

## TBXpert Project

The TBXpert Project provided **1.4 million Xpert MTB/RIF test cartridges** **237 GeneXpert instruments** for the rapid detection of TB and rifampicin resistance in **21 recipient countries** in 2013-2016 (see map and list of recipient countries below). The USD25.9 million TBXpert Project was **funded by UNITAID** and executed by the **WHO Global TB Programme** and the **Stop TB Partnership**. To ensure country absorptive capacity and effective use of the technology, the TBXpert Project linked a broad network of partners and existing initiatives for TB laboratory strengthening and innovative approaches to expand access to vulnerable populations in both the public and private sector. TBXpert Project partners included the Global Laboratory Initiative (GLI), TB REACH, the Global Drug Facility (GDF), the EXPAND-TB Project, Interactive Research and Development (IRD) and the African Society for Laboratory Medicine (ASLM).



### Recipient countries:

Bangladesh, Belarus, Cambodia, Congo, Ethiopia, India, Indonesia, Kenya, Kyrgyzstan, Malawi, Mozambique, Myanmar, Nepal, Pakistan, Philippines, Republic of Moldova, Swaziland, Uganda, United Republic of Tanzania, Uzbekistan, Viet Nam

## MAIN PARTNERS AND ACTIVITIES

- **WHO Global TB Programme** provides leadership in strategic and technical aspects of TB control worldwide, in order to reverse the epidemic and eventually eliminate TB. In the TBXpert Project, WHO was responsible for overall project administration, management and oversight, and:
  - **Provided the necessary policy framework, norms and standards** for use of the Xpert MTB/RIF technology and its integration into strong laboratory networks with appropriate referral systems;
  - **Negotiated the planned allocation and placement** of Xpert MTB/RIF with National TB Control Programmes in cooperation with country partners;
  - Collaborated with countries and partners to **develop plans for procurement of commodities**;
  - Collaborated with partners to ensure that **complementary funding was available** for roll-out of the technology;
  - Supported establishment of **public private mix (PPM) partnerships**;
  - Developed indicators and tools for **monitoring and impact assessment**.
- **Stop TB Partnership** comprises a network of international and technical organizations, government programmes, research and funding agencies, foundations, NGOs, civil society and community groups and the private sector, and is coordinated by a secretariat hosted by WHO. The Stop TB Partnership secretariat manages the Global Drug Facility (GDF), dedicated to procurement of TB drugs and diagnostics, as well as TB REACH, an initiative aimed at promoting early and increased TB case detection among the poor and vulnerable. In the TBXpert Project, the Stop TB Partnership secretariat:
  - **Managed procurement** with the manufacturer and countries and partners to **ensure continuous supply** of commodities, via the GDF mechanism;
  - **Leveraged complementary TB REACH funding** to assist countries and partners in establishing the needed systems for introduction of Xpert MTB/RIF technology;
  - **Collaborated with the established networks of partners** implementing Xpert MTB/RIF to ensure continued and increased uptake of Xpert MTB/RIF technology;
  - Facilitated **public private mix (PPM) partnership activities**, including in partner countries of IRD;
  - **Coordinated country projects supported by TB REACH** for Xpert MTB/RIF implementation.

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- **Global Laboratory Initiative (GLI)** is a global network of partners, including National TB Programmes and Laboratories, technical partners, donors, civil society, private foundations and academia, dedicated to TB laboratory strengthening at global, regional and country levels. The secretariat of the GLI is at the WHO Global TB Programme. In the TBXpert Project, GLI collaborated with National TB Control Programmes to **establish and implement Xpert MTB/RIF** at country level and **provide needed guidance, technical support and complementary funding**.
  - **TB REACH** is an initiative managed by the Stop TB Partnership and funded by CIDA, focusing on innovative approaches to ensure early and increased TB case detection in poor and vulnerable populations. In the TBXpert Project, TB REACH **provided complementary funding** to selected partners in countries to establish the needed systems for introduction of the Xpert MTB/RIF technology.
  - **EXPAND-TB Project** was a collaboration between WHO Global TB Programme, GLI, FIND and GDF funded by UNITAID and other donors, which accelerated uptake of technologies suitable for national/reference laboratory testing in 27 countries. The EXPAND-TB Project **provided complementary central-level laboratory capacity** for culture and drug susceptibility testing in 15 of the TBXpert recipient countries.
  - **Interactive Research and Development (IRD)** is a multidisciplinary organization focused on health delivery, information technology, and community outreach programmes targeting the private sector. IRD was an implementing partner of the TBXpert Project in Bangladesh, Indonesia, and Pakistan, where it **developed novel public-private partnerships** in cooperation with local partners and NTPs to accelerate uptake and increase demand from **patients seeking care in the private sector**. The social business models provide free Xpert MTB/RIF testing for those at high risk of TB and free treatment for all TB cases detected, while **ensuring sustainability** by generating revenue through adjunct tests and services.
  - **African Society for Laboratory Medicine (ASLM)** is a Pan-African International Organization dedicated to advancing professional laboratory medicine practice, science, systems, and networks needed to support preventive medicine, quality care of patients and disease control. In the TBXpert Project, ASLM cooperated with designated national and subregional partners to **ensure optimization of use of Xpert MTB/RIF in African national TB control programmes** and assist in monitoring Project progress and impact.
  - **UNITAID** is a global health initiative, established to provide sustainable, predictable and additional funding to **significantly impact on market dynamics** to reduce prices and increase the availability of high quality drugs and diagnostics for the treatment of HIV/AIDS, malaria and tuberculosis for people in developing countries.

### **A need for global scale-up in implementation of the Xpert MTB/RIF assay**

Only 59% of the estimated number of incident TB cases were diagnosed and notified to WHO in 2015, due in part to an overreliance on sputum smear microscopy to diagnose TB in many low- and middle-income countries. Diagnosis of drug resistance also remains a particular challenge, given the infrastructure, biosafety requirements and human resources needed to conduct traditional culture and drug susceptibility testing (DST). The Xpert MTB/RIF assay, recommended by WHO in December 2010, allows for the **simultaneous detection of TB and rifampicin resistance in under two hours**, using a platform that entails fewer biosafety and human resource requirements than traditional culture and DST. Furthermore, the sensitivity of Xpert MTB/RIF for detecting TB is significantly higher than that for microscopy, particularly in patients with HIV infection.

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More information and resources on Xpert MTB/RIF are available at:  
<http://www.who.int/tb/areas-of-work/laboratory/mtb-rif-rollout>