

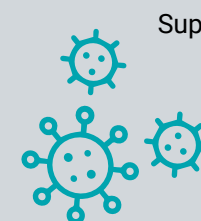
FIND ➡➡➡
Diagnosis for all

ACTIVITY REPORT 2020

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2020 IN NUMBERS



Supplied **>50,000 RT-PCR tests** and **24,000 RNA extraction kits** for enhanced **COVID-19 diagnostics**, across eight states. Procured **165 CBNAAT** (cartridge-based nucleic acid amplification tests) machines to further support the COVID-19 diagnostic network in India; AND undertook the procurement of personal protective equipment for **20,000 lab personnel** to support the Government of India in meeting an increased demand of PPE.



Tested over **350,000 patients** for tuberculosis (TB) and drug resistant TB in FIND-supported labs resulting in the detection of more than **17,707 cases** of multi-drug resistant TB and **2,392** extensively drug-resistant TB. All patients were linked to appropriate treatment under India's National TB Elimination Program (NTEP).



Supported NTEP in rolling out first-ever pan country CBNAAT EQA, ensuring participation of **1,110 public and private sector labs**.

Notified over **64,302 patients** seeking care in India's private health sector to the NTEP, achieved **84% treatment success rate**, sensitized **26,199 private sector providers** on TB guidelines, through **Joint Effort towards Elimination of TB**.



Screened over **1.8 million people** in over **400,000 households** and diagnosed **813** for presumptive TB, as part of our community facing work - **WE-END TB**.

Screened over **74,900 people** for hepatitis C virus (HCV) as part of **HEAD-Start**; detected **9,760** with HCV; and treated **6,677**. Screened nearly **14,240 prison inmates** in the state of Punjab for **hepatitis C**, specifically. Out of those screened, **2,036 inmates** tested HCV RNA positive and **1,282** of them were initiated on HCV treatment.



Upgraded, validated and transferred (to the NTEP), **5 TB liquid culture and drug susceptibility testing** (C&DST) labs. Technically assisted over **8 labs** to operationalize TB culture and DST labs.

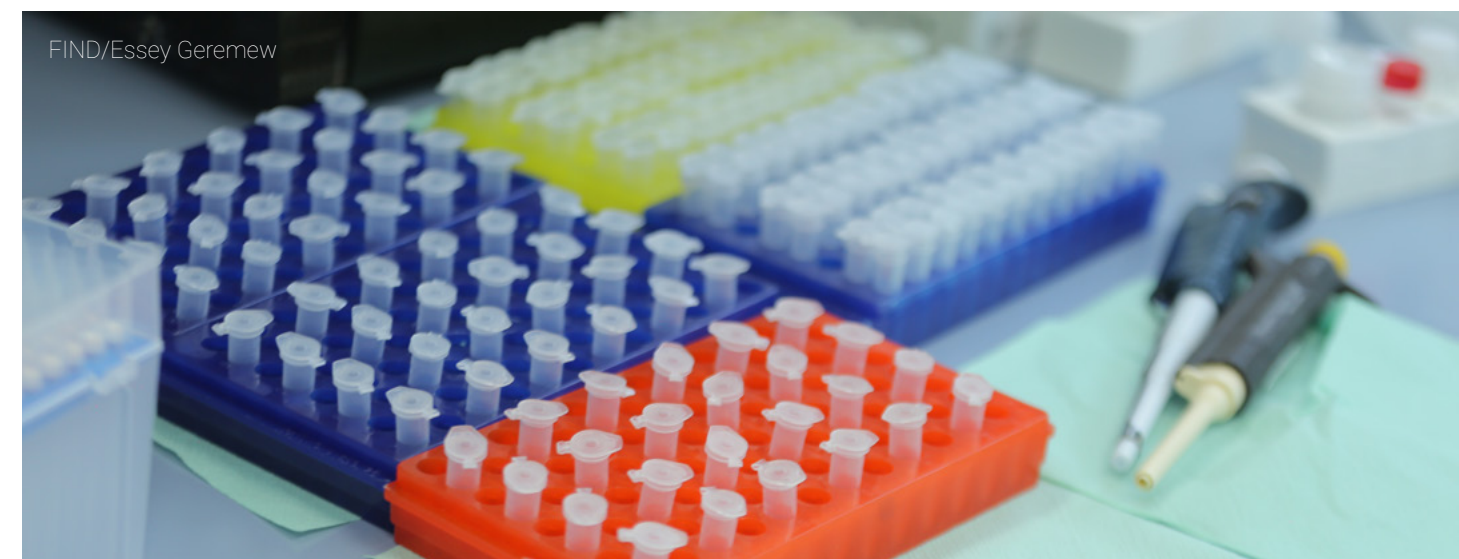


Linked **53 labs** to the NTEP's web portal - Nikshay, as part of our ongoing work to establish a "Lab Information Management System" connecting all public sector TB culture & DST labs.

COVID-19: building on testing capacity and surveillance of outbreak- prone pathogens

*FIND is co-leading the Diagnostics Pillar of the **Access to COVID-19 Tools (ACT) Accelerator**, a ground-breaking collaboration to reduce death and severe disease through accelerated development, equitable allocation, and scaled up delivery of COVID-19 tests, treatments, and vaccines, to protect health systems and restore societies and economies. The ACT Accelerator was set up in response to a call from G20 leaders in March 2020 and launched by World Health Organization (WHO), the European Commission, France and the Bill & Melinda Gates Foundation in April 2020. Specifically, FIND supported the Government of India (GoI), in procuring and implementing diagnostic tests and strengthening the country's pandemic preparedness infrastructure and strategy with a focus on diagnostics.*

- At the state level, key labs were supplied with Indian Council of Medical Research (ICMR) approved diagnostic equipment and consumables, such as RT-PCR machines, sequencers and COVID-19 tests. FIND supplied >50,000 RT-PCR tests and 24,000 RNA extraction kits across 18 sites in eight states. FIND also procured 165 CBNAAT machines to further support the COVID-19 diagnostic network and procured personal protective equipment for 20,000 lab personnel across India to support the GoI in meeting the increased demand. This work was supported by the Global Fund, PepsiCo India, Optum Global Solutions (India) and Tetra Pak India.
- In order to enhance the knowledge and skills of public sector lab personnel, FIND in partnership with the **African Society for Laboratory Medicine (ASLM)** and the **London School of Hygiene and Tropical Medicine (LSHTM)**, developed two online training courses on diagnosing COVID-19. Hosted on the **FutureLearn** platform, these self-paced training courses encompassed an overview of the COVID-19 pandemic, role of diagnostics in national response, types of tests available, current recommendations on their use, testing strategies, and insights on how COVID-19 testing can be scaled up. FIND enrolled 910, and trained 525 lab personnel across India and engaged over 1,000 people through **5 webinars**.
- In partnership with **Tata Institute of Fundamental Research**, the **National Institute of Immunology** and **PanIIT Alumni Reach for India**, FIND conducted a 3-week pre-service training on basic molecular biology and practical bench skills for COVID-19 testing in preparation of a cadre of public sector lab personnel ready for deployment. FIND also launched an on-site, upskilling session for lab personnel, training 74 lab personnel in 2020. A 3-day onsite training program in partnership with **King's George Medical University**, also attracted 13 participants.
- FIND evaluated 4 new SARS-CoV-2 diagnostic tests, prioritized for low- and middle-income countries, across 3 sites.
- With support from the **Bill & Melinda Gates Foundation**, FIND identified five high-volume public sector hospitals, in Mumbai with the intention to test at least 15,000 people, suspected of COVID-19. In parallel, FIND began supporting the **Municipal Corporation of Greater Mumbai's** response to COVID-19 and mitigation of TB service disruption, by operationalizing the GoI's bi-directional screening guidelines, enabling screening for both COVID-19 and TB to opportunistically extend TB and COVID-19 testing services to persons walking in to the out-patient departments.



TUBERCULOSIS (TB): strengthening community-based testing and enabling integrated testing strategies

STRENGTHENING, SUSTAINING AND MAINTAINING NTEP'S LAB NETWORK

Since 2010, with funding from Unitaid and the Global Fund, FIND has been a key technical and implementation partner of the NTEP, Ministry of Health and Family Welfare, supporting its nationwide lab network of diagnostic services for drug-resistant TB (DR-TB).



FIND & MYRADA/Adithya Shankar

ACCREDITATION:

As part of our Global Fund supported project, FIND has been working closely with the NTEP to facilitate lab accreditation processes and offer technical assistance to upgrade culture and drug-susceptibility testing (C&DST) labs. In 2020, FIND supported 11 labs in achieving NABL (ISO 15189) accreditation and prepared 6 additional labs to apply for accreditation.

LABORATORY INFORMATION MANAGEMENT SYSTEM:

To help establish uniformity across the NTEP's lab network, minimize data-entry errors and automate notifications, FIND rolled out a laboratory information management system (LIMS) across all C&DST labs, and integrated LIMS with NTEP's Nikshay. In 2020, 53 labs achieved Go-Live and were linked to Nikshay. Additionally, demonstration of a "logistics module" to support inventory management across all public sector TB C&DST labs was completed, with training and roll out to be carried out in 2021.

WHOLE GENOME SEQUENCING:

FIND provided support in terms of equipment (FastPrep 24, PCR workstations, refrigerated microcentrifuge, heating blocks, thermometers, multichannel pipettes, vortex, mini-spin, mini cooler etc.) and consumables to strengthen whole genome sequencing at 5 sites, in India. In 2020, nearly 500 susceptible and DR-TB complex strains were sequenced for surveillance.

TECHNICAL ASSISTANCE TO ESTABLISH TB C&DST LABS:

Through a project funded by Janssen, FIND provided technical assistance to 4 states to establish 8 C&DST labs, of which 3 labs were established and validated in 2020, while others will be handed over in 2021.

EXTERNAL QUALITY ASSURANCE (EQA):

Through a project funded by US Centre for Disease Control and Prevention (CDC), FIND supported NTEP in conducting a nation-wide EQA Proficiency Testing (PT) program for GeneXpert. Despite the COVID-19 pandemic, 1,074 public and 36 private sector labs participated in EQA PT. EQA helps in ensuring accurate test results through our vast network of GeneXpert® machines. Further, it can also identify issues at the lab/personnel level for immediate rectification.

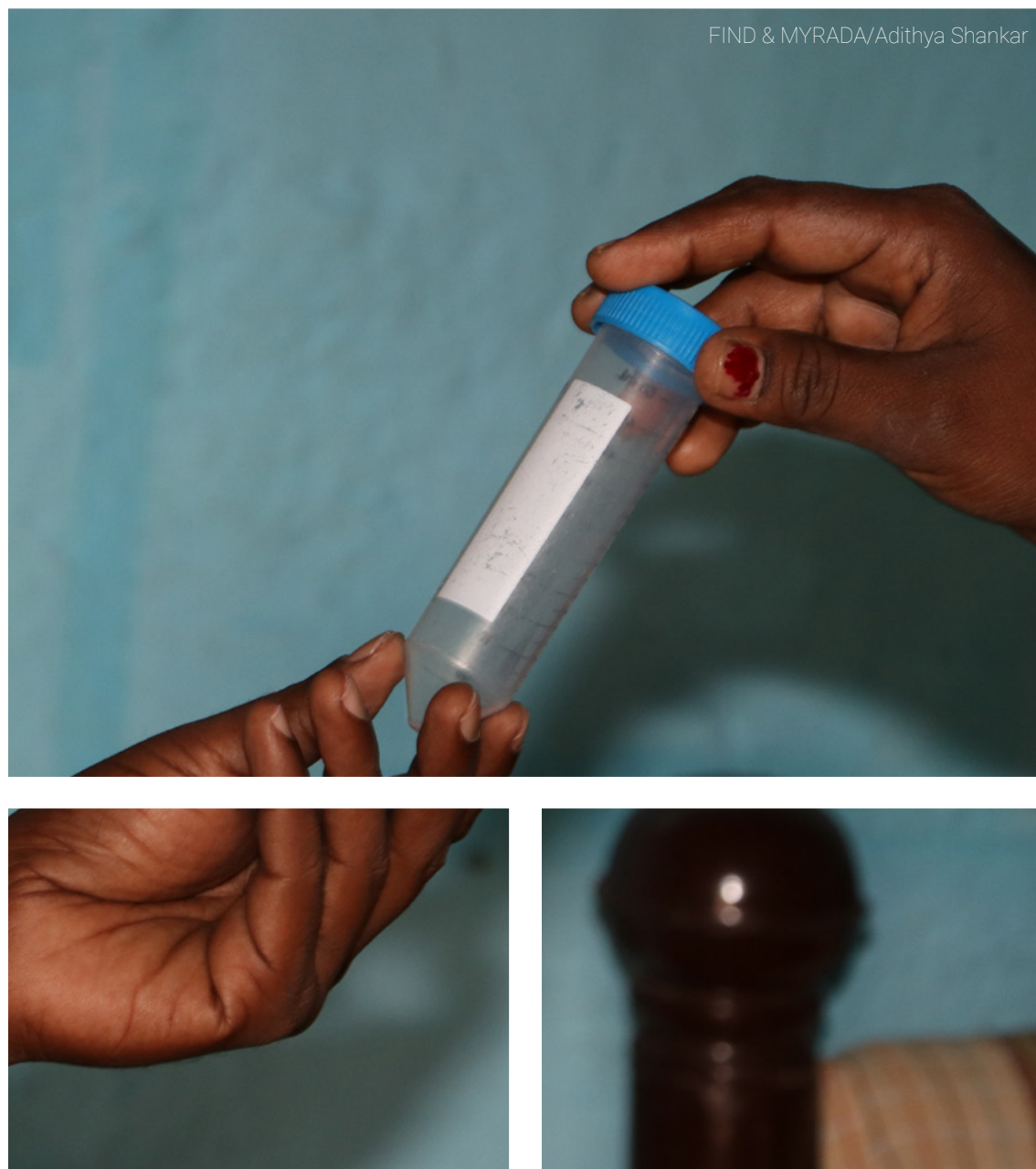
MULTICENTRE CLINICAL STUDY TO ASSESS THE GENEXPERT® MTB/XDR ASSAY FOR INH-AND SECOND-LINE RESISTANCE DETECTION

TB control efforts have been complicated by the rise and spread of DR-TB. The rapid diagnosis and appropriate treatment of DR -TB is essential to prevent significant morbidity, mortality, and further transmission of the disease. The currently used GeneXpert MTB/RIF assay is only capable of identifying Mycobacterium tuberculosis (M.tb) and detecting RIF resistance. It cannot ascertain whether a patient with RIF resistance remains isoniazid (INH) susceptible, and can 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 extensively drug-resistant TB.

- In this study FIND evaluated a new and innovative 10-colour, real-time GeneXpert MTB/XDR assay for INH and second-line drug (fluoroquinolones and injectables) resistance detection, to recommend its use in diverse clinical settings. The focus of this protocol was a multicentre clinical evaluation of GeneXpert MTB/XDR against MGIT™ liquid culture-DST, and LPA (line-probe assay; first and second line) with discordant results to be confirmed by sequencing. The GeneXpert MTB/XDR assay was used for patients who already tested positive for TB (and RIF

resistant) in a primary GeneXpert test. The results of the study have been shared with the WHO for review.

- This rapid sputum-based assay has the potential to greatly improve diagnosis and management of DR-TB worldwide. Additional studies, including those to assess implementation approaches, will be crucial to define best use-cases for the Xpert MTB/XDR assay and ensure optimum impact in improving outcomes for DR-TB patients.



JOINT EFFORT FOR ELIMINATION OF TB (JEET)

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. FIND has been implementing **project JEET** since 2018. The project partnered with private sector physicians, labs and pharmacies across 5

states of India to establish linkages with TB care in the private sector to increase identification and notification of TB patients, facilitate early treatment and provide adherence support for improved treatment outcomes. Project JEET is carried out by a consortium comprising FIND, **William J Clinton Foundation** and **Centre for Health and Research and Innovation**. The project is supported by the Global Fund and is being implemented in collaboration with NTEP. In 2020, project JEET sensitized 26,199 providers, notified 64,302 TB patients, and reported 84% successful treatment outcomes.

NETWORKS FOR OPTIMIZED DIAGNOSIS TO END TB (NODE-TB)

In order to eliminate TB by 2025, India needs to create a comprehensive, high-quality TB diagnostic network to diagnose TB accurately and rapidly. To enable this rapid scale-up and improved access to quality testing, the existing and future TB testing demands needs to be compared with the country's lab resources. NTEP initiated the NODE-TB project to improve diagnostic efficiency through optimization of test utilization and optimal sample referral systems. The project is being implemented by FIND in 10 states of India - Andhra Pradesh, Assam, Bihar, Chhattisgarh, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Uttarakhand, and Uttar Pradesh. The key outputs include recommendations to optimize use of existing instruments, placement of new diagnostic devices and design of integrated sample referral systems. Further, keeping a patient-centric approach, the project will bring diagnosis closer to patients by setting up a project designed optimal sample referral system, linking designated microscopy centres to CBNAAT and Truenat sites to enhance DST, thereby allowing for reduced turnaround time. Presently, the project has completed data collection in 20 out of 52 identified districts and is now in the process of data analysis and validation.

COMMUNITY FACING PROJECTS: bringing care closer to community



FIND and **MYRADA**, conducted two grass-roots-level projects focussed on TB, and non-communicable diseases (diabetes and hypertension). **WE-END TB** (Women's Empowerment to End TB) started with TB screening in 2019 and screening for NCDs, in 2020. Both the projects catered to the rural communities in three districts of Karnataka i.e. Bellary, Gulbarga and Yadgiri and leveraged existing women-led network of self-help groups (SHGs) with an intention to screen **1.8 million people** and link them to diagnosis and treatment at primary health care centers. As of December 2020, **413,100 households** had been screened for TB and **51,000 households** for NCDs. Subsequently, **813 TB patients** and **442 NCD patients** were linked to treatment. Both projects to continue in 2021.



HEPATITIS C: adopting a decentralised approach to address HCV

With funding from Unitaaid, FIND is working to build an efficient and sustainable public health response to hepatitis c virus (HCV). The Hepatitis C Elimination through Access to Diagnostics (HEAD-Start) team implemented innovative models for the screening and treatment of HIV/HCV co-infected and other high-risk populations, by introducing new technologies (like rapid diagnostic tests and GeneXpert). At all project sites, FIND introduced the use of rapid diagnostic tests for HCV testing and replaced the use of ELISA. HEAD-Start was the first, most simplified and decentralized approach to addressing HCV among key and general populations in Delhi, Manipur and Punjab. 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), the project:

- Screened almost **75,000 people**
- Diagnosed **9,760 individuals** and
- Cured **6,677 people**

While the project stopped testing for HCV in 2020, in a span of 10 years (i.e., by 2030), it is expected to avert almost **35,000 disability-adjusted life year (DALYs)** and save **INR 28,56,38,169** or **USD 3,746,044**.

Further and in partnership with other civil society organisations, FIND also conducted primary research to understand the perceptions on HCV self-testing in India. The evidence was compiled into a larger report that informed the WHO's recommendations on HCV self-testing. The report is expected to be released in July 2021.

SUPPORTING HEPATITIS C MICRO-ELIMINATION AMONG PRISON INMATES IN PUNJAB, INDIA

In collaboration with the **Directorate of Health Services, Punjab**, FIND targeted micro-elimination of HCV in 9 state prisons. In 2020, the project screened 14,240 prisoners for HCV, of which 2,036 tested positive after the confirmatory tests. 1,282 (63%) were initiated on treatment, with 295 achieving sustained virological response, i.e., patients tested negative for HCV after stopping treatment for 12 weeks or more.

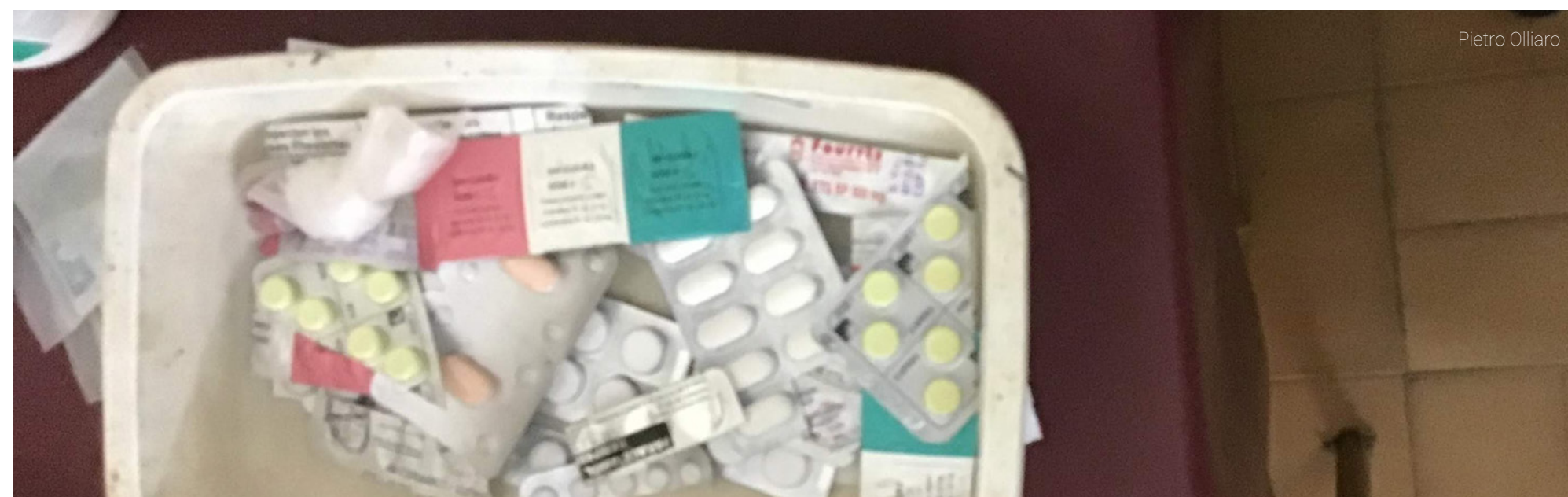


ANTI-MICROBIAL RESISTANCE (AMR): preventing AMR development through improved diagnostic systems

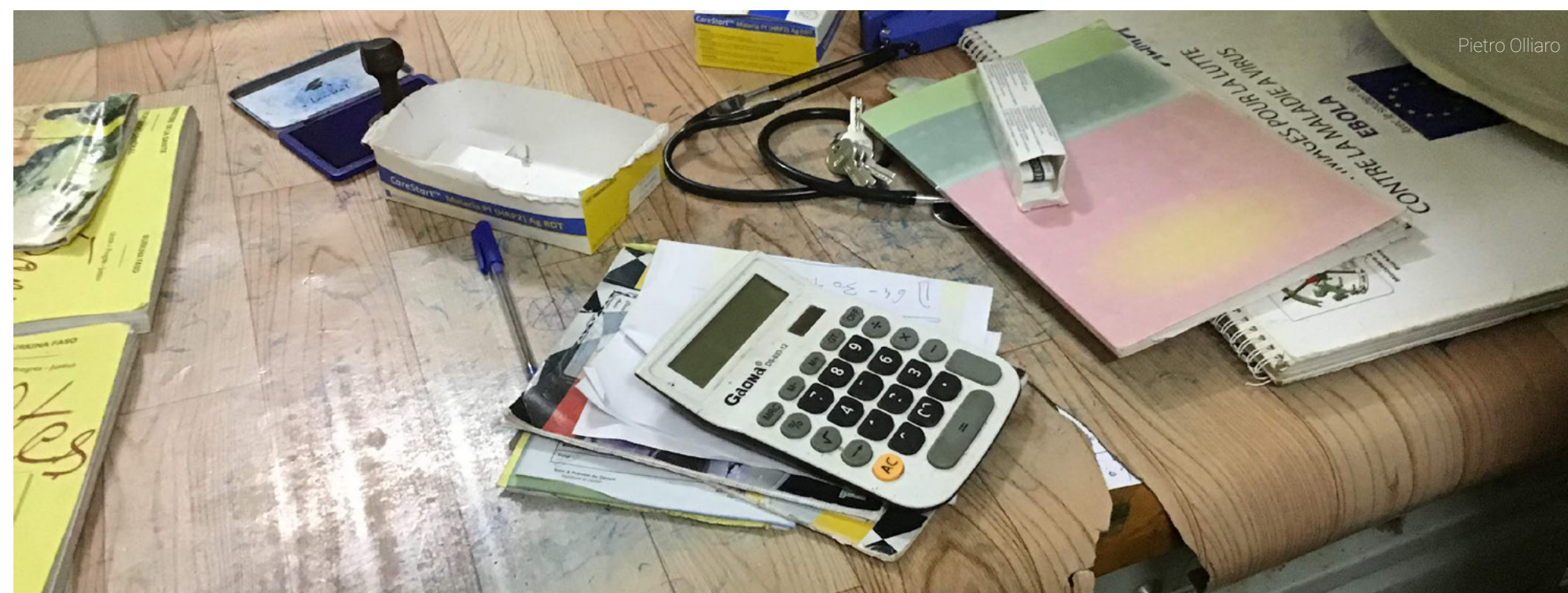
The AMR Diagnostic(Dx) Use Accelerator is a platform to evaluate a package of interventions and provide evidence to inform policy change that can positively impact AMR and contribute to universal health coverage (UHC). The AMR Dx Use Accelerator is intended to help prepare for the introduction of new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

In 2020, FIND began preparing for its collaboration with **ICMR** - the apex body in India for the formulation, coordination and promotion of biomedical research – to concretize the AMR Dx Use Accelerator. The primary objective of the project is to improve the management of acute febrile illnesses and reduce unnecessary antibiotic use. It also stimulates research to identify best in-country solutions for key diagnostic access challenges, in relation to AMR. Through this

collaboration, **USD 500,000** will be provided, including **USD 400,000** from FIND and **USD 100,000** from ICMR, to local researchers. The partnership aims to demonstrate the value of commercially available point of care diagnostic tests in clinical algorithms for efficient diagnosis of acute fever among children, adolescents and adults. The intervention targets to reduce irrational use of antibiotics in patients with acute fever.



Pietro Olliaro



Pietro Olliaro

LOOKING AHEAD

The pandemic has once again put the spotlight on the criticality of diagnostics - our first and best line of defense against any infectious disease.

The current situation with COVID-19 has vastly improved. The numbers have fallen drastically and India is en-route recovery. However, in 2020 when the pandemic was at its peak, our teams determinedly coped under the pressure of pandemic-induced restrictions and the rapidly spiraling cases, to continue and deliver on programmatic milestones. Our teams have determinedly coped under the pressure of pandemic-induced restrictions and the rapidly spiraling cases, to continue and deliver on programmatic milestones. As an organization, we have witnessed the deep commitment of team members, who have strived to ensure continuity of health services; and are already witnessing a paradigm shift with projects now covering a spectrum of disease areas, including COVID-19. In the world of TB, we aim to continue to establish new culture & DST labs and ensure consistent service delivery to the existing public sector labs. We hope to expand both liquid culture and line probe assay infrastructure to catalyse the diagnosis of DR-TB, continue to support to the NTEP's genome sequencing labs as well as implement EQA at all CBNAAT sites in India. After a significant slow-down of TB services, through our private sector engagement project - JEET - we aim to enhance private-sector TB notifications through engagement of private providers and report increased treatment outcomes.

In the coming year, we shall continue to work to expand diagnostic capacity and our footprint to include latent TB initiatives as well as enhanced community engagement for improved access to TB services.

As part of our community-facing interventions that tackle key gaps in delivery of care at primary healthcare levels, FIND will continue to expand screening for key NCDs including diabetes mellitus and hypertension as well as TB. The projects will cater to the rural communities in three districts of Karnataka, leveraging existing women-led network of self-help groups (SHGs) with an aim to screen **>2.5 million people** and link them to diagnosis and treatment at primary health care centers, within project districts. FIND will also expand its footprint to other states to cover prisons in the state of Haryana and Union Territory of Chandigarh.

Overall, despite the challenges posed by the pandemic, FIND has made significant progress in 2020. We have never been short on efforts, striving to put our best foot forward. As we move into the first quarter of 2021, there is a lot to look forward to. A renewed focus on people development, enabling us to become a cohesive unit, and emphasis on digital health and diagnostics connectivity.

FINANCIAL FIGURES

EXPENDITURE 2015-2020

TOTAL EXPENDITURE 1	2015	2016	2017	2018	2019	2020
INR in lakhs	3,230	2,447	8,265	14,002	7,347	5,072
USD in thousands	5,028	3,626	12,718	20,429	10,427	6,844
1. Expenditure include activities conducted in India, funded by FIND India and FIND Switzerland						

EXPENDITURE 2020	INR (IN LAKHS)	USD (IN THOUSANDS)	%
Building Laboratory Capacity [The Global Fund]	3,859	5,208	76%
Providing HR and Payroll Management Services [CTD]	461	622	9%
Lab Strengthening & quality assurance for diagnostics [CDC]	217	293	4%
Building TB lab network [BMGF]	163	220	3%
Indirect Expenditure	164	221	3%
Enhancing Access to TB care [StopTB/UNOPS]	124	167	2%
DST for labs [J&J]	43	57	1%
BD India TB Grant 300KUSD, & TB Alliance Bioscience	26	35	1%
Updating TB scorecard to align with ISO15189-2012 (ASLM)	13	18	0%
Other	2	3	0%

ABOUT FIND

FIND, the global alliance for diagnostics, seeks to ensure equitable access to reliable diagnosis around the world. We connect countries and communities, funders, decisionmakers, healthcare providers and developers to spur diagnostic innovation and make testing an integral part of sustainable, resilient health systems. We are working to save 1 million lives through accessible, quality diagnosis, and save US\$1 billion in healthcare costs to patients and health systems. We are co-convener of the Access to COVID-19 Tools (ACT) Accelerator diagnostics pillar, and a WHO Collaborating Centre for Laboratory Strengthening and Diagnostic Technology Evaluation. For more information, please visit www.finddx.org



OUR PARTNERS



