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TB CARE II

Strengthening Health Systems to Meet Global Targets for Ending Tuberculosis

Context

The COVID-19 pandemic highlighted how the strength of a health system can impact the magnitude of an infectious disease outbreak. An adequately resourced and adaptable health system can effectively respond to rapidly shifting and unpredictable diseases, whether localized or global. Strengthening health systems is at the core of USAID's mission. USAID's Vision for Health Systems Strengthening 2015-2019 identified four critical HSS outcomes:

- Reducing out-of-pocket expenditures that prevent people from using necessary health services or impoverish them;
- Advancing the availability and use of essential health services;
- Ensuring equity in access for poor, underserved, marginalized, and vulnerable people; and
- Assuring the dignity, confidentiality, autonomy, quality, and timeliness of services.

The deadliest infectious disease in the world is tuberculosis (TB) which causes 1.5 million deaths globally each year—more than HIV and malaria combined. It is also extremely common: with an estimated one-quarter of the world's population infected. As the result of concerted global efforts and significant investments by USAID, the number of new TB cases continues to decline. Achieving the U.S. Government vision of a world free of TB, set out in its Global TB Strategy 2015-2019, the goals of the global End TB Strategy, and targets set at the United Nations General Assembly High-Level Meeting on TB in 2018, however, will not be possible without a stronger focus on HSS.

The USAID TB CARE II Project (2010-2020)

- Provided global leadership and technical support to National TB Programs and other stakeholders to accelerate the implementation of TB, TB-HIV co-infection, and multi-drug resistant TB services.
- Particular emphasis on innovative technological approaches to improve TB case detection and treatment, and interventions related to infection control and programmatic management of drug-resistant TB.
- Strengthened TB program capacity and fostered commitment to ending TB by empowering government partners, civil society, communities, and the private sector to develop local solutions to address bottlenecks and strengthen health systems for TB control.

Through global research and innovation, and field support programs in Bangladesh, Malawi, and Swaziland, the USAID TB CARE II Project engaged partners to strengthen the six core HSS functions: human resources for health; health finance; health governance; health information; medical products, vaccines, and technologies; and service delivery. The project collaborated with global TB control partners and National TB Programs (NTP) to develop and scale up models to meet urgent gaps in TB programming, such as insurance coverage for TB services, management of drug-resistant TB (DR-TB), and infection prevention and control.

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HSS strategic outcomes

Financial protection

A key outcome of HSS is universal health coverage (UHC), where individuals and communities receive the health services they need without suffering financial hardship. As there had been little previous work on TB coverage in coverage of TB in national health insurance schemes (NHI) in 2010, TB CARE II started from the ground level, focusing on increasing dialogue and awareness of the need to examine coordinated structures between NHI programs and TB stakeholders.

To address the lack of information on TB coverage in national health insurance schemes, TB CARE II conducted a study in 2011 to examine the package of services covered under NHI in the Philippines, India, Thailand, and Peru against the recommended TB services for diagnosis, treatment, and follow-up care. The study also examined the cost implications of expanding the package of TB services covered through the various NHI models. Key findings in the synthesis report and subsequent journal publication included:

- Improved coordination and strategic planning was needed between health policymakers and program managers.
- Lack of coverage for indirect costs—transport, loss of wages, nutritional support needs—was a disincentive for seeking care in all countries, particularly for vulnerable populations.
- Coverage for MDR TB was a critical gap in all countries.

Case studies for each of the countries were shared and discussed in national workshops and high-level consultations on utilizing insurance-based financing to reduce expenditures for TB patients and strengthening linkages with social support systems. Additional case studies were developed for Georgia and South Africa, along with a study on the quality of TB services provided by PhilHealth-accredited facilities (**Box 1**). The findings also informed the development of a *Program Manual: Inclusion of TB in Health Insurance Programs* (2013).

Availability and use of essential services

TB CARE II worked to expand the availability and use of TB prevention, case finding, diagnosis and treatment services by working with national NTPs, the private sector, and civil society. At the global level and in field support programs, the project built clinical and programmatic capacity, developed and scaled-up innovative TB interventions and models.

On the global level, TB CARE II focused on providing technical expertise and building capacity on the **DR-TB service delivery**, focusing particularly on countries supported through the U.S. Government's National Action Plan for Combating DR-TB (NAP). To build national capacity, TB CARE II sponsored the participation of over 60 policy makers, NTP staff, and national research institute staff from fourteen high TB-burden countries in an annual course in advanced TB diagnostics organized by the McGill International TB Centre as part of its Summer Institute of Infectious Diseases and Global Health. Through the online DR-TB training network, since transitioned to the TB Academy, TB CARE II offered TB practitioners learning resources including webinars, clinical case studies, and self-study materials. The project also developed and updated materials to meet gaps in DR-TB service delivery, such as the PIH Guide to the Medical Management of MDR-TB (2014) and Management of

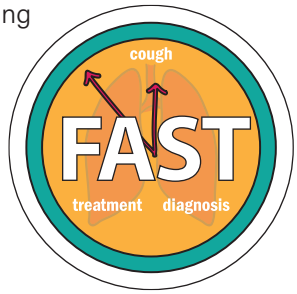
Box 1. Case study on the impact of accreditation on the quality of TB services in the Philippines

TB CARE II worked with PhilHealth Insurance Corporation to assess the quality of TB services provided by both accredited and non-accredited facilities providing directly observed therapy (DOT) for TB in the public and private sector.

The study found that all provider types in the study were generally compliant with national TB standards and guidelines. Clients were most satisfied with TB care services in private facilities, regardless of accreditation, due to the perceived competency of health providers and positive and caring attitude. Within the public sector, clients were more satisfied with accredited, rather than in non-accredited, DOTS facilities.

Recommendations included increasing DOT accreditation in public facilities, expanding current quality assurance measures to include client satisfaction, and improving quality of care in the public sector.

MDR-TB in Children: A Field Guide (2016). *(see technical brief on MDR-TB for additional information).*



TB CARE II also focused on boosting global attention on **infection prevention and control** (IPC), collaborating with partners to develop the *FAST* model for IPC: **F**ind cases **A**ctively, **S**eparate safely, and **T**reat, and introduce it in four countries. In Vietnam, for example, *FAST* implementation reduced the average turnaround time for test results decreased from about 125 days to 7 days, resulting in adopting by the NTP for national use (see technical brief on IPC for details).

During 2010-2015, TB CARE II provided technical support to the implementation of essential TB services through field support programs in Bangladesh, Malawi, and South Africa, supporting NTP engagement with private providers and civil society (see country briefs for more information). Some examples include:

Case finding: In Bangladesh, TB CARE II used a small grants program to engage over 10,000 private providers in public-private mix activities. This resulted in the identification and referral of more than 135,000 presumptive TB cases and detection of approximately 10,000 TB cases. The project also supported 15 NGOs in selected low performing areas to increase case finding and community knowledge and awareness about TB. The NGOs contributed to the detection of about 35,000 TB cases during 2012-2015.

Diagnosis: TB CARE II worked with NTPs to strengthen laboratory networks from community sputum collection points to microscopy laboratories and reference laboratories equipped for diagnosis and drug-susceptibility testing. A key achievement was the establishment and roll-out of molecular diagnosis using GeneXpert MTB/Rif machines, which involved developing new diagnostic algorithms, building laboratory capacity, and procuring 39 GeneXpert machines in Bangladesh and 11 machines in Malawi.

Treatment: TB CARE II particularly focused on decentralizing MDR-TB management to regional hospitals and to the community level in order to increase accessibility. The community-based programmatic management of DR-TB (cPMDT) model was introduced in Bangladesh and South Africa, resulting in increased treatment adherence and success

Population coverage

Groups at high risk of developing active TB include contacts of people with TB, particularly children, and those with suppressed immune systems, such as PLHIV. These groups also often face significant barriers in accessing TB services and adhering to treatment.

Childhood TB: Less than half of children with TB are diagnosed and treated. TB CARE II developed global guidance on the management of pediatric DR-TB and built provider capacity through the DR-TB learning network. The project also supported individual countries in developing programmatic strategies and clinical capacities. For example, in **Bangladesh**, TB CARE II worked with the NTP and the Bangladesh Pediatric Association to introduce the country's first-ever *National Guidelines for the Management of Tuberculosis in Children* (2012) and initiate wide-scale capacity development programs for health care professionals. As a result, the childhood TB case detection increased by 30% compared to the baseline. A South African innovation was working with early childhood development centers to screen the learners' parents.

PLHIV: TB programs have struggled with how increase the rate of high-risk populations receiving isoniazid preventive therapy (IPT) to prevent cases of latent TB infection from progressing to active TB. In 2014-2015, TB CARE II conducted a study on IPT delivery models in Swaziland, comparing adherence and treatment completion for facility-based, community-based, or peer-supported IPT delivery. The study found that giving patients a choice of IPT delivery model resulted in much higher treatment completion. Drawing on findings, TB CARE II developed the *Universal Toolkit for Delivery Models to Improve IPT for Children and PLHIV*. Country implementation involved TB/HIV collaboration and the establishment of one-stop-shops offering integrated services. In **Malawi** for example, where over 60% of TB patients are co-infected with HIV, TB CARE II expanded routine TB screening in HIV settings, doubling the number of PLHIV diagnosed with TB.

People with diabetes: People living with diabetes who are also infected with TB are more likely to develop TB disease and become sick with TB. TB CARE II supported countries develop integrated approaches to TB and diabetes co-management. For example, in **Bangladesh**, TB CARE II collaborated with Diabetes Association of Bangladesh to a national guideline for management of TB in diabetes patients and introduce integrated TB services in diabetes management. During 2013-2015, detection of TB among diabetes patients increased eight-fold compared to the baseline.

Miners: An estimated one-third of TB infections in the **Southern African** region are linked to mining activities. During 2015-2016, TB CARE II supported efforts to reduce TB in mines, focusing on four countries: Lesotho, South Africa, Swaziland, and Zimbabwe. Working with NTPs, mining companies, and national ministries of mines and minerals, the project improved partnership and collaboration and expanded the availability of TB services for miners.

Responsiveness

A key theme of TB CARE II's advocacy was patient-centered care. Approaches such as self-selected models of IPT delivery and cPMDT provided patients with options for where they could receive their care, including care that was easily accessible in their community. Two additional approaches promoted by the project included comprehensive care for patients with DR-TB and the ethical treatment of TB patients.

Comprehensive care: Recognizing that the needs of TB patients go beyond clinical services, and that non-clinical factors play a major role in influencing treatment adherence and success, TB CARE II developed guidelines and provided countries with technical support on palliative care and comprehensive supportive services for people living with DR-TB. In **South Africa**, for example, the project supported the development of *Comprehensive Guidelines for TB and DR-TB Palliative Care and Support* (2015). TB CARE II also supported the development and roll-out the *USAID DR-TB Care Package* (2018) to NAP countries through workshops, webinars, and technical support.

Ethical issues in TB control: Planning and implementing TB programs involve decisions about how to ensure patient choices about treatment are respected, resources are equitably distributed, vulnerable groups are protected, and communities are engaged. Building on WHO guidance on ethics in TB prevention, care, and control, TB CARE II developed *An Assessment Tool for NTPs for Ethics in TB Prevention, Care and Control* (2015). and a training curriculum on the ethics of TB prevention, care and control.

Conclusions

Effective TB control systems require a high degree of planning, coordination, and clinical and programmatic capacity across multiple sectors. However, challenges such as latent TB and the spread of drug-resistant TB have strained health system capacities, particularly in high-burden countries that also have high levels of other infectious diseases. TB CARE II worked to increase the visibility of community-driven, patient-centered care and support countries in developing or adapting models for their specific TB control needs. By the end of the project, effective models for some of the gaps in TB programming, such as insurance coverage of TB services, decentralized DR-TB treatment, and IPC, had been piloted and scaled-up in many of the countries supported by the project. TB CARE II's support to country implementation increased NTP engagement with the private sector and civil society, building the social capital essential for the Journey to Self-Reliance. The self-reliance will be essential as countries work toward ending TB, as well as other existing infectious diseases and emerging threats such as COVID-19.

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