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**Tuberculosis is a curable disease.** Yet people around the world continue to die from TB, in part because a proper diagnosis is often difficult to make, particularly in settings with low resources. The result is that patients don't begin treatment until very late in their illness, all the while continuing to infect others in their communities. HIV infection makes TB even harder to diagnose, and causes tremendous burdens on health systems in resource-poor settings already struggling to provide quality care. Mozambique, for example, was making extraordinary progress in diagnosing TB and expanding DOTS-based treatment nation-wide. But over the last decade, as HIV fuelled the TB epidemic, the health system has suffered greatly.

To address this setback, Health Alliance International (HAI), a non-profit non-governmental organization affiliated with the University of Washington in Seattle, USA, partnered with the Mozambique Ministry of Health (MOH) on a TB REACH project to introduce 2 new and highly sensitive technologies to improve TB diagnosis in central Mozambique: Xpert MTB/RIF testing and LED Microscopy. Because these new technologies can more quickly and accurately diagnose cases of TB, patients can be treated earlier, and the spread of TB can be stopped. In the first months of the project, four Xpert machines were introduced in rapid succession in four health facilities in Sofala and Manica Provinces of Mozambique. Shortly thereafter, six LED microscopes were similarly. All of the new devices were installed in MOH laboratories, and are managed primarily by MOH laboratory staff. In this way, the project seeks to strengthen all aspects of TB diagnosis and treatment while providing more skills and expertise to laboratory technicians and health managers.



## Health Alliance International (HAI)



# Mozambique

Immediately after these technologies were implemented, the number of newly-diagnosed TB cases rose dramatically when compared to traditional testing methods (Ziehl-Neelson Microscopy). During the first nine months of the project, 4,300 patients were tested with GeneXpert, and over 600 newly-diagnosed cases of TB were identified. This represents a staggering 100% increase—or doubling—of the number of patients diagnosed with TB compared to traditional methods. LED Microscopy has also increased the number of patients diagnosed with TB by 26% compared to traditional testing. While this technology is not as sensitive as Xpert, LED is much less expensive and easier to use, and therefore may be more cost-effective in low-resource settings. A cost analysis is currently being conducted to help the Mozambique MOH determine how best to expand these new technologies throughout the country. Over the coming months, in addition to maximizing the benefits of these technologies, HAI and the MOH will also focus on strengthening other aspects of TB diagnosis and treatment with TB REACH funds, such as ensuring that all patients diagnosed with TB are appropriately treated in as short a time as possible.



**Stop TB Partnership**  
**TB REACH**





## FINDING AND TREATING PEOPLE WITH TB IN THE WORLD'S POOREST COMMUNITIES

# TB REACH

**The first wave of projects  
increased case detection  
by an average of 26%  
compared to  
the previous year**

More than nine million people around the world become ill with tuberculosis (TB) each year. About one-third of them fail to get an accurate diagnosis or effective treatment and are more likely to die from this curable disease.

By supporting the many partners working in the field, TB REACH offers a lifeline to people among this missing 3 million by finding and treating people in the poorest, most vulnerable communities in the world. In areas with limited or non-existent TB care, TB REACH supports innovative and effective techniques to find people with TB quickly, avert deaths, stop TB from spreading, and halt the development of drug resistant strains.

- TB REACH was launched in 2010 and will run until 2016, thanks to a CAD\$ 120 million grant from the Canadian International Development Agency.
- TB REACH is committed to getting funds to our partners with a very short turnaround time.
- TB REACH has committed nearly \$50 million to partners working on 75 projects in 36 countries covering a wide range of interventions.
- Preliminary analysis from Wave 1 shows that efforts of partners led to an increase of 26% in TB case detection over an area of 100 million people, while some areas saw increases of more than 100%. The average cost per person covered is US \$0.15.

Stop TB Partnership Secretariat  
World Health Organization  
HTM/STB/TBP  
20, avenue Appia CH-1211 Geneva 27  
Switzerland

Email: [tbreach@who.int](mailto:tbreach@who.int)  
Phone: + (41) 22 791 46 50  
Fax: + (41) 22 791 48 86



Canadian International  
Development Agency

Agence canadienne de  
développement international

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