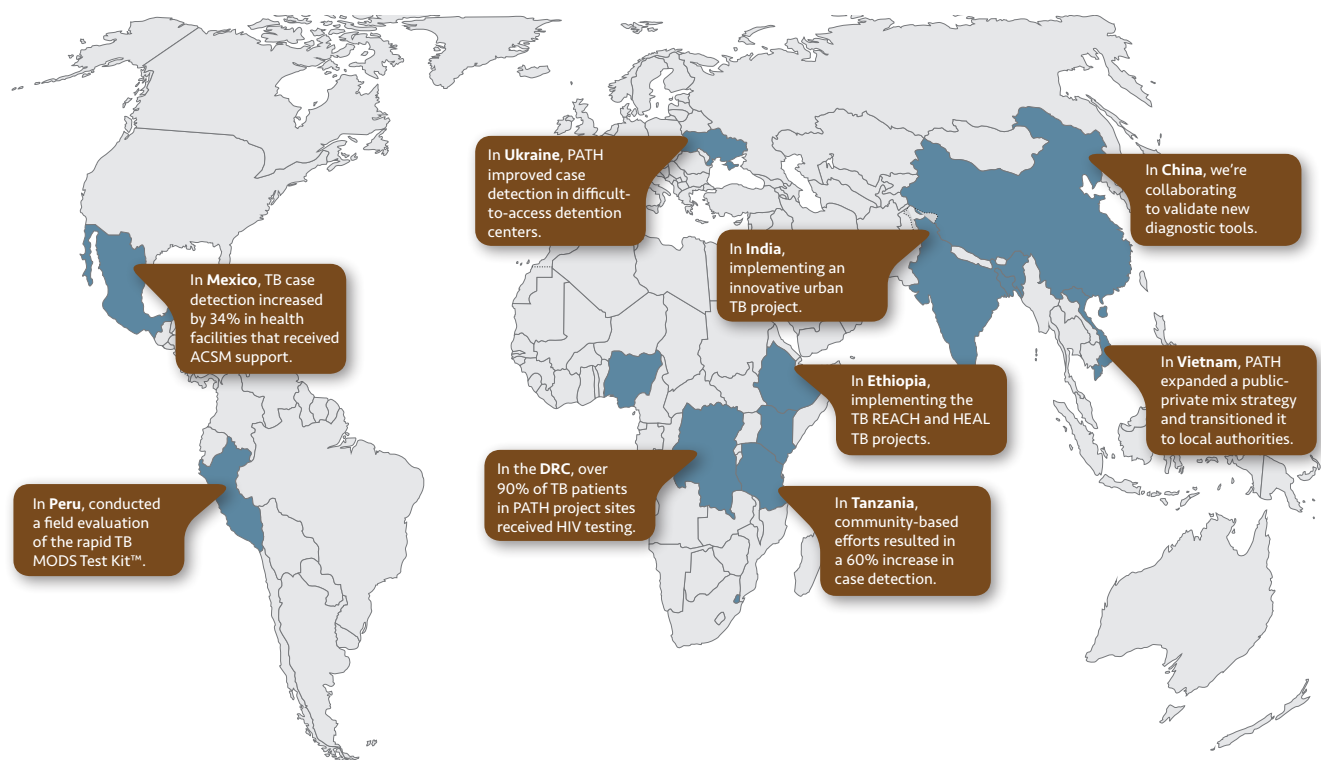
Creating innovative and sustainable solutions for a TB-free world

For more than 30 years, PATH has developed, adapted, and introduced technologies and approaches that improve global health. With a team of 1,200 staff around the world, PATH takes an entrepreneurial approach to developing and delivering high-impact, low-cost solutions, from lifesaving vaccines and devices to collaborative programs with communities in more than 70 countries. We have applied this global health expertise and our innovative approaches to the fight against tuberculosis (TB) since 2001. Working hand in hand with global partners, we support high-burden countries in their efforts to overcome TB. PATH is a partner on the US Agency for International Development-funded Challenge TB global consortium, which implements programs in a variety of countries and actively participates in various World Health Organization-led global subgroups.

Our work in TB is driven by the knowledge that each year nearly 1.5 million people die from this curable disease. It kills more women per year than all causes of maternal mortality and is the leading killer of people living with HIV. Meanwhile, resistance to TB drugs is increasing. Our most in-depth TB work has been in Bangladesh, China, the Democratic Republic of Congo (DRC), Ethiopia, India, Kenya, Mexico, Peru, Swaziland, Tanzania, Ukraine, and Vietnam.

PATH pursues five strategies that are essential to treating and curing patients, lowering incidence and mortality rates, and involving communities in decisions about their health. We:

1. Develop and introduce innovative approaches and technologies for TB diagnosis, treatment, and patient support.
2. Strengthen health systems and build public-private and informal health sector collaborations.



PATH provides technical support for TB efforts around the world.

3. Engage communities to build an enabling environment for improved TB case detection and treatment success.
4. Scale up management of TB/HIV co-infection and infection prevention to reduce TB transmission.
5. Develop and introduce strategies to improve treatment success among MDR-TB patients.

We believe that collective efforts will lead to a world free of TB, and we stand firm in our commitment to this goal.

Our work—as outlined in the examples that follow—is made possible with generous support from our many funders, including the US Agency for International Development; the Global Fund to Fight AIDS, Tuberculosis and Malaria; the Bill & Melinda Gates Foundation; the US Centers for Disease Control and Prevention; the Medtronic Foundation; BD; TB REACH; and partner governments around the world.

INNOVATIVE APPROACHES AND TECHNOLOGIES FOR TB DIAGNOSIS, TREATMENT, AND PATIENT SUPPORT

New TB screening tools, diagnostics, drugs, and approaches are urgently needed to decrease the time to diagnosis and length of treatment, detect drug resistance, and improve outcomes. PATH partners with the private sector, academic institutions, civil society, and national

governments to develop, adapt, and introduce these tools where they are needed most.

Introducing new point-of-care TB diagnostics

PATH worked with Hardy Diagnostics to develop the TB MODS Test Kit™, a rapid, simple, and low-cost tool that diagnoses TB and resistance to first-line antibiotic therapies and could extend the reach of TB diagnostics into lower-level health facilities. We partnered to validate a range of new diagnostics for drug-resistant TB for introduction in China, and we are investigating low-cost ways of improving quality assurance of the next generation of nucleic acid-based rapid TB diagnostics.

Because introducing new tools requires preparing health systems, we used a comprehensive health system strengthening approach in Tanzania and the DRC to build the foundation for the GeneXpert® system. The DNA test will help these countries better detect TB and multidrug-resistant TB (MDR-TB).

COLLABORATING TO STRENGTHEN HEALTH SYSTEMS

PATH engages patients, communities, and the full range of health providers from the public, private, and informal sectors to improve care within all sectors and to recognize TB symptoms and provide timely referral.



Expanding sustainable public-private mix programs

In many countries, TB cases managed through the private health sector are never notified to national TB programs. PATH links private-sector players—such as pharmacies and clinics—with the public sector, so that all providers contribute to national efforts and adhere to international standards. We contributed to the expansion of public-private mix strategies in Bangladesh, Cambodia, India, Vietnam, and Mexico and, in several countries, have already transitioned them to local authorities. In project sites in Vietnam, the public-private mix network of 700 pharmacies, private hospitals, and clinics screened 7,000 people with TB symptoms in a year, of which roughly 18 percent were diagnosed with TB.

Mobilizing communities to detect and treat TB

Communities play a critical role in detecting TB, supporting treatment, and reducing stigma. PATH trains and supports traditional healers, private drug sellers, sputum fixers, community-based organizations, and former TB patients to deliver community-based TB interventions. Through the USAID-funded TB2015 project in the DRC, community health volunteers referred nearly 3,000 people for diagnosis in one year and supported hundreds of patients to complete treatment.

BUILDING COMMITMENT TO FIGHT TB

PATH supports community leaders and government officials in designing, implementing, and evaluating effective advocacy, communication, and social mobilization (ACSM) interventions. These tools are an essential part of addressing the challenges facing TB programs—from delayed diagnosis and non-completion of treatment to the social, economic, and political dimensions of TB.

Global-to-local trainings

PATH has designed and led ACSM trainings in every region of the world, in collaboration with the Stop TB Partnership Secretariat, WHO regional offices, and local partners. We strengthen national responses, build regional communities of practice, and provide support for civil society contributions on the ground and at the global level. PATH's ACSM training package has been adapted and used around the world.

Supporting civil society leadership

Locally led solutions are the foundation of a successful and sustainable approach, so PATH supported civil-society leaders and former TB patients from five African countries to launch the Africa Coalition on Tuberculosis (ACT!). ACT!'s dynamic leaders mobilize their communities in support of universal access to high-quality, rapid TB diagnosis; appropriate, patient-

A patient's story: Overcoming resistance

William Daraja was just a teenager when he "started feeling unhappy." But after three months of his six-month course of TB treatment, he felt better—and stopped taking his medicine.

"Within no time, I fell sick," he says. Months later, he was diagnosed with multidrug-resistant TB (MDR-TB).

People with MDR-TB must undergo a two-year treatment regimen of expensive drugs with harsh side effects. In Tanzania, patients go to Kibong'oto National TB Hospital to undergo the first intensive, six-month phase.

MDR-TB patients need special support to endure their treatment, so PATH and partners established a program of training and mentoring for hospital staff. We also led MDR-TB trainings for the district-level health staff who support patients for the 18 months following their hospital stay.

PATH also raised community awareness about MDR-TB to ensure that fears and misconceptions don't stop patients from accessing lifesaving care, which is exactly what happened to William. Not understanding the implications, he resisted the required six-month stay at the hospital and the drugs' side effects. But when a traditional healer couldn't help, he finally traveled to Kibong'oto Hospital.

Now cured, he tells other TB patients, "If you want to stand up and walk just like me, take your medication properly."

centered care and treatment; and effective new drugs and vaccines. ACT! is invigorating advocacy throughout the continent, and PATH is in discussions with other partners to replicate the model in new regions.

COMBATTING DRUG-RESISTANT TB

To help countries combat the growing threat posed by MDR-TB and extremely drug-resistant TB (XDR-TB), PATH supports patients through treatment and provides tools for planning, implementing, and evaluating national MDR-TB response plans.

Supporting patients for success

PATH strengthens community support of MDR-TB patients to successfully complete difficult, two-year treatment regimens. This includes education in managing side effects and preventing TB infection in the home. Within a year of PATH training in project sites in Mexico, 87 percent of MDR-TB patients had negative culture results by month six of treatment, surpassing the national target.

Practical tools to address MDR-TB

PATH develops a range of tools for countries fighting MDR-TB. For example, we worked with partners to develop the MDR-TB Planning Toolkit, which is available on PATH's website. Endorsed by the WHO, the toolkit guides national TB programs through a planning process to develop or strengthen their MDR-TB response plans.

INTEGRATION WITH OTHER HEALTH SERVICES

PATH works with countries to strategically incorporate TB activities with other health services. This ensures cost-effective use of limited resources, streamlined care for patients, and increased reach and efficiency of health services.

Tackling the HIV-TB co-epidemic

PATH has shown that integrating TB and HIV services can significantly increase diagnoses of both diseases. For example, we trained former TB patients in the DRC to serve as community volunteers who screen for TB and HIV. Nearly 90 percent of TB patients at project-supported sites received HIV testing, a dramatic increase from the national average of 24 percent.



PATH/Mike Wang

In Ukraine, PATH has fostered collaboration between national and regional TB and AIDS programs, supported an updated TB/HIV national policy, and trained health providers to manage both diseases. To prevent TB/HIV co-infection in TB2015 project sites in India, PATH and Partners in Health built the capacity of health care workers, engineers, and architects to implement infection-control guidelines.

Finding and treating TB in children

Although TB is curable, underdiagnoses and poor case management mean that more than 100,000 children still die each year. To prevent this tragedy, we supported the development and rollout of national pediatric TB guidelines and a comprehensive training curriculum in Tanzania.

Addressing the intersection of TB and diabetes

PATH partnered with the Mexican Secretariat of Health to pilot a bidirectional screening model using two novel, noninvasive technologies to diagnose TB among people with diabetes and vice versa. Diabetes triples the risk of developing TB, and rates of TB are higher in people with diabetes than in the general population, making the need for these tools urgent.

JOIN US

PATH is committed to supporting efforts to eliminate TB as a public health problem. For more information, please contact Dr. SS Lal at lsadasivan@path.org. Visit us online at www.path.org/our-work/tuberculosis.php.

Cover photo: PATH/Gabe Bienczycki



www.path.org

PATH is the leader in global health innovation. An international nonprofit organization, we save lives and improve health, especially among women and children. We accelerate innovation across five platforms—vaccines, drugs, diagnostics, devices, and system and service innovations—that harness our entrepreneurial insight, scientific and public health expertise, and passion for health equity. By mobilizing partners around the world, we take innovation to scale, working alongside countries primarily in Africa and Asia to tackle their greatest health needs. Together, we deliver measurable results that disrupt the cycle of poor health. Learn more at www.path.org.

STREET ADDRESS
2201 Westlake Avenue
Suite 200
Seattle, WA 98121 USA

MAILING ADDRESS
PO Box 900922
Seattle, WA 98109 USA