



FIND INDIA

# 2019 ACTIVITY REPORT

## LEADERSHIP MESSAGE



Dr Sanjay Sarin  
Head of FIND India

### **The year 2020 presented a unique set of challenges.**

On 11 March, the World Health Organization (WHO) declared COVID-19 a global pandemic. This pandemic has reminded us yet again of the glaring health system inequities around the world and of the importance and value of testing.

### **Testing is the first line of defence against COVID-19 or any disease for that matter. It saves lives.**

In the words of WHO Director-General Dr Tedros Adhanom Ghebreyesus, without testing we may as well be “fighting a fire blind-folded”. An organization whose vision is “a world where diagnosis guides the way to health for all people”, FIND and its partners have been at the forefront of the COVID-19 diagnostics and testing response.

This report takes us back to 2019, or the pre-COVID-19 era. FIND teams working across disease areas including tuberculosis (TB), hepatitis C, malaria and fever and anti-microbial resistance (AMR), have continued their activities with utmost dedication to bring alive our mission of “turning complex diagnostic challenges into simple solutions to overcome diseases of poverty and transform lives.”

FIND India was established 13 years ago, and I would take this opportunity to express my appreciation and gratitude to our teams (current and former), consultants, partners and donors for continuing to remain committed to the cause of improving access to diagnosis for all.

### **Stay well and stay safe.**



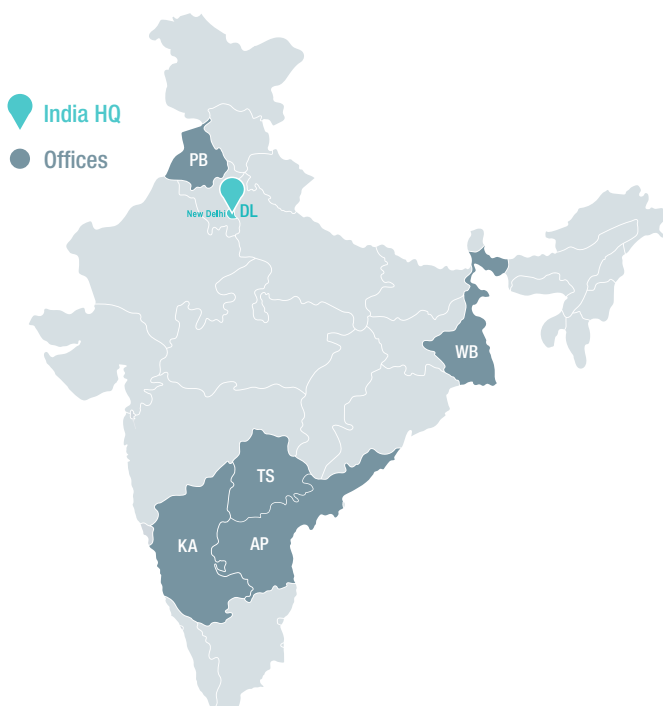
## OUR VISION

is a world where diagnosis guides the way to health for all people.

## OUR MISSION

is turning complex diagnostic challenges into simple solutions to overcome diseases of poverty and transform lives.

## FIND INDIA AT A GLANCE



HQ IN NEW DELHI + STRATEGIC PRESENCE IN 5 STATES, ENABLING PROJECTS COUNTRY-WIDE

### KEY PROJECTS:

NTEP laboratory network – pan India  
 JEET – 6 states + 1 Union Territory  
 HEAD-Start – Delhi + 2 states  
 AMR Dx Use Accelerator – 4 states  
 Technical assistance to establish TB  
 C&DST laboratories – 4 states



### PARTNER NETWORK

Donors: 12  
 Partners: 20+



### OVERALL TEAM STRENGTH: 472

FIND India: 81  
 Extended team (third-party employed): 391



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## ABBREVIATIONS

|                               |  |
|-------------------------------|--|
| <b>ART</b>                    | antiretroviral therapy   |
| <b>CBNAAT</b>                 | Cartridge-based nucleic acid amplification test  |
| <b>CDC</b>                    | U.S. Centers for Disease Control and Prevention  |
| <b>CHAI</b>                   | Clinton Health Access Initiative   |
| <b>CHRI</b>                   | Centre for Health Research and Innovation  |
| <b>DST</b>                    | Drug susceptibility testing  |
| <b>DR TB</b>                  | Drug-resistant tuberculosis  |
| <b>HCV</b>                    | hepatitis C virus  |
| <b>HIV</b>                    | human immunodeficiency virus   |
| <b>IRL</b>                    | Intermediate Reference Laboratory  |
| <b>ISO</b>                    | International Organization for Standardization   |
| <b>INH</b>                    | isoniazid (first-line TB drug)   |
| <b>LC&amp;DST / C&amp;DST</b> | Liquid culture and drug susceptibility testing / culture (both liquid and solid) and DST |
| <b>LIMS</b>                   | Laboratory Information Management System (LIMS)  |
| <b>LPA</b>                    | line-probe assay   |
| <b>MDR</b>                    | multi-drug resistant   |
| <b>MoHFW</b>                  | Ministry of Health and Family Welfare  |
| <b>NABL</b>                   | National Accreditation Board for Testing and Calibration Laboratories                    |
| <b>NRL</b>                    | National Reference Laboratory  |
| <b>NTEP</b>                   | National TB Elimination Program  |
| <b>NTI</b>                    | National Tuberculosis Institute  |
| <b>NVHCP</b>                  | National Viral Hepatitis Control Program   |
| <b>OST</b>                    | opioid substitution therapy  |
| <b>POC</b>                    | point of care  |
| <b>PPM</b>                    | public-private mix   |
| <b>PPSA</b>                   | Patient Provider Support Agency  |
| <b>PT</b>                     | proficiency testing  |
| <b>RIF</b>                    | rifampicin   |
| <b>RNA</b>                    | ribonucleic acid   |
| <b>SLMTA</b>                  | Strengthening Laboratory Management Toward Accreditation                                 |
| <b>TB</b>                     | tuberculosis   |
| <b>TST</b>                    | tuberculin skin test   |
| <b>UHC</b>                    | universal health coverage  |
| <b>WGS</b>                    | whole genome sequencing  |
| <b>XDR</b>                    | extensively drug resistant   |

## 2019 IN NUMBERS

Over **740,000** patients were tested for tuberculosis (TB) and drug resistant TB (DR-TB) in FIND-supported laboratories resulting in the detection of nearly **14,000** cases of multi-drug resistant (MDR) TB and extensively drug-resistant (XDR) TB. These patients were linked to appropriate treatment under the National TB Elimination Program (NTEP).

As part of the Global Fund-supported project, **3** TB liquid culture and drug susceptibility testing laboratories were upgraded, validated and transferred to the NTEP.

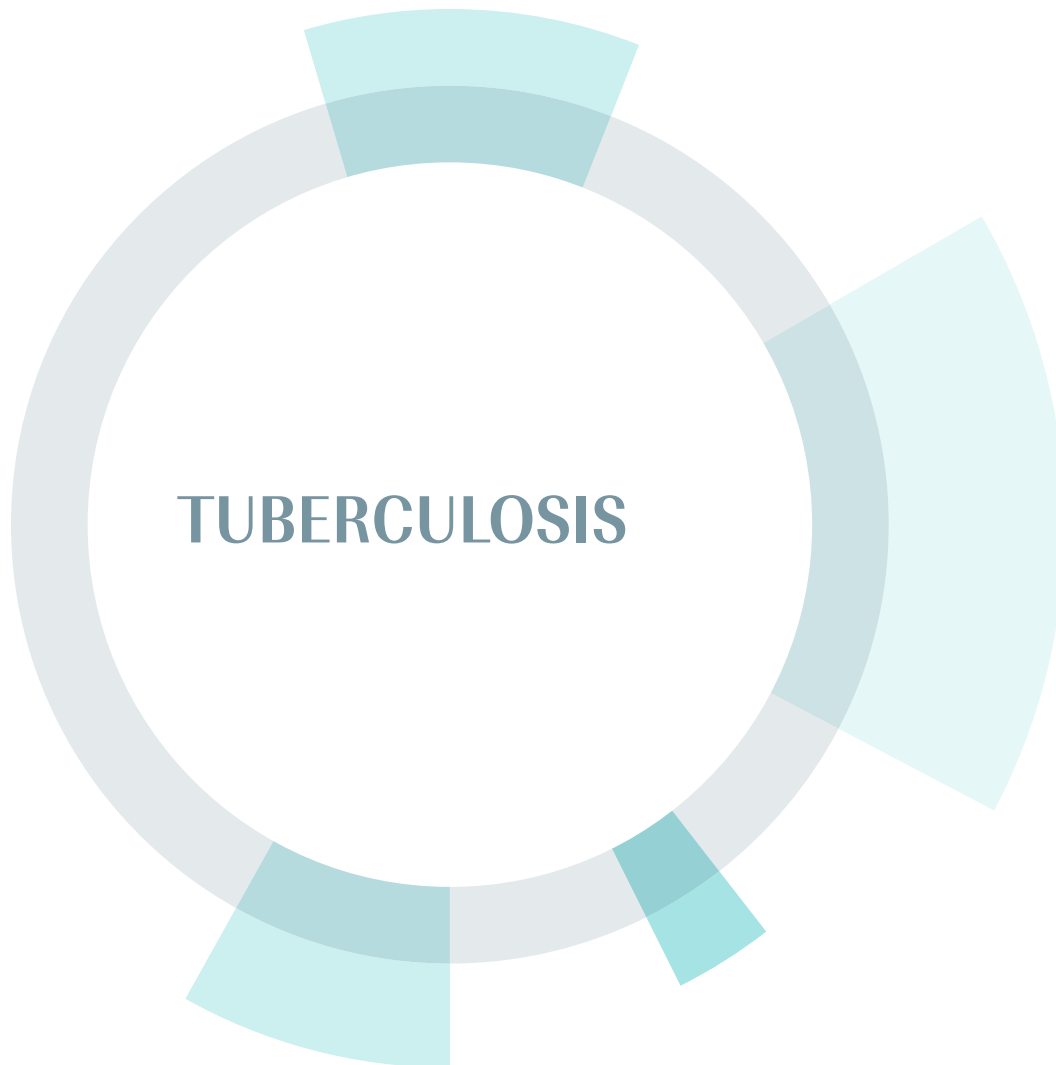
Another **7** laboratories are in the process of being upgraded and are expected to be completed by the end of 2020.

Under the Global Fund-supported project “Joint Effort towards Elimination of TB” (JEET), over **105,000** TB patients seeking care in India's private health sector were notified to the NTEP. The project achieved an **80%** treatment success rate in 2018. Nearly **18,000** private sector providers were sensitized on TB guidelines as of December 2019.

As part of the ongoing work to establish a “Lab Information Management System” connecting the NTEP's TB culture & DST labs, **55** labs are now linked to the NTEP's web portal “Nikshay”. In addition, development and demonstration of a “logistics module” to support inventory management across the laboratories was also completed.

Over **76,000** people were screened for hepatitis C virus (HCV) as part of the Unitaid-funded HEAD-Start project, with **>9,000** cases of HCV detected and over **5,000** patients linked to treatment.

Nearly **2,300** prison inmates in the State of Punjab were screened for hepatitis C under the Gilead-funded project entitled “Supporting Hepatitis C Micro-elimination among Prison Inmates in Punjab, India”. Out of those screened, **400** inmates were found to be HCV RNA positive, and **~70%** of them initiated on HCV treatment.



#### **PARTNERING TO TRANSFORM THE DIAGNOSIS OF MULTIDRUG-RESISTANT TB (2010–ONGOING)**

Since 2010, with funding from Unitaid and the Global Fund, FIND has been a key technical and implementing partner of the National TB Elimination Program (NTEP), Ministry of Health and Family Welfare, Government of India for its nationwide laboratory network of diagnostic services for drug-resistant tuberculosis (DR-TB). These projects have radically changed the management of DR-TB in India by the NTEP.

#### **Strengthening and sustaining NTEP's laboratory diagnostic network**

The objectives of the current grant from The Global Fund include sustaining service delivery of NTEP's existing liquid culture and drug susceptibility testing (LC&DST) and line-probe assay (LPA) laboratories. It includes enhancing capacity for quality assured diagnosis of DR-TB by establishing 20 additional LC&DST facilities and scaling up the Laboratory Information Management System (LIMS) for all LC&DST laboratories under the NTEP.

In 2019, FIND India completed the validation of three out of 20 laboratories which were then transferred to the NTEP for service delivery. FIND also conducted laboratory assessments and developed the structural design and layout for 10 of these laboratories.

### **Maintenance of existing NTEP laboratories**

FIND provided maintenance services for ~21 types of laboratory instruments and more than 3700 diagnostic equipment. To ensure long term sustainability, transition of equipment maintenance services to the NTEP was undertaken for several diagnostic platforms used to diagnose TB such as the MGIT, GT Blot 48 and Twincubator. FIND also provided consumables and reagents to the laboratories leveraging FIND's robust supply chain capabilities.

### **Laboratory Information Management System (LIMS)**

To help establish uniformity across the NTEP's laboratory network, minimize data-entry errors and automate notifications, FIND rolled out LIMS across the C&DST laboratories in the NTEP network, integrating LIMS with NTEP's Nikshay software. Onsite trainings were conducted by FIND and its implementing partner KPMG at 55 sites and LIMS was updated based on feedback from the trainings. A logistics module to track laboratory supplies is being incorporated into LIMS to help reduce reporting workload and establish uniformity in laboratory processes across the network.

FIND India plans to complete the validation and handover of remaining 17 sites along with the supply and installation of associated hardware, provide training at the remaining 6 sites, and deliver the logistics module.

### **Whole genome sequencing (WGS) implementation**

Procurement and installation of WGS equipment and supply of consumables and testing of samples was initiated at six identified WGS sites spread across the country.

### **TECHNICAL ASSISTANCE FOR CAPACITY BUILDING OF INSTITUTES AND STATES TO ESTABLISH TB C&DST LABORATORIES**

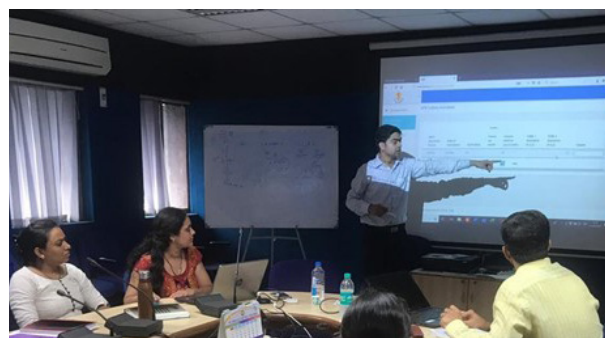
Several states in the country are keen on building and upgrading their current laboratory infrastructure for C&DST by leveraging their own funds. However, the upgrading of TB LC&DST laboratories involves several complex technical steps, which, over the years, FIND India has provided in the form of its laboratory strengthening expertise for 61 laboratories within NTEP.

FIND India, with support from Johnson and Johnson Pvt Ltd, started providing technical assistance and guidance for upgrading 8 TB C&DST laboratories in Maharashtra, Tamil Nadu, Himachal Pradesh and Madhya Pradesh using state/institute funds. These laboratories are expected to be functional in 2021. All 8 laboratories and state teams were guided through preparation of lab design, tendering process for upgradation, and procurement and installation of equipment as per NTEP guidelines. One C&DST laboratory was validated, and civil work was completed for 2 C&DST labs, with another 5 labs planned.

The intervention will not only serve to offer on-ground technical assistance, but also develop a comprehensive guidance document for capacity building, long-term sustainability and knowledge transfer to the NTEP.



Microbiologist at IRL Patiala reviewing the test results during a LIMS onsite training from 16–17 November 2019



Onsite LIMS training at IRL Ahmedabad from 3–4 September 2019





### CREATION OF LABORATORY-BASED E-TRAINING PACKAGES (2017–2019)

Laboratory strengthening and capacity building is an integral part of NTEP's ambitious plan to expand India's TB diagnostic network. Adequate training of laboratory personnel is key to building laboratory capacity and it is essential that trained staff are competent in performing their activities and up to date in their understanding of the latest guidelines on TB diagnosis and treatment. Currently, national level trainings are organized by NTEP at designated National Reference Laboratories (NRLs). The master trainers, trained at the national level, are subsequently expected to conduct on-site trainings for laboratory staff. Although highly effective, this method needs to be supported by other training and capacity building approaches, especially considering that the NTEP focus on TB and DR-TB diagnosis has significantly increased thereby increasing demand for a trained laboratory workforce.

Under the Challenge TB project, supported by USAID, FIND developed a comprehensive set of e-training modules for four TB diagnostic technologies [sputum microscopy, CBNAAT (cartridge-based nucleic acid amplification test), LPA and C&DST (liquid and solid)] and laboratory-related bio-safety practices. Multimedia content and 22 training videos were developed by FIND, with the help of experts from NRLs, IRLs and technical partners. FIND validated the e-training modules by piloting the training at a few sites in July 2019. Site staff were satisfied with this concept of guided training via e-training modules followed by individual competency assessments. In conjunction with other learning methods/materials, these modules will be used for induction, refresher trainings, and support in implementing competency assessments on various TB diagnostics technologies in use under NTEP.

The modules are hosted on WHO India's [e-swasthya gurukul](#) platform for wide-spread dissemination and use.

### DIAGNOSING TB IN CHILDREN

Since the completion of our landmark paediatric TB project in March 2018, the project team has meticulously documented the project findings and created a "[paediatric dissemination package](#)". This was to ensure that all project activities, such as design, implementation, advocacy, training materials, lessons learnt and successes are documented and available for other health programmes and teams wishing to conduct similar interventions in other regions or countries.



Four technical videos on sample collection from paediatric TB cases, as well as how to conduct a tuberculin skin test, were made. The videos were developed in collaboration with Dr Varinder Singh from the paediatric TB CoE at the Kalawati Saran Children's Hospital, Delhi, India, and are now available on the [NTEP website](#) for nationwide dissemination and on [FIND's YouTube channel](#).

In 2019, one manuscript from the project was [published](#) in a peer reviewed journal with two more under review. The project also received a mention by the United Nations, as an example of "[good practice](#)" in line with Sustainable Development Goals 3 and Target 3.3.]

## SCALING UP CBNAAT (GENEXPERT MTB/RIF) EQA (2016–ONGOING)

The National TB Institute Bangalore (NTI) and FIND, under the overall guidance of NTEP, is currently working to scale up – in a phased manner across the country – an external quality assurance (EQA) proficiency testing (PT) programme for CBNAAT testing. This project is funded by the U.S Centers for Disease Control and Prevention (CDC).

As of 2019, the EQA PT programme has been scaled up to 622 CNAAT laboratories across the country from both the public and private sectors. Additionally, with technical support from CDC, NTI and FIND have developed in-country capacity to manufacture PT panels for CBNAAT EQA at the International Center for Excellence in Laboratory Training. Sensitization workshops were carried out for participants from 3 NRLs and 19 IRLs from 20 states at NTI Bangalore in February 2019 followed by the dispatch of PT panels to the participating sites. In May, results of the round were released for 664 CBNAAT machines across 622 sites. Analysis of EQA data showed 651 (98%) out of 664 machines to have satisfactory proficiency scores (80% or more).

FIND, in collaboration with CTD/NTI, plans to scale up this CBNAAT EQA program to cover 1200+ public and private sector sites across the entire country in 2020.



Second batch: national Level CBNAAT EQA sensitization workshop held at NTI from 6–7 February 2019



Third batch: national Level CBNAAT EQA sensitization workshop held at NTI from 8–9 February 2019

## STRENGTHENING TB LABORATORIES TO IMPROVE QMS AND ACHIEVE ISO 15189 (2019–ONGOING)

As part of a CDC-supported project, FIND is working with 5 TB laboratories to improve their quality management systems in preparation to achieve ISO 15189 accreditation from the National Accreditation Board for Testing and Calibration Laboratories (NABL), India.

The laboratories are being guided through a customized, sustainable strengthening tuberculosis laboratory management toward accreditation (TB SLMTA) approach. All stakeholders were sensitized and informed about the project, plans and commitments required from the laboratories. Baseline assessments were carried out to plan for mentoring laboratories. A series of three workshops, followed by onsite mentoring visits, were carried out to strengthen quality implementation. The laboratories successfully completed their internal audits and are planning to apply to NABL for accreditation in 2020.

FIND is also providing technical support to 11 TB laboratories for maintaining their NABL accreditation.



Third TB SLMTA workshop: in-house calibration and pipette maintenance at NTI from 17–20 December 2019



Third TB SLMTA workshop: in-house calibration and maintenance at NTI from 17–20 December 2019

## CONTRIBUTING TO NATIONAL CAPACITY FOR DIAGNOSTIC DEVELOPMENT AND MANUFACTURING (2018–ONGOING)

Following a prospective multicentre study conducted in India, Peru, Ethiopia, and Papua New Guinea to assess the diagnostic accuracy of the Truenat™ MTB and rifampicin (RIF) assays in intended settings of use (microscopy centre level), Truenat™ is expected to further scale up NTEP's molecular diagnostic capacity for rapid diagnosis of TB and DR-TB. Currently, CBNAAT (GeneXpert® MTB/RIF) is widely used in the country and has transformed TB diagnosis by reducing time to result from months to hours, allowing patients to start treatment without delay.

Truenat, which is a chip-based NAAT, is designed to be used close to the point of care (POC), as it does not need to be housed in air-conditioned facilities. It is therefore particularly well-suited for use in low-resource primary care settings.

The main objective of the study was to determine the diagnostic accuracy of the Truenat MTB and reflex RIF assays using C&DST as a gold standard, with the secondary objective to determine their diagnostic accuracy, and assess patient outcomes, compared to GeneXpert.

The study was conducted across 9 designated microscopy centres – three each in the states of Tamil Nadu (Chennai), Gujarat (Ahmadabad) and Assam (Guwahati) and one private laboratory in Maharashtra (Hinduja Hospital, Mumbai). Patient enrolment was completed at all the sites in 2019.

## MULTICENTRE CLINICAL STUDY TO ASSESS THE GENEXPERT® MTB/XDR ASSAY FOR INH- AND SECOND-LINE RESISTANCE DETECTION (2019–ONGOING)

TB control efforts have been complicated by the rise and spread of MDR-TB and XDR-TB. The rapid diagnosis and appropriate treatment of M/XDR-TB is essential to preventing significant morbidity, mortality, and further transmission of disease. The currently used GeneXpert MTB/RIF assay is only capable of identifying *Mycobacterium tuberculosis* (*M.tb*) and detecting RIF resistance. It cannot tell whether a patient with RIF resistance remains isoniazid (INH) susceptible, and thus could still be treated with this first-line drug. Nor can it identify which RIF-resistant patients can be treated with a fluoroquinolone and/or aminoglycoside, since these drugs are not suitable for those who have XDR-TB. In this study we are evaluating a new and innovative 10- colour, real-time GeneXpert MTB/XDR assay for INH and second-line resistance detection, and to recommend its use in diverse clinical settings.

The focus of this protocol is a multicentre clinical evaluation of GeneXpert MTB/XDR against MGIT™ LC-DST, and LPA (first and second line) with discordant results, to be further confirmed by sequencing. The GeneXpert MTB/XDR assay will be used for patients who already test TB positive (and RIF resistant) in a primary GeneXpert test.

### Activities completed in 2019:

- Completed site initiation visits and trainings at P.D. Hinduja NHMRC, Mumbai and NITRD, Delhi in May 2019
- Screening, enrolment, and sample processing for GeneXpert XDR, liquid culture DST, LPA, DNA extraction of half of the patients at the two study sites completed by December 2019
- Standardization of DNA extraction protocol for sequencing
- Site monitoring visits by FIND project lead at both study sites
- Data entry of samples processed and results made available



## JOINT EFFORT FOR ELIMINATION OF TUBERCULOSIS (JEET) (2018–ONGOING)

Studies have shown that nearly half of all people affected by TB in India first seek care in the private sector, where there are significant gaps across the patient-care cascade, diagnostic delays, irrational and non-standardized treatment regimens, and under-reporting to authorities. As a result, [over a million cases](#) of TB are estimated to be missed in India every year.

Engaging the private sector effectively is crucial to achieving universal access to quality diagnosis and treatment for TB and in line with this, FIND India is currently implementing the [“Joint Effort for Elimination of TB”](#) or JEET project, that began in 2018. The project aims to partner with private sector physicians, laboratories and pharmacies in over 95 districts across various states of India to establish linkages to increase identification and notification of TB, facilitate early treatment initiation and provide adherence support for improved treatment completion rates. JEET is carried out by a consortium comprising FIND, CHAI and CHRI. The project is supported by the Global Fund and is being implemented in collaboration with NTEP. This innovative approach has already notified over 105,000 TB patients, with >80% successful treatment outcomes in 2019.



## NETWORKS FOR OPTIMIZED DIAGNOSIS TO END TB (NODE-TB) PROJECT (2019–ONGOING)

One of the strategic pillars of India's National Strategic Plan to End TB is “detection,” which focuses on creating a comprehensive, high-quality TB diagnostic network to accurately and rapidly diagnose TB and link the patients to appropriate and timely treatment. Network design that is better aligned with patient health seeking behaviour is expected to help alleviate barriers to care and will assist governments and donors to improve the efficiency of investments and service delivery.

**In 2019, FIND conducted a diagnostic network optimization exercise for LC&DST, LPA and NAAT across the country. The results from these exercises will inform NTEP on:**

- Optimizing placement of existing CBNAAT devices and modelling the optimal positioning and scale up of Truenat to fill gaps in current CBNAAT instrument placement in the public sector
- Estimating future demand for testing
- Mapping the location and capacity of TB diagnostic testing services in selected private sector labs and propose engagement models and referral patterns to optimise overall network efficiency and increase patient access to diagnosis
- Recommend the optimal sample referral network design from health facility to molecular testing site
- Introduce newer and more efficient technologies and phase out outdated technologies



# HEPATITIS C & HIV

## HEAD-START (2017–ONGOING)

The treatment landscape for hepatitis C has recently undergone a dramatic transformation with the availability of effective, well-tolerated, all-oral regimens, capable of achieving cure rates of more than 90% within 12 weeks of treatment. While large-scale manufacturing of new regimens has provided access to affordable treatments in countries like India, rapid, inexpensive, and accurate diagnosis remains a critical bottleneck that must be addressed if hepatitis C is to be eliminated. To address this gap, and with funding from Unitaid, FIND India is working to build an efficient and sustainable public health response to HCV.

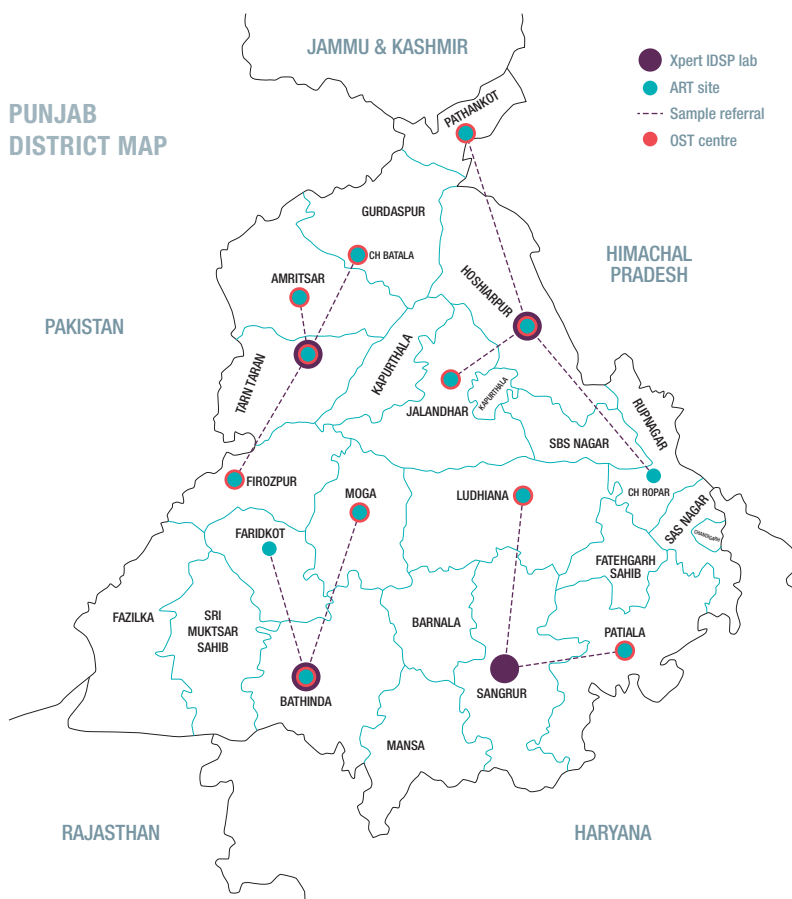
Under the project, the HEAD-Start team implemented innovative models for the screening and treatment of HIV/HCV co-infected and other high-risk populations, initially using existing diagnostic platforms and direct-acting antivirals, and then by introducing other technologies as they become available. This is the first and largest public health HCV intervention among key and general populations in Delhi, Manipur and Punjab. Our work is supported by the government of Punjab, the government NCT of Delhi, the Institute of Liver and Biliary Sciences (ILBS) and the YR Gaitonde Centre for AIDS Research and Education (YRG CARE).



**Yashwinder Singh,**  
HCV community leader and  
representative on the Steering  
Committee for India's National  
Viral Hepatitis Control Program

## HEAD-START, PUNJAB

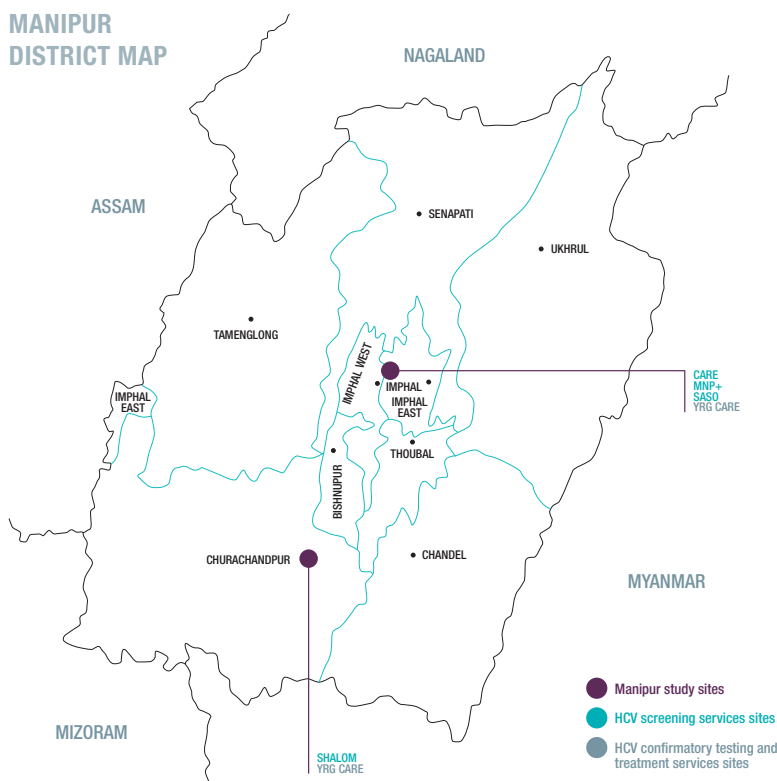
### PUNJAB DISTRICT MAP



- Demonstration of integrated HCV counselling and screening in ART and OST Centers
- Integration of HCV treatment for HIV-HCV coinfected patients through 13 ART Centers
- Decentralized HCV RNA diagnostic facility established at 4 district hospitals in Punjab
- Revived community engagement and provided platforms for community voices at high-level event chaired by state health minister
- Encouraged government commitment to sustain HEAD-Start HCV testing and treatment model (HCV samples managed through outsourced lab)

## HEAD-START, MANIPUR

### MANIPUR DISTRICT MAP



- Demonstration of community-facilitated HCV counselling, testing and treatment for people who inject drugs (PWIDs) and their sexual partners
- HCV testing and treatment initiated at 2 hospitals under the aegis of NVHCP, Manipur

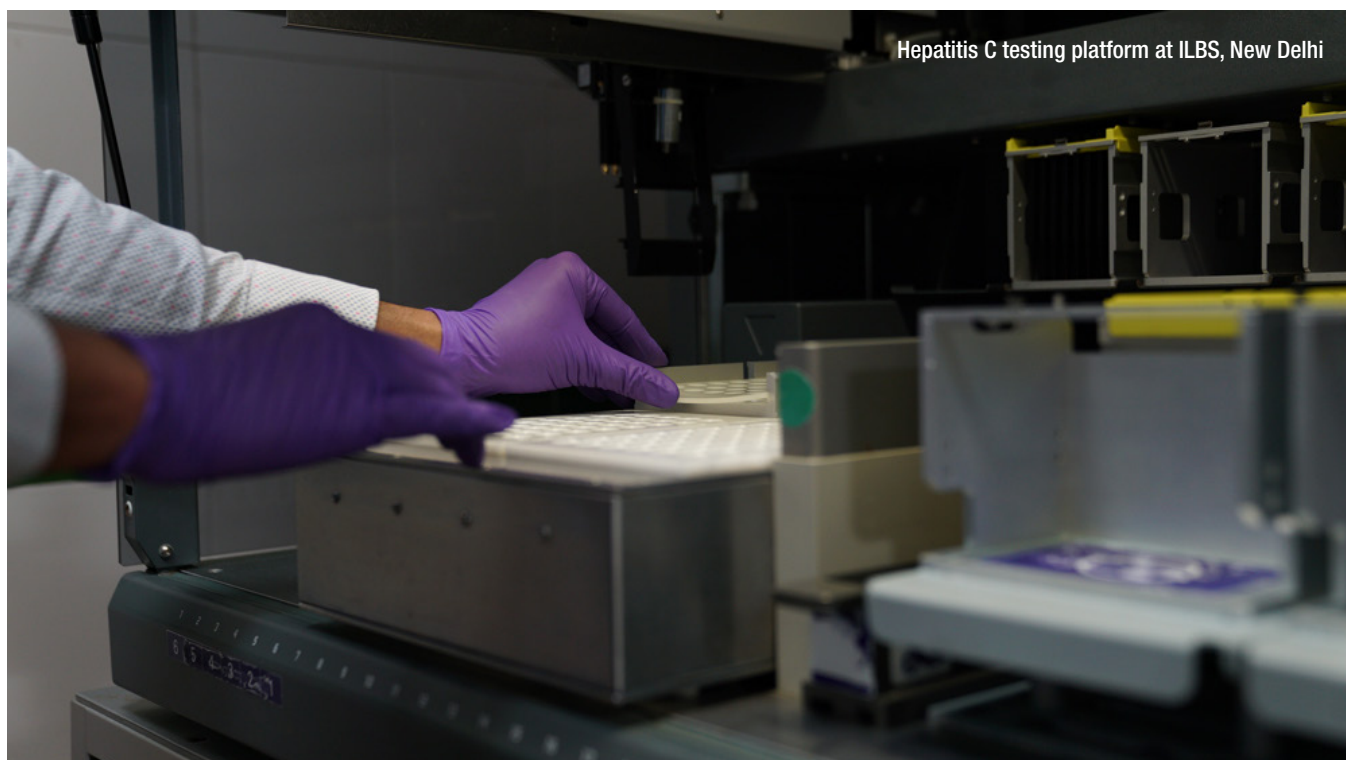
## HEAD-START, DELHI



### Hepatitis C Elimination through Access to Diagnostics (HEAD-Start) THE DELHI MODEL



- Capacity building for human resources and strengthening of health systems for HCV service delivery in 5 district hospitals and 15 polyclinics under the HEAD-Start hub and spoke model
- Successfully demonstrated effective and efficient management of HCV diagnosis and treatment among general population with minimal patient visits
- Delhi MoH recognized and endorsed HEAD-Start as a well-functioning 'Delhi Model' for decentralized HCV services exploring innovative testing approaches
- Under NVHCP, Delhi MoH notified the 5 hospitals as HCV treatment centers and linked them to the model treatment centre for viral load testing and complicated case management



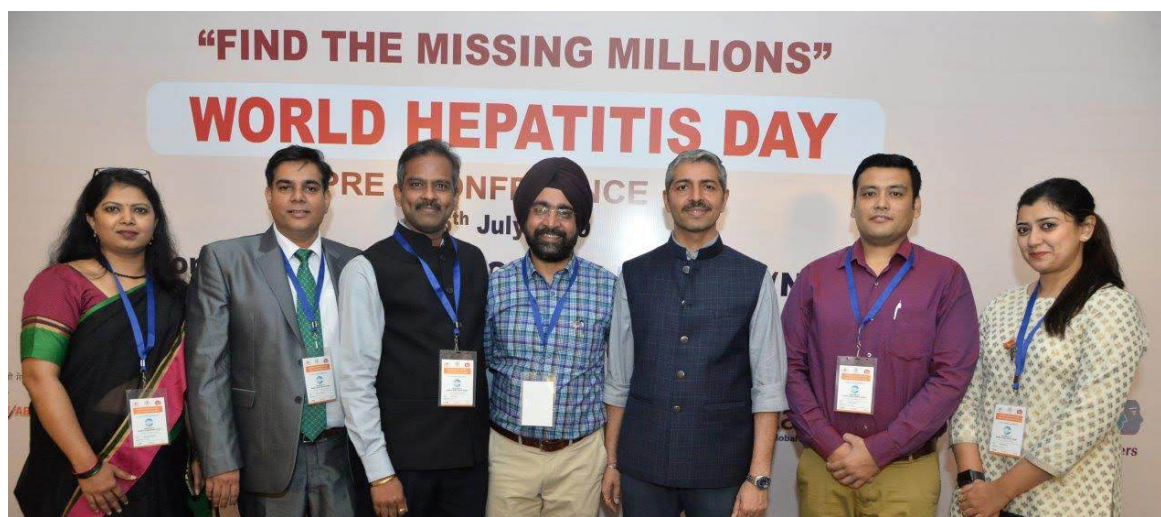
Hepatitis C testing platform at ILBS, New Delhi

## KEY HEAD-START EVENTS IN 2019

| ACTIVITY MEETING   | PURPOSE  |
|--|--|
| Media Sensitization Workshop, Delhi, India                           | Build capacity of health journalists around HCV issues and promote reporting on HCV  |
| 2nd Technical Advisory Group (TAG) meeting for HEAD-Start, Punjab    | Improve ongoing project activities and expansion of HEAD-Start activities to OST sites   |
| 2nd Review Meeting of MACS TI NGOs, FIND & YRG CARE, Imphal, Manipur | Review the progress of Project HEAD-Start with NGOs/CBOs at Imphal-YRG CARE  |
| Media Sensitization Workshop at Imphal, Manipur, India               | Introduce viral hepatitis with a focus on both the national and state scenarios as well as HEAD-Start                                    |
| 1st Technical Advisory Group (TAG) Meeting, HEAD-Start, Delhi        | Discuss progress made under Project HEAD-Start from 23 January to 30 June 2019   |
| 3rd TAG meeting on HEAD-Start  | Improve ongoing project activities and expansion of HEAD-Start activities to OST sites   |
| HEAD-Start, Delhi project  | Congratulate hospital nodal officers, lab technicians, data entry operators, ILBS team on the success of the HEAD-Start project in Delhi |
| State Review Meeting & Intersectoral Co-ordination under NVHCP       | Review the uptake of HCV implementation in each state; introduce and integrate NVHCP activities with other health components             |

## PARTICIPATION IN INTERNATIONAL CONFERENCES IN 2019

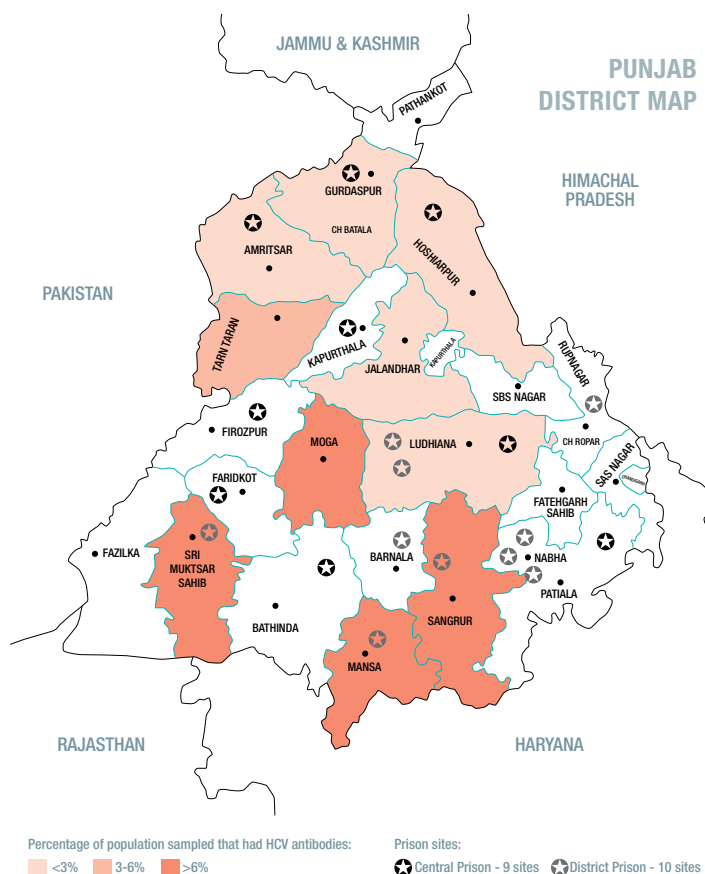
| PRESENTATION TITLE  | CONFERENCE   |
|---|--|
| Integration of hepatitis C services in existing HIV care within the public sector; HEAD-Start, Punjab, India                | 4th Asia Pacific AIDS & Co-infections Conference (APACC), Hong Kong.                                 |
| Community Centric HCV Testing and Treatment for PWID in Manipur, India – The HEAD-Start Project                             | International Conference on Hepatitis Care in Substance Users (INSHU), Montreal, Canada              |
| Increasing the uptake of HCV testing by a decentralised testing and treatment model: experience from a pilot study in India | 70th Annual meeting of the American Association for the Study of Liver Diseases (AASLD), Boston, USA |
| Punjab micro-elimination project  | International Viral Hepatitis Elimination meeting (IVHEM), Amsterdam, Netherlands                    |





## SUPPORTING HEPATITIS C MICRO-ELIMINATION AMONG PRISON INMATES IN PUNJAB, INDIA (2019–ONGOING)

FIND India is conducting a hepatitis C micro-elimination which includes screening followed by confirmatory testing for HCV among prison inmates in Punjab in collaboration with the Government of Punjab and the Prisons Department. Micro-elimination is a concept that targets eliminating hepatitis C for defined segments of a population as a strategy to incrementally achieve national elimination. The intervention covers 9 central and 10 district prisons in Punjab, with plans to screen ~21,400 inmates for the duration of the project. Experience across the prisons will help to establish capacity to expand HCV diagnosis and treatment coverage to sub-district levels beyond project period.



### Objectives:

- Conduct micro-elimination for hepatitis C in all of Punjab's 9 central and 10 district prisons with screening and confirmatory testing
- Link at least 90% of those with positive confirmatory diagnosis to the public sector for treatment

### Achievements:

- The project was launched by Shri Balbir Singh Sidhu, Honourable Health Minister, Punjab during an event organized by FIND in collaboration with Department of Health and Family Welfare, Punjab on 26 July 2019 in Chandigarh.
- A situational assessment was carried out across all the 9 central prisons of Punjab to gauge the existing facilities and to do gap analysis of the sites so as to be able to set up HCV screening.
- While FIND was responsible for ensuring HCV viral load testing of prison inmates, the Government of Punjab provided treatment free of cost.
- Capacity-building workshops to train the medical and the para-medical staff of prisons were conducted. A total of 29 medical officers, 9 pharmacists and 9 lab technicians were trained.
- Phased roll-out of the intervention was carried out with an estimated 21,400 inmates.
  - Phase I – All 9 central jails were covered and activities started in November 2019, with Phase II, covering all 10 district jails, expected to commence in May 2020
- Screening and management of hepatitis C in the 9 central prisons included 73% (19,925) of the total Punjab prison population (24,569).
- A total of 2285 prisoners were screened by the end of 2019: 592 (26%) were found HCV antibody positive, of which 400 were positive for HCV RNA. 251 (62%) HCV RNA positive inmates were started on treatment.

## Glimpses from the field



Meeting at Patiala Prison with SP jail



Visit to Punjab jails



Planning for next batch of trainings at Patiala Jail Training School with DIG Prisons and Principal PJTS



Felicitation at the launch of the HCV prisons project and completion of training programme for prison medical team at Patiala Jail Training School, Patiala



Punjab's Health Minister Balbir Singh Sidhu unveiled the prisons project on World Hepatitis Day



#### AMR DIAGNOSTIC (DX) USE ACCELERATOR

The AMR Diagnostic (Dx) Use Accelerator is a platform to evaluate a package of interventions and provide evidence to inform policy change that can positively impact antimicrobial resistance (AMR) and contribute to universal health coverage (UHC). The AMR Dx Use Accelerator is ultimately intended to help prepare for the introduction of new diagnostics and provide a safe environment for new antibiotics to enjoy a longer useful therapeutic lifespan.

In the first instance, interventions focus on improving management of patients presenting with fever by providing and evaluating a “toolbox” that can help healthcare professionals provide more targeted treatments. By adopting available diagnostic tests and other aids, and encouraging behaviour changes in outpatient clinics, we hope to rationalize the use of antibiotics. To generate the data to support this toolbox, we will conduct studies, in partnership with the Indian Council of Medical Research (ICMR) at 4 sites in India.



## FIND-BD AMR SCORECARD (2019–ONGOING)

Antimicrobial resistance is a global problem, estimated to account for more than 700,000 deaths worldwide. The O'Neill report highlighted global gaps in AMR surveillance, standardized procedures and data management. Recent AMR data are lacking in many low- and middle-income countries and where data exist, quality and standardization are a serious concern.

Building on previous work with Becton Dickinson & Company (BD) and partners, FIND developed a modular AMR scorecard for measuring progress towards implementation of quality-assured diagnostic services.

## The activities under the project include:

- Conducting assessments and providing structured mentoring for quality improvement in AMR laboratory services and use of laboratory data for patient management and surveillance
- Generating evidence and advocating for the scale-up of the AMR scorecard and structured quality improvement

A meeting of all stakeholders, microbiologists from 4 labs in Maharashtra, WHO, CDC, FIND and BD, took place in Mumbai. The group reviewed the scorecard and developed a plan for conducting the initial assessments of the 4 labs in Maharashtra, with plans to scale up the scorecard to another 10 labs.







## MALARIA & FEVER

### MALARIA CRP PROJECT (2019–ONGOING)

FIND India is evaluating the performance of a malaria C-reactive protein (CRP) test to help guide treatment decisions, particularly the use of antibiotics in malaria-negative fever patients. This work is being done in collaboration with the National Institute of Malaria Research (NIMR) in New Delhi, India, at sites across the country.

The proposed malaria/CRP test is a rapid, immunochromatographic assay which can detect *Plasmodium falciparum* (*P. falciparum*) and other *Plasmodium* species (including *P. vivax*), as well as the presence of CRP, a sign of bacterial infection.

The aim of this project is to assess the clinical performance (sensitivity, specificity, positive and negative predictive values) of the novel STANDARD™ Q Malaria/CRP Duo Test when used by health workers in a POC setting in a malaria endemic area. Performance will be assessed in comparison with expert microscopy as the reference test for malaria, and with a high quality, commercially available CRP test kit run on a laboratory machine as a reference test for CRP.

### Activities completed in 2019:

- Patient screening, enrolment, and testing as per study protocols at 7 study sites
- Data entry and documentation
- Site training and monitoring visits



## LOOKING AHEAD

### ENHANCING ACCESS TO TB CARE THROUGH WOMEN-LED SELF-HELP AFFINITY GROUPS IN KARNATAKA

Despite the wide reach of India's TB control program, many women and children with TB do not receive the healthcare services they need, especially in rural and agricultural areas. FIND and Myrada, an Indian non-governmental organization working to improve health and education in the community, have joined forces with NTEP in Karnataka to find the “missing” TB individuals in villages and communities.

Our “WE-End TB” initiative (Women's Empowerment to End TB) is funded by the Stop TB Partnership's TB REACH grant mechanism. WE-End TB aims to enhance access to TB services for close to 2.5 million marginalized people in three rural districts in Karnataka, India through an existing network of Self-help Affinity Groups (SAGs) in the community. The population in this region has a significant proportion of high-risk groups like HIV-infected miners, making them highly vulnerable to TB. Women and adolescent girls in these districts are also at higher risk of contracting TB due to several factors, which include poor nutritional status and low literacy rates.

WE-End TB relies on “active case finding” strategies, such as systematically screening for TB in populations at risk by SAG volunteers led by community resource persons. SAG members in Karnataka are being trained in raising awareness, screening and mobilizing people with symptomatic TB to get tested, and ensuring that samples reach diagnostic facilities. All SAG members in this intervention are women with long-standing credibility and having the trust of the community, enabling easier access to the households.

## VALIDATION OF STOOL PROCESSING KIT FOR PAEDIATRIC TB

FIND India is evaluating the performance of a stool processing kit that can be used at designated microscopy centres and will enable the processing of large numbers of stool samples. The aim of this study is to improve the diagnosis of paediatric TB.

## EXPANDING THE ESSENTIAL DIAGNOSTICS LIST (EDL) IN INDIA

Primary healthcare is at the heart of UHC. While access to essential medicines is explicit in UHC, access to essential diagnostics has received little attention. In May 2018, WHO published the first Essential Diagnostics List (EDL), a catalogue of the tests needed to diagnose the most common conditions as well as a number of global priority diseases. The EDL offers countries a benchmark for improving diagnostic services. FIND India has started evaluating access to essential tests in the country using the WHO and Indian EDL at the primary healthcare centres.

**Using a stratified, cluster random sampling approach to survey a representative sample of 640 primary healthcare facilities in India, FIND is assessing each facility:**

- to estimate the availability, coverage, and quality of diagnostic testing – together, these 3 components will be used to estimate overall level of access to essential tests
- to assess if the tests are outsourced (e.g. some states have public-private partnership models for laboratory services) or done in-house
- to provide recommendations on the suitability of 2 models (in-house vs outsourced) in terms of overall access and quality of tests done

This valuable study will support the uptake of the EDL in India.



FIND India story telling workshop



High-level stakeholder meeting “In India for the world” in Hyderabad



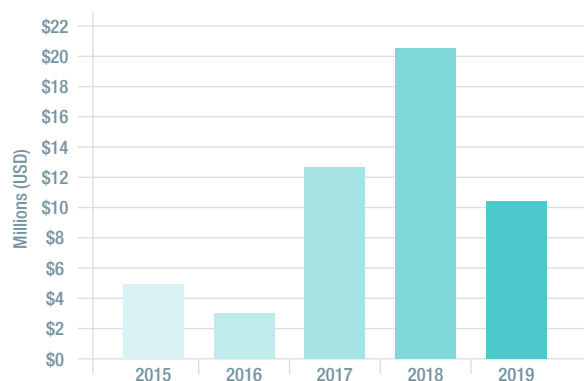
FIND India, global teams and Board members in Hyderabad, on the sidelines of the Union World Conference on Lung Health

# FINANCIAL FIGURES

## EXPENDITURE 2015–2019

| TOTAL EXPENDITURE <sup>1</sup> | 2015  | 2016  | 2017   | 2018   | 2019   |
|--------------------------------|-------|-------|--------|--------|--------|
| INR in lakhs                   | 3,230 | 2,447 | 8,265  | 14,002 | 7,347  |
| USD in thousands               | 5,028 | 3,626 | 12,718 | 20,429 | 10,427 |

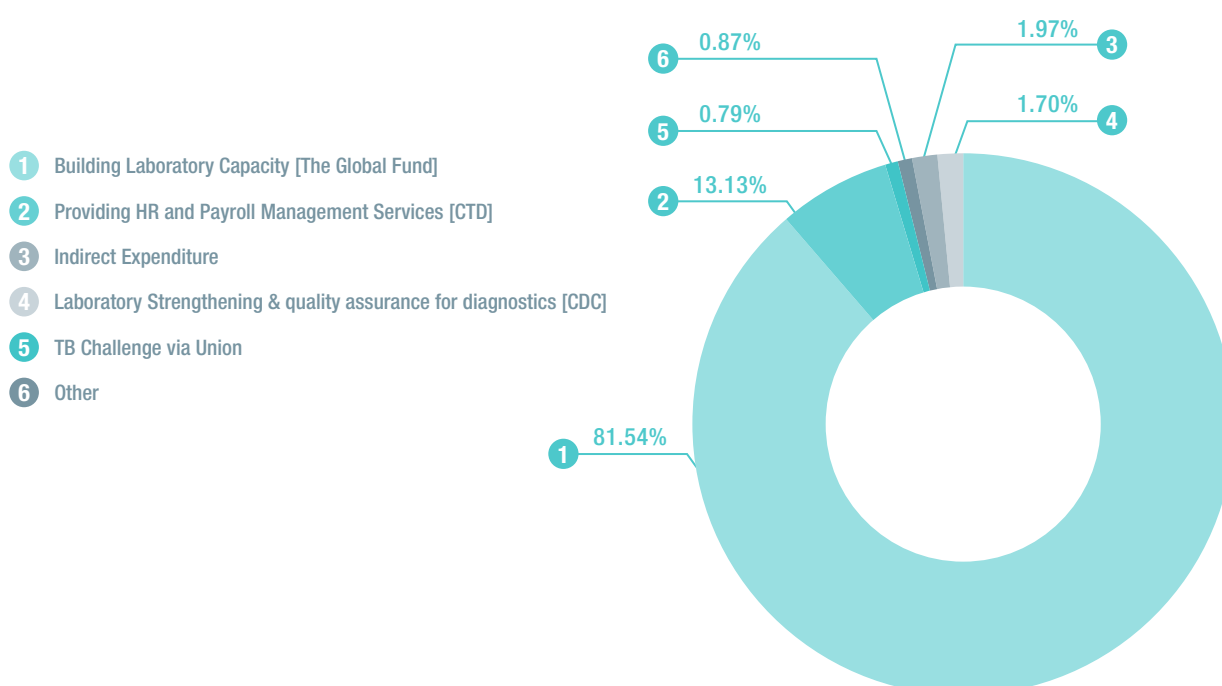
1. Expenditure include activities conducted in India, funded by FIND India and FIND Switzerland



## EXPENDITURE 2019

| EXPENDITURE 2019 <sup>1</sup>                                      | INR in lakhs | USD in thousands | %      |
|--|--------------|------------------|--------|
| Building Laboratory Capacity [The Global Fund]                     | 5,991        | 8,502            | 81.54% |
| Providing HR and Payroll Management Services [CTD]                 | 965          | 1,369            | 13.13% |
| Indirect Expenditure   | 145          | 206              | 1.97%  |
| Laboratory Strengthening & quality assurance for diagnostics [CDC] | 125          | 177              | 1.70%  |
| TB Challenge Via Union   | 58           | 82               | 0.79%  |
| Other  | 64           | 91               | 0.87%  |

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





## OUR PARTNERS



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### ABOUT FIND

FIND is a global non-profit organization that drives innovation in the development and delivery of diagnostics to combat major diseases affecting the world's poorest populations. Our work bridges R&D to access, overcoming scientific barriers to technology development; generating evidence for regulators and policymakers; addressing market failures; and enabling accelerated uptake and access to diagnostics in low- and middle-income countries (LMICs). Since 2003, we have been instrumental in the development of 24 new diagnostic tools used in 150 LMICs. Over 50 million FIND-supported products have been provided to our target markets since the start of 2015. A WHO Collaborating Centre, we work with more than 200 academic, industry, governmental, and civil society partners worldwide, on over 70 active projects that cross six priority disease areas. FIND is committed to a future in which diagnostics underpin treatment decisions and provide the foundation for disease surveillance, control, and prevention.

