



FIND INDIA ACTIVITY REPORT 2013



Because diagnosis matters

IMPACT OF FIND INDIA

*Progress as of end 2013 through
various projects implemented
by FIND India*

> Over
40,000
patients diagnosed
with MDR-TB

> **90**
rapid TB and MDR-TB
diagnostic facilities
established

> More than
2,000
lab workers trained

HIGHLIGHTS FROM A YEAR OF MEASURABLE ACHIEVEMENTS



Dr. C.N. Paramasivan
Head, FIND India and South-East Asia

Every year since FIND has been operational in India, there has been exciting and encouraging progress; 2013 was no exception. Our presence in India since 2007 finds its origins in the recognition by the Government of India that we could play a key role in helping it to scale up the delivery of strong programmatic management of drug-resistant tuberculosis (DR-TB) under the Revised National TB Control Programme (RNTCP).

Our public-private partnership model has proven to be an efficient mechanism for the introduction of several new FIND co-developed technologies and diagnostic platforms of particular relevance to India. We have helped to build the necessary laboratory capacity and provided support for the wider application of quality assured rapid diagnostic tests for tuberculosis (TB) and multidrug-resistant TB (MDR-TB). This has fulfilled a long felt need, expressed by physicians and public health experts, for appropriate MDR-TB treatment to be initiated as early as possible.

India's RNTCP is the world's largest programme for the management of TB and DR-TB. Even though it has significantly reduced morbidity and mortality

through the application of the DOTS (directly observed treatment, short-course) TB strategy recommended by the World Health Organization (WHO), it still requires support to be able to expand access to quality assured rapid diagnosis for TB and MDR-TB. As we look at our accomplishments over the past several years, we can see that our endeavours have made – and continue to make – a significant contribution to the government's goal, and that this support has been constructive and wide-ranging.

Human resource training has definitely been a major focus, and its key driver is the International Centre of Excellence for Laboratory Training (ICELT) at the National TB Institute in Bangalore. With support from the Global Laboratory Initiative and the WHO, and with UNITAID funding through the EXPAND-TB project, the centre trains laboratory personnel at the national level. Activities at ICELT cover training in supervisory and monitoring skills in addition to the technical skills required to work with the newer rapid diagnostic platforms that are now being used. We have also provided technical assistance on building layout and laboratory workload management – all to

ensure the proper use of rapid TB diagnostics, resulting in correct patient diagnosis. The crucial importance of this is well illustrated through the stories of individual patients and medical practitioners in this report.

We are supporting the National Laboratory Scale-up Plan (2009 to 2014) and will, by the end of 2014, have established 46 line probe assay (LPA) and 40 liquid culture (LC) facilities across the country. We are doing this with support from UNITAID through EXPAND-TB and the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM). FIND is the technical and implementing partner with RNTCP for the world's largest scale-up of a nationwide laboratory network for DR-TB services. EXPAND-TB is a worldwide, six-year programme for accelerating and expanding access to diagnosis of MDR-TB, an initiative to which UNITAID contributed more than US\$17 million to FIND India alone (UNITAID's overall investment in this global project totals US\$87 million). The project in India has been complemented by the GFATM since 2011; this funding provides support for all laboratories with additional human resources – more than 300 field staff and 20 administration staff – as well as training, quality assurance procedures, technical assistance, monitoring and supervision, and supply of equipment and consumables, all of which were worth over US\$11 million as of the end of 2013.

Our key accomplishments leading up to 2013 included upgrading laboratories to establish 35 LPA, 14 GeneXpert, and 23 LC testing facilities. FIND has conducted 34 national and 140 onsite training courses.

Physicians and public health experts in India have acknowledged the potential shown by these new diagnostic technologies. A significant development was the introduction of the Xpert MTB/RIF® test, for which FIND carried out large, multi-site demonstration studies, including in India, in 2009. Endorsed by the WHO, this cartridge-based nucleic acid amplification test is capable of producing results in less than two hours rather than weeks, as is sometimes required with culture-based testing. Xpert, co-developed

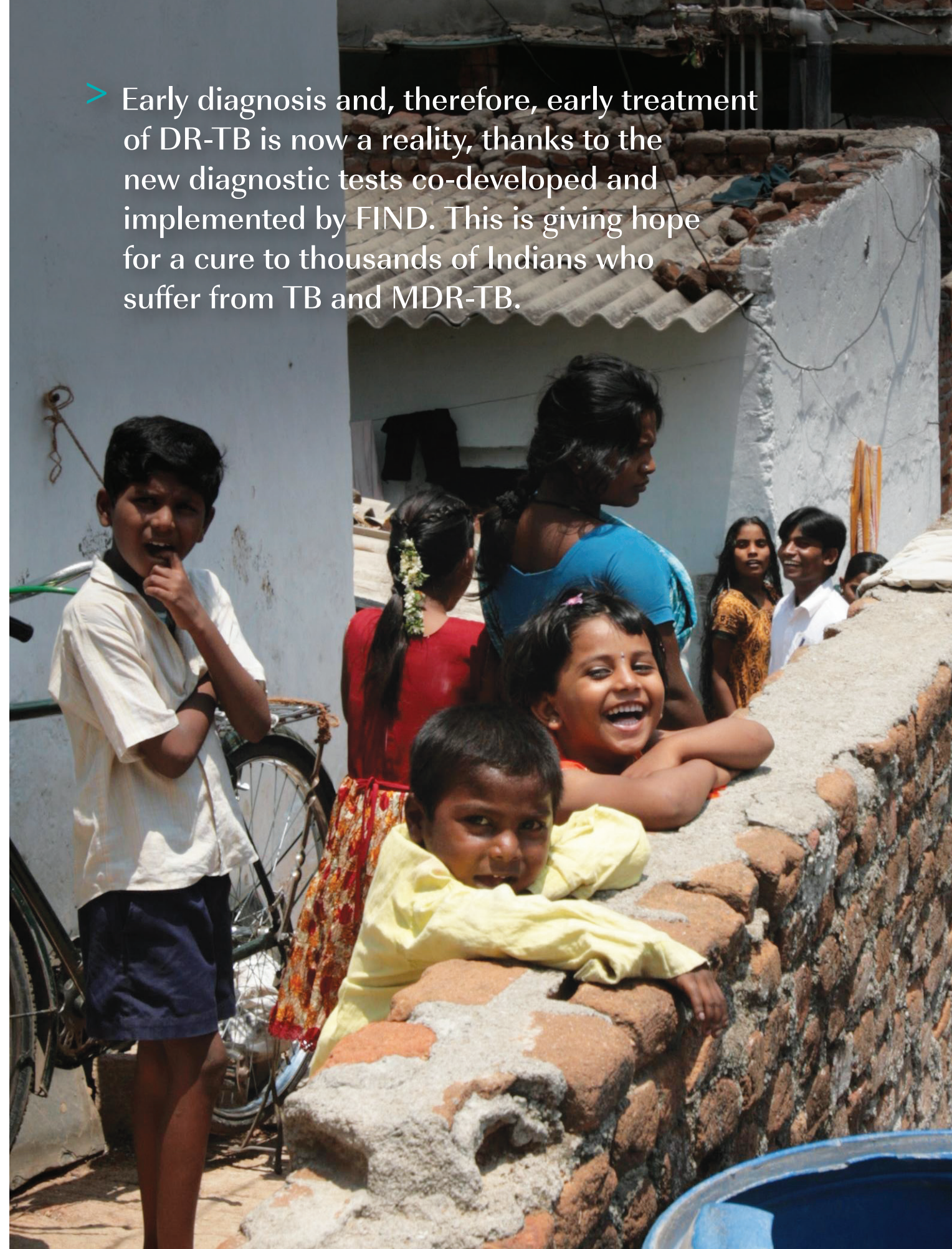
by FIND and its partners, is designed for use in laboratories at district and sub-district levels with minimal bio-safety requirements and training needs. By the end of 2013, there were 32 sites in India using this diagnostic platform: 18 as part of a feasibility and assessment study supported by WHO with funding from USAID; and another 14 through the EXPAND-TB project, which is using the technology to diagnose patients at risk of developing MDR-TB.

The capacity of our team in New Delhi is growing. We are building towards being able to operate as a strong local office, capable of using our expertise to contribute to public health efforts in India and the region. Ours is a robust and efficient multi-disciplinary team made up of programme managers, medical officers, microbiologists, bio-medical engineers, and logistics and procurement officers. We also have access to FIND's global team of experts, which, together with our local experts, creates a significant professional pool capable of addressing multiple diagnostic hurdles so that patients have access to the care they need.

“We have helped to build the necessary laboratory capacity for the wider application of quality assured rapid diagnostic tests for TB and MDR-TB. ”

The staggering need to contain TB and MDR-TB in India cannot be underestimated. Given the size of the challenge, additional national and international funding to support infrastructure, laboratory capacity building, and overall planning and coordination in this vast and diverse sub-continent is critical. Based on our performance, we are confident that our partners will continue to provide the invaluable support needed for FIND to sustain its presence in India and to participate fully in global TB control efforts, ensuring that India is equipped with the latest diagnostic technologies and appropriate implementation infrastructure.

➤ **Early diagnosis and, therefore, early treatment of DR-TB is now a reality, thanks to the new diagnostic tests co-developed and implemented by FIND. This is giving hope for a cure to thousands of Indians who suffer from TB and MDR-TB.**



PATIENT STORIES



Patro
Availability of rapid diagnostics saves lives

Patro, a potter by trade, lives in the small village of Jhadigudain in the state of Odisha. In a good month, he can expect to earn Rs 2500. For four months, he was unable to work – suffering from a persistent cough and weight loss, he went to a government dispensary for treatment, but it was not equipped with appropriate rapid TB diagnostics. He went to another government hospital equipped with Xpert and HIV diagnostic test facilities, where he tested positive for HIV and *Mycobacterium tuberculosis* with Rifampicin sensitive status. He was immediately put on anti-TB treatment with first-line drugs and antiretroviral

therapy. Patro recovered well in the community care centre and was soon back home and looking forward to going back to work.

TB is now the leading cause of death among people living with HIV. A million deaths could be avoided globally over the next five years by diagnosing and treating TB in HIV-positive people. Compared to sputum smear microscopy, Xpert is able to detect more TB cases regardless of HIV status and the WHO recommends the technology as a primary diagnostic test for TB in these patients.



Shanti
Without proper diagnosis, social exclusion could have killed her

Shanti was working on a road construction site for a daily wage of INR 100. Even though her smear microscopy result was negative, her health kept deteriorating until she could no longer work. Her husband had left her, and her children were sent to a nearby hostel. Had she been able to benefit from better testing technologies she could have started treatment much earlier and may not have seen her family disintegrate around her.

A month later, she came to Koraput to visit her cousin who decided she should see a doctor because of her

coughing and weight loss. At the government hospital, the doctor advised smear microscopy and an Xpert test for TB. She was found to be positive for TB and sensitive to Rifampicin; the Xpert result was delivered just three hours after submitting the sputum sample.

Within two days, Shanti was on anti-TB treatment with first-line drugs. By regularly taking her medication, she soon recovered, staying with her cousin until the end of her treatment. She now plans to reunite with her children, but will not miss her husband.



Dr. Rajesh Solanki, BJ Medical College in Ahmedabad, Gujarat
Rapid diagnosis and early treatment – the key to fighting MDR-TB

Dr. Rajesh Solanki is a professor with the TB and Chest Department at BJ Medical College in Ahmedabad, Gujarat.

“We get many complicated cases,” he says. “They do not respond to treatment and it becomes difficult to take care of these patients unless we have accurate diagnosis.”

“We are most thankful for the impact of these diagnostics in detecting DR-TB at an early stage, leading to prompt initiation of treatment.”

With the support of FIND India, his team can now obtain accurate diagnosis of MDR-TB – and in a very short time. “Earlier we used to wait for their diagnostic results and many times patients would not come back and we would get information from relatives that the patient had died.”

Dr. Solanki’s department has been fortunate to benefit from the early introduction of the new LPA test during its validation phase in 2009. In addition to the accurate and rapid LPA diagnostic test, the laboratory has benefitted from the introduction of liquid culture, which has enabled effective follow-up for patients. “This is particularly important for critical follow-ups and diagnosing smear negative pulmonary and extra-pulmonary TB cases,” says Dr. Solanki.

Since 2009, the treatment outcomes for some 3,000 patients on the category IV drug regimen have been encouraging. Early diagnosis and, therefore, early treatment of DR-TB is a reality, thanks to the LPA test which is becoming the standard diagnostic test and is giving hope for a cure to thousands of Indians who suffer from TB and, in particular, from MDR-TB.

In the state of Gujarat (population over 60 million), before the introduction of these newer diagnostics in 2008, a meagre number of 95 MDR-TB cases had been diagnosed, out of which 71 patients were put on treatment. From 2009 to 2013, the cumulative figure went up to 6,102 and 4,868 respectively. Dr. Solanki says, “We are most thankful for the impact of these diagnostics in detecting DR-TB at an early stage, leading to prompt initiation of treatment.”

PROGRESS IN 2013

Number of MDR-TB cases detected and number tested:

- A total of 23,692 patients were diagnosed with MDR-TB in various projects implemented by FIND India under RNTCP.
- A total of 174,811 patients were tested using various diagnostic technologies across the FIND supported laboratories.

Value of equipment installed and consumables supplied

- UNITAID (for EXPAND-TB): US\$3,435,524 for LPA and LC items; US\$356,785 for Xpert items.
- The Global Fund to Fight Aids, Tuberculosis and Malaria: US\$ 2,822,718 for TB LC&DST laboratories (including upgrading infrastructure).

Training

- 8 national and 35 on-site training sessions were conducted.
- 364 laboratory staff were trained in newer TB diagnostics.

KEY ACHIEVEMENTS IN 2013

FIND India: Impact of our work

- A total of 21,736 MDR-TB cases were detected in 2013 with EXPAND-TB support, which is 95% of the annual detection target of 22,941 MDR-TB cases.
- 20,763 MDR-TB patients were initiated on second-line treatment under RNTCP PMDT in 2013. A total of 41,860 MDR-TB and 490 XDR-TB patients have been put on treatment under the programme since its inception in 2007. This figure also includes MDR-TB cases diagnosed by solid culture and by sites outside the EXPAND-TB project.
- The detection rate of MDR-TB has been significantly progressing since 2010 and the number of cases detected yearly has been steadily increasing. FIND India's laboratory strengthening activities have made a major contribution to achieve this result.



> FIND participates in global TB control efforts, ensuring that India is equipped with the latest diagnostic technologies and appropriate implementation infrastructure.

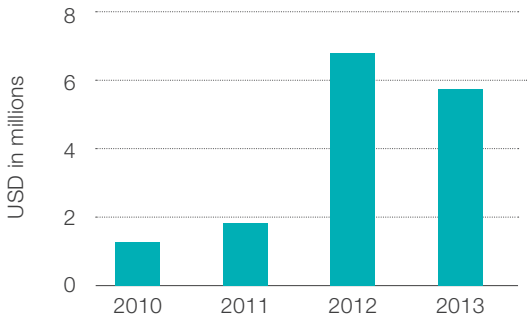
2013 KEY FINANCIAL INFORMATION

FIND India’s expenditures in 2013 were US\$5.8 million, which represents a slight reduction compared to the previous year – this was due to most of the equipment and supplies for the demonstration project on Xpert use having been purchased in 2012. In terms of other expenditures, 2012 and 2013 were on par.

Expenditure 2010-2013

	2010	2011	2012	2013
INR in lakhs	580L	869L	3.364L	3.236L
USD in thousands	1.272k	1.826k	6.789k	5.752k

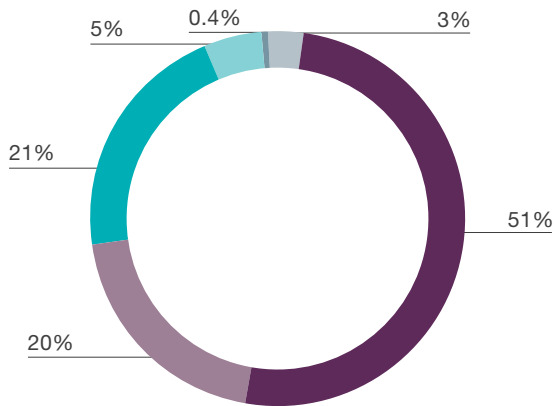
1. Expenditures include activities conducted in India, funded by FIND India and FIND headquarters in Switzerland.



Expenditure 2013

	INR in lakhs	USD in thousands
Building laboratory capacity [The Global Fund]	1,678L	2,922k
Improving access to MDR-TB diagnostics [EXPAND-TB-UNITAID]	659L	1,141k
Demonstration of feasibility of Xpert use in India [WHO]	684L	1,182k
Lab strengthening & quality assurance for diagnostics [CDC]	183L	315k
Diagnostic laboratory capacity building[USAID-PATH]	14L	23k
Indirect expenditure	18L	169k
Total	3,236	5,752

1. Expenditures include activities conducted in India, funded by FIND India and FIND headquarters in Switzerland.





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