

**In Zambia**, less than 50% of new pulmonary TB patients who begin TB treatment at health facilities actually have a confirmed diagnosis for TB. This is because the diagnosis of TB is still largely dependent on smear microscopy which is known to have low sensitivity especially where there is high, HIV co-infection in TB patients and suspects.

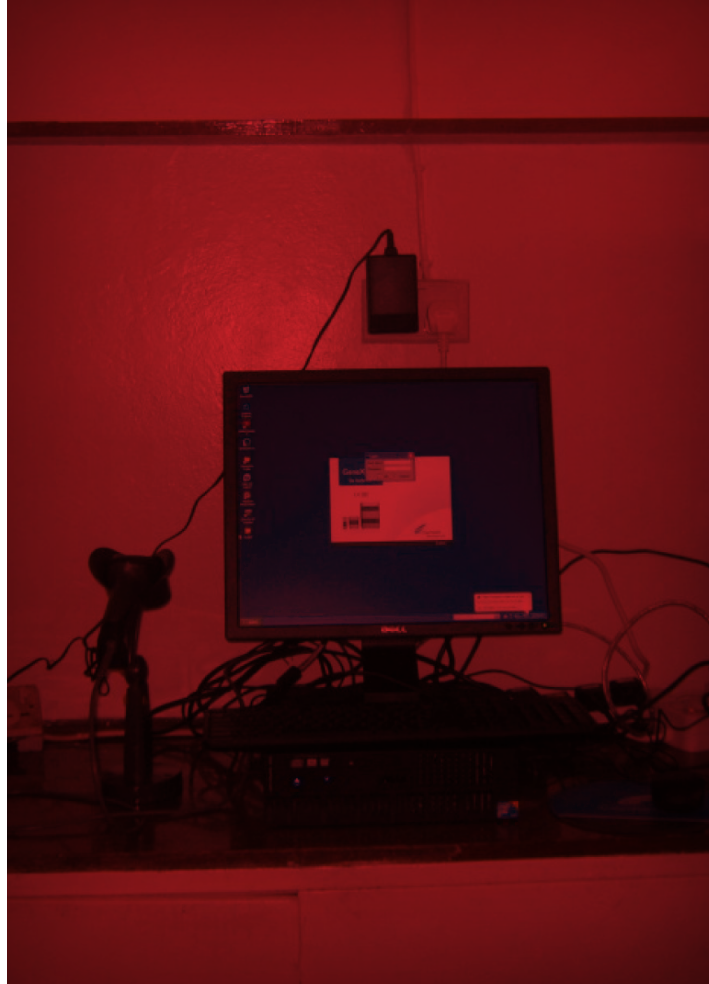
With funding from TB REACH, a project has been initiated with the goal of streamlining the TB diagnostic process, while at the same time increasing its accuracy, through the employment of GeneXpert and LED fluorescent microscope (FM) technologies. The program is being conducted by The Zambia Project for Actively Curing Tuberculosis (ZAM-PACT) in collaboration with the National TB Program in Zambia.

To increase access to diagnosis, open access points have been established, enabling patients to submit samples directly to TB services, eliminating the necessity of standing in long lines at outpatient departments. GeneXpert instruments and FM have been installed in two public primary care facilities. In one facility, patients are offered HIV testing and counseling; those who test positive for HIV or who refuse testing and are therefore categorized as “status unknown”, are then tested for TB using GeneXpert. Patients who are negative for HIV are tested for TB using FM. To date, 24% of the sputum samples tested with GeneXpert were positive for TB as well as 13% of those tested with FM. Everyone in both groups was referred for treatment.

In the second facility, chest x-rays (CXR) are offered to all patients presenting with a cough. Each CXR is then electronically scored as normal or abnormal, using a Computer Aided Diagnosis (CAD) program made available through Diagnostic Image Analysis Group, Nijmegen, Netherlands. Those patients rated abnormal were tested for TB using GeneXpert; to date, 35% were detected with TB. The patients with normal CXR were tested for TB with FM and less than 2% were detected as MTB, confirming the usefulness of CAD for predicting TB.

To increase awareness of TB, mobilization activities are conducted in the communities surrounding both facility sites. Dramatic performance, megaphone announcements and distribution of flyers are all employed to increase community familiarity with the problem of TB.

As a result of these various initiatives, more patients have been able to access diagnosis and the number of patients starting tuberculosis treatment with a confirmed diagnosis has doubled.



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# Zambia

Zambart



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.

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