ENGAGING THE PRIVATE SECTOR TO IMPROVE TB SERVICES

HISAR DISTRICT, INDIA

Background

India is the country with the world's highest burden of tuberculosis (TB). The country has more than 25,500 district- and peripheral-level TB testing facilities that offer some basic TB tests. However, access to newer, rapid tests for TB and drug susceptibility testing needs to be expanded at these lower levels so that patients do not have to travel to other laboratories to receive these services.

Hisar, a district of Haryana state and home to some 2 million people in northern India, is a prime candidate for improving access to TB diagnostic services. In Hisar, most patients must travel an average distance of 10–15 kilometers (6–9 miles) from a designated microscopy center (the most peripheral type of laboratory) to another facility that offers diagnostic services, including drug susceptibility testing. Given this challenge, patient dissatisfaction and diagnostic delays were all too common, leading to underdiagnosis of TB, delayed treatment, and continued spread in the community.

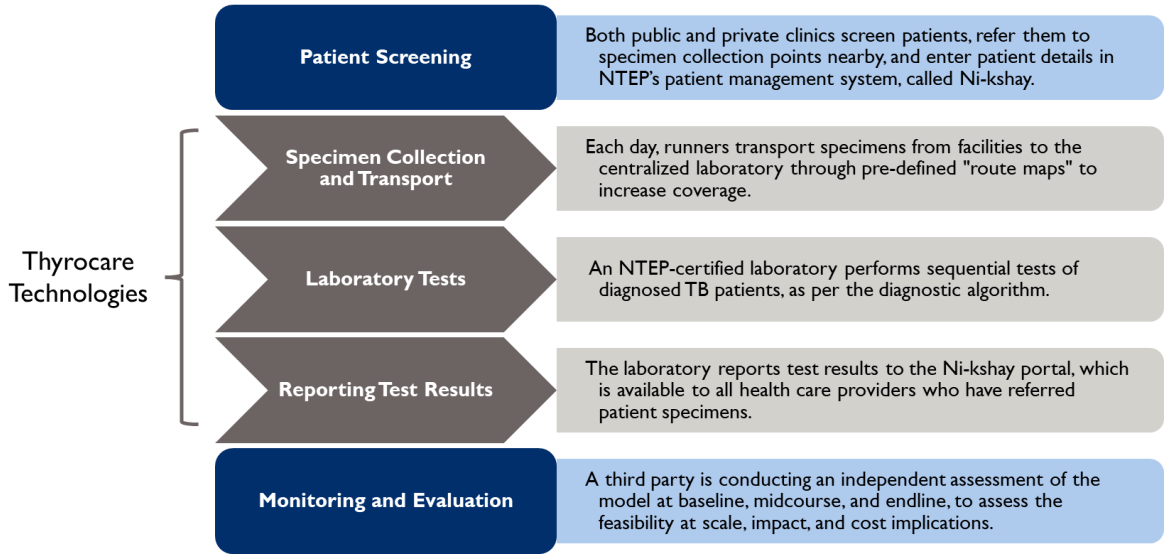
Problem

In 2021, 76 percent of TB diagnoses in Hisar were made using sputum microscopy, and 24 percent were made using much faster molecular tests such as GeneXpert® or Truenat®. Even more concerning, testing for drug resistance among TB patients was not conducted at the state reference laboratory of Haryana prior to 2021, meaning that many patients were likely not receiving appropriate treatments. The testing process for TB often requires patients to submit multiple specimens, and there are gaps in the ability to transport specimens from peripheral sites to higher-level laboratories for testing. Finally, because specimens are tested at multiple levels of the health system, results are shared at different times, leading to delayed initiation of appropriate treatments.

Testing for TB in Hisar, India. Photo by IDDS

Solution

The private sector is a major provider of health care, even for low-income groups. About half of all TB patients are diagnosed in India's private sector. To expand access to TB testing and reduce costs, USAID's Infectious Disease Detection and Surveillance (IDDS) project partnered with national stakeholders to pilot a new model in Hisar district. The model incorporates 44 new private facilities into the TB diagnostic network, covering the entire district (both urban and rural areas). A National Tuberculosis Elimination Program (NTEP)-certified private laboratory, Thyrocare Technologies, provides services for specimen collection, laboratory testing, and delivery of test results.



Midcourse Outcomes

By engaging private facilities, the new model is expanding access to laboratory services, including use of nucleic acid amplification tests for TB diagnosis, culture and drug susceptibility testing for TB patients, chest X-rays, and pre-treatment evaluations for patients with drug-resistant TB. A consulting organization (IQVIA) is conducting an independent assessment of the model to review its impact, cost, and feasibility of operating at scale in India. The midcourse review of the model assessed five key performance indicators after 3.5 months of implementation (May 14, 2022—August 31, 2022) and presented some preliminary results.

Key Performance Indicator	Midcourse Outcomes
1 Use of upfront Nucleic Acid Amplification Tests (NAAT)	Upfront NAAT coverage in Hisar increased from 26 percent in 2021 (baseline) to 63 percent during midcourse evaluation.
2 Universal Drug Susceptibility Testing (UDST)	At midcourse, 64 percent of patients had UDST done within 15 days, compared with 39 percent during 2021 (baseline).
3 Compliance with diagnostic algorithm	Compared with baseline, there was an increase in compliance with the diagnostic algorithm for all indicators.
4 Turnaround time (TAT)	Patients receive their test results much faster: TAT decreased by 82 percent for patients with drug-sensitive TB and decreased by 59 to 78 percent for patients with drug-resistant TB.
5 Cost Implications	The cost of purchasing TB tests in the private sector is the same as the cost of providing them in the public sector.

What's Next?

The final assessment will include data from nearly 12 months of pilot implementation (May 14, 2022—April 30, 2023).

IDDS is transitioning the operation of the model to the National TB Elimination Program:

1. IDDS is working to identify a site for establishing a central laboratory with two GeneXpert instruments and two Truenat instruments. The site will address approximately 70 percent of diagnostic demand from the district and the remaining 30 percent from the district cartridge-based NAAT site.
2. IDDS is partnering with courier agencies to engage runners to collect specimens from health facilities and transport them to the intermediate reference laboratory in Rohtak.
3. IDDS is providing technical support to the state program to facilitate the transition of the model to NTEP, supported by recurrent budget allocations from state program implementation plans.

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