

# The World Bank Group's Engagement in Tuberculosis Control

## Background Document Prepared for the Stop TB Partnership Board Meeting

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### Background

Historically, the World Bank has supported a wide range of national TB control projects (e.g. China, India, Russia), TB/HIV interventions under the Multi-Country Action Program Against HIV/AIDS in over a dozen countries in Africa, and health systems investment projects which have bolstered TB control, laboratory and surveillance efforts and promoted performance based financing. In addition to investment funding, the Bank has conducted analytic work, such as a major study on the economics of investing in TB control, programmatic assessments of TB/HIV (Ethiopia, Kenya, Tanzania and Eritrea), and studies on the potential for cross border transmission of MDR-TB (East Africa). The Bank has been proactive in policy dialogues in various regions, including the flagship program in Southern Africa which has galvanized political support to tackle TB at the highest levels in the SADC region. The Bank has been supporting advocacy work through its annual contributions to the Stop TB Coordinating Board Secretariat.

The Bank is committed to responding to government requests to control the spread of TB and to tackle rising concerns with multi-drug resistant TB, in line with the institutional commitment to regional and Global Public Goods. Over the past few years, there has been a growing emphasis on supporting regional programs to address TB, assisting governments to leverage Global Fund financing, and promoting a health systems approach to TB control. The Bank has renewed its commitment to serving as a knowledge institution which translated in the establishment of the South Africa Knowledge Hub that has been driving an important agenda on TB in the mining sector in Southern Africa, in close collaboration with the Stop TB Coordinating Board Secretariat.

### Ongoing and Planned Bank Activities

The following section summarizes main highlights of ongoing and planned Bank activities, including regional projects and initiatives, national investment operations, and analytic work.

### Regional Projects and Initiatives

**East Africa Public Health Laboratory Networking Project** (*Burundi, Kenya, Rwanda, Tanzania and Uganda*), US\$63.7 million; approved May 2010; recently extended to March 2020. This regional project, designed with support of the WHO (Global Lab Initiative and the Stop TB Department) and the United States Centers for Disease Control and Prevention (CDC) is supporting the establishment of a network of efficient, high quality, accessible public health laboratories for the diagnosis and surveillance of TB and other communicable diseases. The project is coordinated with support of the East, Central and Southern Africa Health Community (ECSA) which facilitates knowledge sharing among countries.

The project builds on the pioneering work of TB control programs in promoting tiered networks of laboratories. The operation supports over 30 facilities with the majority in cross border areas to target the most vulnerable groups. The project has three unique features: (i) *client driven* with each country providing leadership in a key thematic area, such as Rwanda on MDR-TB program management and Uganda on laboratory accreditation; (ii) *evidence based* with countries generating new knowledge, such as a multi-country study on the impact of the roll out of the GeneXpert technology; and (iii) involves *multiple partnerships* at national, regional and global levels. The main results over the past five years are as follows:

- Rolled out *new molecular technologies* for more rapid and accurate results with a major impact in terms of the accuracy and timeliness of TB laboratory results.
- Enrolled all laboratories in the regionally recognized *Stepwise Laboratory Improvement Process Towards Accreditation*, instilling a culture of continuous quality improvements and setting them on a path towards international accreditation with most the majority of facilities surpassing two stars and over half having reached at least three stars on the five-star scale.
- Supported the *Uganda national TB laboratory* to reach ISO accreditation and qualify to serve as one of the prestigious WHO Supranational Reference Laboratories in Africa, the second of its kind on the continent. The new NTRL facility was designed by CDC with construction funded under the project and technical support provided by multiple partners. ECSA has recently received a US\$6.0 million grant from the Global Fund to operationalize the Uganda SRL, demonstrating how the project has leveraged additional funding.
- Boosted *human resource capacity* in East Africa through national and regional training activities (e.g. lab management, biosafety, mentorship, field epidemiology) and expanded access to bachelors and masters programs.
- Rolled out *video conferencing and other ICT innovations* to bolster communications, facilitate knowledge sharing, and support e-learning within and across countries.
- Strengthened *disease surveillance* efforts in the sub-region, including support for cross border investigations and joint table top simulations, enabling countries to respond more effectively to frequent outbreaks.
- Supported analytic work on: *Human Resources for Health* to improve understanding of the status of laboratory professionals, and generate policy recommendations for these neglected cadres; alternative models of *Public-private Partnerships for Laboratory Services* which lays out policy options for governments to consider in order to reduce costs and enhance accountability; and an *Evaluation of the Economic and Health Impact* of investing in laboratories.

Building on the initial promising results from the project, and following the Ebola outbreak in West Africa, additional financing of US\$50 million has been provided to Burundi, Kenya, Tanzania and Uganda to: (i) scale up successful activities to additional facilities in cross border areas; and (b) broaden and deepen the range of interventions to be funded (i.e. establishing isolation units; strengthening community surveillance activities; supporting the *One Health* approach) in order to enhance effectiveness and impact of health systems in terms of management and containment of communicable diseases.

**The Southern Africa TB and Health Systems Support Project** (*Lesotho, Malawi, Mozambique, Zambia*), US\$120 million; expected approval: FY16

As part of the regional TB in the Mining Sector initiative, the World Bank Group, with support of CDC, is preparing a new regional project, which has the overarching goals of: (i) improving coverage and quality of key TB control and occupational lung disease services in targeted geographic areas; and (ii) strengthening regional capacity to manage the burden of TB and occupational diseases. The project aims to target underserved populations with a high TB and/or TB/HIV burden, including mining communities, transport corridors and cross border areas. The operation will support: (i) innovative interventions to boost prevention, detection and treatment of TB and occupational lung diseases, such as active case finding, one stop shop approaches, and enhanced MDR-TB management; (ii) regional capacity strengthening to boost quality and availability of human resources; strengthen disease surveillance and diagnostic capacity and mine health regulation; and (iii) learning, knowledge sharing and innovations at national and regional levels to share good practices, promote evidence based approaches, and support rigorous evaluations.

The geographic areas to be targeted in each country are being identified based on a combination of criteria: (i) *mining zones*; (ii) high *HIV areas*; (iii) *transport corridors* with large movements of vulnerable groups and refugees; and (iv) *congested urban areas* with pockets of poverty that represent a hotbed for TB transmission. In line with the new Global TB Plan, the primary beneficiaries of the project will be the most vulnerable groups in each country, including mine workers, ex-miners and their families and labor-sending communities; health workers; and TB and TB/HIV co-infected individuals and household members.

### **TB in Mining Sector Initiative in Southern Africa**

The governments of South Africa, Lesotho, Swaziland, and Mozambique have partnered with the World Bank, the Stop TB Partnership and DFID to explore new ways of addressing a century-old challenge: the high prevalence of Tuberculosis (TB) within the mining sector.

Through an innovative two-pronged approach that focuses both on improving occupational health in the mines and on strengthening public health services in near-mine communities, the World Bank has brought together ministries of health, labor, mines, and social welfare, as well as mining companies, unions, communities, and regional bodies, to work collaboratively on a complex issue. A notable achievement has been the successful mobilization of high-level political support from the Heads of State of the Southern African Development Community (SADC), who issued a Declaration of TB in the Mines, which has become the driving force for regional action on a shared challenge.

Through a new \$30 million Global Fund grant, the initiative will now support 10 countries in the SADC region to reduce TB prevalence in the mining sector. Over the next two years, the initiative will seek to: (i) increase the number of TB case notification among the targeted key populations; (ii) improve treatment success rates among the key populations in the ten countries; (iii) increase the number of TB patients put on ART during the period on TB treatment; (iv) increase access to information and education on TB prevention, care and treatment; and (v) improve accountability of key institutions addressing TB, silicosis and HIV in the mining sector.

### **National Projects**

#### **India: Accelerating Universal Access to Early and Effective Tuberculosis Care**

This project is the third operation to support India's TB program since the start of expansion of DOTS in the late 1990s. The project aims to support India's 2012-2017 National Strategic Plan for Tuberculosis Control with a view to expanding the provision and utilization of quality diagnosis and treatment services for people suffering from TB. The operation was originally designed to fund procurement of drugs (85 percent) and consultancies and services (15 percent). The credit is currently being restructured to reprogram 60 percent of the proceeds to be disbursed against achievement of key policy milestones while 40 percent will remain for procurement of drugs, including fixed-dose combination drugs. The new design will support the following key milestones\*:

1. Implementation of daily regimen in 5 states as the first phase of a national rollout
2. Tripling the number of districts with availability of drug-sensitivity-testing through molecular technology (CBNAAT).
3. A four-fold increase in access to baseline 2<sup>nd</sup> line drug-sensitivity-testing for patients detected with rifampicin resistance.
4. A three-fold increase in the number of reference labs that perform extended 2<sup>nd</sup> line drug-sensitivity-testing.

5. Roll-out of isoniazid preventive therapy for people living with HIV/AIDS in at least 4 of the seven high HIV prevalence states.
6. Expansion of the case-based web system Nikshay to include drug logistics management, expenditure tracking and drug resistance surveillance capabilities.

\*This is undergoing government approvals and is subject to change

## **Argentina: Essential Public Health Functions I and II**

The largest public health projects in the World Bank's health portfolio are the Essential Public Health Functions and Programs Project I and II (EPHF) in Argentina, with a total of approximately US\$ 700 million over ten years. The projects have supported the provision of "*basic public health packages*", which include six public health (EPHF I), and eight public health (EPHF II) programs, one of which is Tuberculosis under each project.

The 11 essential public health functions defined by CDC and PAHO, are applied to each of the 8 selected public health programs. For example, function 1 is "strengthening the national and sub-national capacities of monitoring, evaluating and analyzing TB"; and function 2 is "strengthening epidemiological surveillance of TB". The idea is to reinforce with the 11 functions, the Health system's role applied to the basic package in public health, reducing duplication, and reinforcing the key functions of the selected programs.

Additionally, the project uses Results Based Financing (RBF) to provide incentives for delivery of specific public health interventions and key actions on Tuberculosis (supply side). It also supports the testing of conditional cash transfers (demand side interventions) for TB patients in the Buenos Aires Province (the most affected by TB).

As a result of the project(s), the number of TB patients receiving Directly Observed Therapy (DOTs) increased from 58 to 95 percent in 7 years, and health surveillance improved dramatically, with 32-situation rooms created nationwide (including epidemiologist, economist, and public health officials). In addition, synergies increased between all eight public health programs, as well as the public health basic package. 20 out of 24 provinces were certified as having basic capacities for exercising the essential public health functions applied to the 8 selected programs. While the burden of TB in Argentina has been substantially reduced, co-infections with HIV/AIDS still remain a challenge.

## **Technical Assistance**

### **Optima TB**

The landscape of TB control is changing rapidly, with the recent emergence of novel diagnostic tools, therapies and delivery strategies. Traditional approaches like active case finding and targeting people at the greatest risk of progressing to active TB alongside broader interventions to improve social development remain key components of TB control. With a growing range of interventions, diagnostic algorithms and delivery modalities available, but limited funding, policy makers and funders now face a difficult task to ensure that resources are allocated optimally across different interventions.

The Optima-TB initiative is inspired by the World Bank Group's resource optimization work that has yielded real life impact in HIV. The Optima-HIV software was used to carry out country-level HIV

allocative efficiency analyses.<sup>1</sup> Optima-HIV has now been applied in over 30 countries in Eastern Europe, Asia, South America, and Africa.<sup>2</sup> The work has impacted countries' strategic and operational planning and budget decisions, with shifts in the allocation of HIV funding towards programs with greater cost-effectiveness.<sup>3,4</sup> The reallocations will improve HIV results and therefore the sustainability of national HIV responses.

The Optima-TB initiative will work in partnership with TB modelers and TB stakeholders to enhance existing, established TB models. Subject to modelers' interest and resource availability, the selected models will be overlaid by a health economic model and optimization algorithm which considers strategic objectives and real-world constraints, tailored to NTPs. Alternatively, models can be fitted with an optimization function for informing TB allocative efficiency research and policy discussions.

The Optima-TB initiative is overseen and guided by a Steering Group and closely working with modelling experts in a Technical Group which has an advisory and review role. The World Bank has appointed a consortium currently consisting of the Burnet Institute, the University of New South Wales, University of Melbourne and James Cook University for the development and application of Optima TB. During the forthcoming TB Union meeting in Cape Town the Optima TB tool will be discussed with key partners to seek their inputs and suggestions.

### **Studies on TB in the Context of Antimicrobial Resistance**

In the context of a broader piece of analytic work on antimicrobial resistance, the World Bank Group is preparing a series of case studies in six countries (Botswana, Mozambique, Indonesia, Peru, Nicaragua and Azerbaijan). The case studies will also include a seminal study on multi-drug resistant TB.

The World Bank has also recently completed a report on MDR-TB in the BRICS countries, looking at the experiences of Brazil, Russia, India, China and South Africa. It highlights the key challenges facing these countries, as well as highlights some recommendations for accelerating interventions to curb the rise of MDR-TB.

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<sup>1</sup> Optima: A Model for HIV Epidemic Analysis, Program Prioritization, and Resource Optimization. Kerr et al. *J Acquir Immune Defic Syndr* 2015;69:365–376.

<sup>2</sup> Niger (<https://openknowledge.worldbank.org/handle/10986/20600>), Sudan (<https://openknowledge.worldbank.org/handle/10986/21104>), Zambia (<https://openknowledge.worldbank.org/handle/10986/22080>)

<sup>3</sup> Sudan case study "From analysis to action", November 2015

<sup>4</sup> Reorienting the HIV Response in Niger Toward Sex Work Interventions: From Better Evidence to Targeted and Expanded Practice. Fraser et al. *J Acquir Immune Defic Syndr* 2015;68:S213–S220