

Successful Pilot of e-Pharmacy Model Brings TB Treatment to Patients' Doorsteps

Introduction

In December 2019, the Sustaining Health Outcomes through the Private Sector (SHOPS) Plus project team in India, in partnership with the state government of Madhya Pradesh and the pharmaceutical company Medlife International, launched an innovative, drug-to-doorstep e-pharmacy model to help the fight against TB. The e-pharmacy model is innovative and the first of its kind in India in that it provides doorstep delivery of anti-TB drugs and diagnostic services. The pilot with Medlife is being rolled out in the cities of Jabalpur, Indore, and Bhopal with plans to expand to additional cities in the state of Madhya Pradesh. SHOPS Plus, Medlife, and the state government of Madhya Pradesh have worked together closely since the beginning of this pilot to ensure that the e-pharmacy model fits the local context and has local government buy-in.

While the TB epidemic is declining in India, the country still has the largest number of TB patients in the world, and half a million cases that go undiagnosed each year. A major barrier for eliminating the epidemic is patients who do not fully adhere to the treatment regimen or who do not complete the recommended treatment. One contributing factor to these failures to complete their regimen by patients includes high travel costs to obtain treatment.

The government of India has pledged to provide free diagnoses and drugs for patients seeking care in both public and private facilities, in part by referring private facility patients to the public facilities. However, over 80 percent of early care seeking for TB occurs in the private sector, and they are often deterred by the need for an additional trip to receive the free services. SHOPS Plus is partnering with Medlife and the Madhya Pradesh government to reduce this barrier by using technology to provide diagnosis and treatment support services to patients, through an e-pharmacy model.

Implementing the e-pharmacy pilot

In the e-pharmacy model, private providers can prescribe home sputum testing materials to presumptive TB patients. The test is completed in the comfort of the patient's own home, and e-pharmacy agents will pick up the materials and deliver them to the lab facility. The lab uploads the results to Nikshay, the government's online platform, where providers can view results and prescribe treatment. Once the prescription is verified by the e-pharmacy, agents deliver the drugs directly to the patient's home—typically within a week. The platform also features communication technology to follow up with patients to remind them to take their drugs as well as the due date for the next delivery.

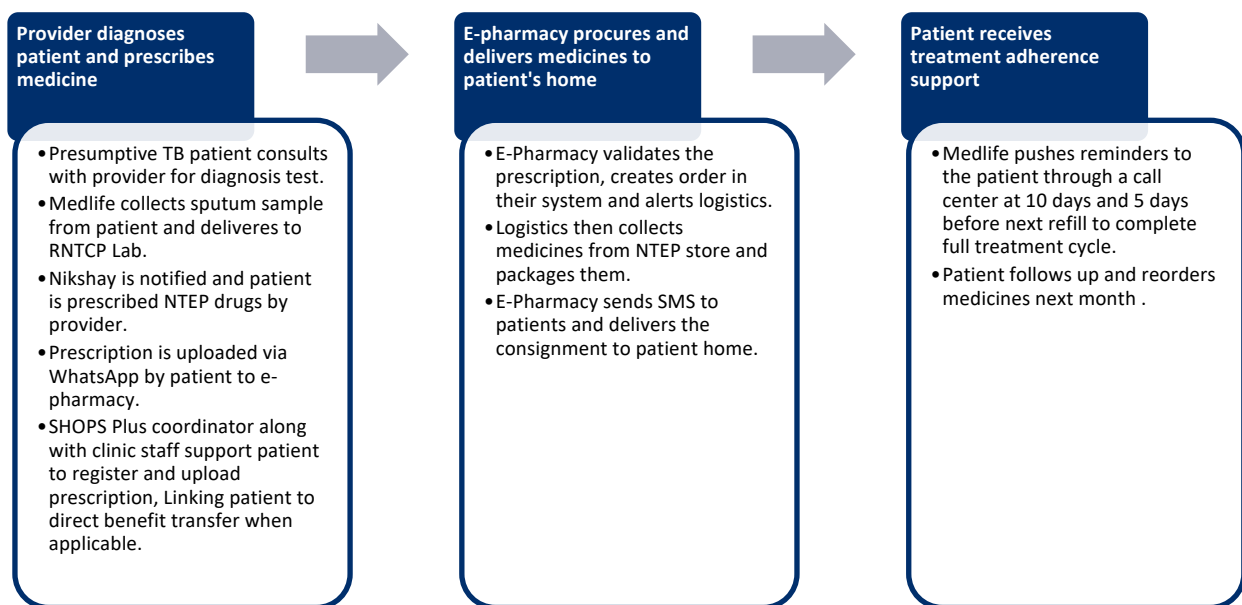


After the treatment ends, the platform also prompts communication with the patient confirming they have successfully completed their regimen.

The actions to combat the COVID-19 pandemic in India have created further obstacles for TB patients who need to obtain their treatment medication and for patients who need to be tested for TB. The related lockdowns, in which private medical providers closed or only functioned partly, resulted in limited access to health providers for TB screenings, diagnoses, treatments, and patient counseling. The e-pharmacy pilot has been invaluable during this time by securing

the lack of access to providers during the pandemic, the pilot has also expanded to support patients who use public providers to ensure that no TB patient is left out.

Figure 1. Key steps in the e-pharmacy model



Results

The e-pharmacy model has provided sputum sample collection for nearly 600 patients (Figure 2) and delivered free TB drugs to over 2,800 patients at their doorstep in the three pilot cities (Figure 3).

Figure 2. Patients diagnosed with TB through sample collection services

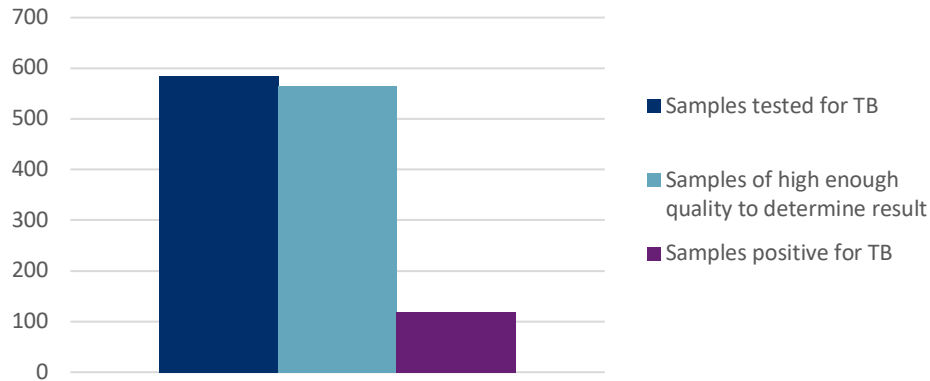


Figure 3. New patients enrolled in Medlife pilot to receive free TB drugs

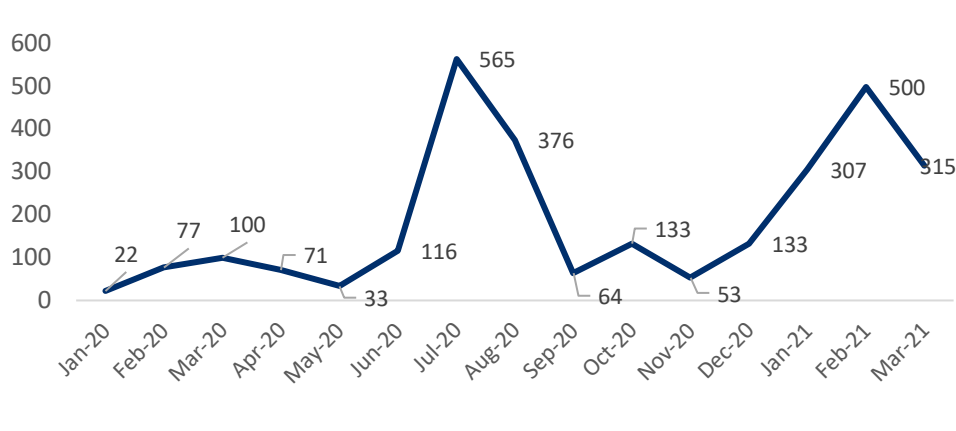
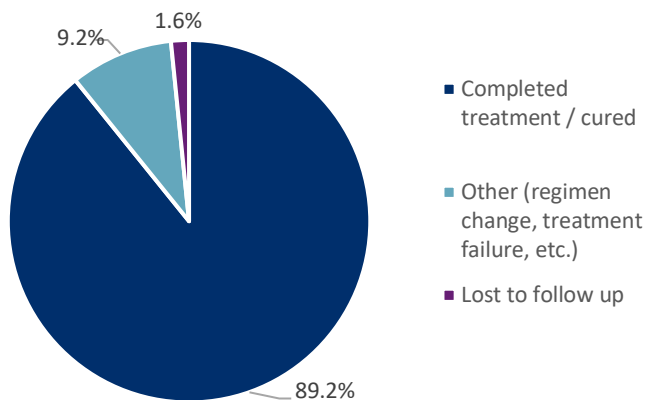


Figure 4. Outcomes of enrolled patients, January–August 2021



As COVID-related lockdowns began in March 2020, the pilot expanded to patients from public facilities in June 2020, and city managers began driving the program in August 2020. Despite these changes, loss to follow-up remained low at just 1.6 percent of patients over an eight-month period (Figure 4). The pilot also linked nearly 2,600 patients with the government's direct benefit transfer scheme that provides free nutrition support to TB patients.

Lessons learned from the pilot

Enrollment

SHOPS Plus found it could increase efficiency by engaging doctors who already had a high caseload of presumptive TB patients. This way the e-pharmacy could be presented as a way to serve their clients better. The project also found that by providing a range of options to get onboarded to the Medlife platform, they made enrollment easier and more likely to be completed by patients. An example includes sending a scanned version of the prescription to the Medlife WhatsApp number, or directly uploading to the Medlife platform. This ensured reduced provider dependency while empowering the patient to be in direct touch with Medlife for onboarding and consequently for any other issues that might arise later.

Government advocacy

Advocacy with the Madhya Pradesh government from the stage of conceptualizing the pilot was crucial for local buy-in. Ensuring advocacy with the government early on allowed time for them to overcome any negative perceptions of the private sector and their objectives. Similarly, it allowed for appropriate time for the private sector vendor, Medlife, to convince the government that the idea is commercially viable. Another advantage of engaging the government early on is in the integration of the e-pharmacy pilot with government systems, for example data from Medlife on the TB patients is integrated into government TB database (Nikshay) to ensure that the government has a complete picture of all TB services and patients being rendered. The project also worked with the government of India's National TB Elimination Program (NTEP) to add appropriate language in their partnership guidelines, which in turn provided an endorsement and confidence to state government officials to engage with the e-pharmacy agency.

Engaging the government and the private sector

The contract with Medlife was the first of its kind. As a result, contract negotiations were lengthy and demanded flexibility from all parties. The e-pharmacy request for indemnification from potential legal action on account of shortcomings by the government or the treatment provider needed to be addressed before they agreed to conduct the pilot. Ultimately, the parties built trust through the shared vision of increased access to TB treatment for patients.

Doorstep delivery

TB is a highly stigmatized disease in India. Stigma can often lead to shame and makes patients afraid to seek treatment, tell their family and friends, or follow through with treatment. The doorstep delivery aspect of the e-pharmacy model allows patients to be tested and receive treatment from the privacy of their own homes, thereby increasing the chances that they seek testing and the likelihood that they complete treatment. This model also has potential to be extended to drug delivery for other diseases that carry stigma for patients.

Flexibility

When the e-pharmacy model was first envisioned, no one could have foreseen the challenges that lay ahead with national lockdowns and a global pandemic. The flexibility of both parties as

the COVID-19 pandemic unfolded has shown the resilience of the model and benefits to be gained when stakeholders are willing to adapt to changes in the initially envisioned outcome (for example, expansion to the public sector).

Next steps

SHOPS Plus will fully transition the oversight of the e-pharmacy pilot to the Madhya Pradesh government as stated by the State TB Officer at the World Conference on Lung Health. The Madhya Pradesh government has so far appointed two patient provider support agents to support effective delivery of TB interventions by engaging private providers.

At the city level, SHOPS Plus supported Medlife staff and the district TB office through improved coordination of the e-pharmacy pilot. This helped Medlife and the district TB office more effectively troubleshoot issues in the e-pharmacy process, organize TB drugs for delivery, ensure patients' data are uploaded on the NIKSHAY website, and link TB patients with other eligible government initiatives such as POSHAN direct benefit transfer. SHOPS Plus capacity building also enabled the project to smooth out (and document) implementation challenges, thereby providing a fully tested proof of concept in April 2021, which the Madhya Pradesh government can use to inform the e-pharmacy scale-up. The project will evaluate the proof of concept with respect to its operational and cost efficiency and document the learnings.



The project has delivered free TB drugs to over 2,600 patients and is transferring the standard operating procedures to the Madhya Pradesh government so that it can continue implementing the model. At the state level, SHOPS Plus helped the Madhya Pradesh government accurately budget the e-pharmacy costs in the program implementation plan, which was approved in March 2021, to ensure adequate government funds are available to continue and scale up the model. SHOPS Plus also equipped the state TB office with the skills to conduct the procurement mechanism to contract an e-pharmacy vendor directly. The budget for implementing the e-pharmacy in the program implementation plan was approved by the government in three cities for FY2021–2022, and the budget has been released to the Madhya Pradesh National Health Mission for Implementation.

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Sustaining Health Outcomes through the Private Sector (SHOPS) Plus is a five-year cooperative agreement (AID-OAA-A-15-00067) funded by the United States Agency for International Development. The project strategically engages the private sector to improve health outcomes in family planning, HIV, maternal and child health, and other health areas. Abt Associates implements SHOPS Plus in collaboration with the American College of Nurse-Midwives, Avenir Health, Broad Branch Associates, Banyan Global, Insight Health Advisors, Iris Group, Population Services International, and the William Davidson Institute at the University of Michigan.

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