

CASE STUDY 2: TB REACH — INDUS HOSPITAL

Background

The Indus Hospital, a non-profit, private charity hospital situated in Karachi, Pakistan, provides free tertiary-level care to patients within a catchment population of 2.6 million. The hospital aims to promote early and increased detection of tuberculosis (TB) cases in order to ensure their timely treatment. With support from the Stop TB Partnership's TB REACH program, and in partnership with Interactive Research and Development (IRD), the Indus Hospital has built a TB control program that ranks as the second highest volume treatment center in Pakistan.

Mobile Money

With funding from the Stop TB Partnership, the Indus Hospital and IRD partnered to develop a mobile-money incentive scheme to improve and increase data on directly-observed treatment (DOT) for TB. The program operates using mobile-phone based software, built in house to screen over 1.2 million individuals for TB, and utilizes a progressive incentive scheme to motivate general practitioners, health workers, and community screeners to identify and refer TB suspects, confirm TB cases, and ensure TB patients successfully complete treatment.

Under the first wave of TB REACH funding, the program relied on a network of community screeners, selected from local community members in family-clinic catchment areas. Screeners received training on TB awareness, screening, and treatment, and were supplied with mobile phones pre-loaded with software that allows them to enter data electronically. Screeners were stationed in 54 geographically dispersed family clinics, where they conducted home visits of multidrug resistant-TB patients to perform DOT. After their home visits, screeners uploaded data to the hospital's patient database in real-time over the phone network or, if the network connection was unreliable, they completed and stored electronic forms on their phones which are linked to the Open Medical Record System (OpenMRS). The mobile phone database creates a streamlined data collection system, which automatically detects and corrects data entry errors, saving time and money for all those involved.

Incentive payments (or 'conditional cash transfers') were sent electronically directly to doctors', community health workers', or screeners' mobile banking accounts, for which they could register at their convenience from a local shop or outlet. Screeners at family clinics received a monthly stipend of approximately USD \$23.50 (where \$1 = PKR 84), plus cash incentives for submitting a daily phone report (\$0.18), procuring an acceptable sputum sample (\$0.88), and identifying a smear-positive case (\$11.80) or other form of TB (\$4.88). Additional incentives were also provided for initiating treatment (\$1.76) and follow-up visits (\$0.58). In total, screeners earned on average USD \$50 per month and were paid on a monthly basis through their mobile banking accounts. Screeners also received regular SMS messages from the mobile phone system to inform them of how many cases they had helped to detect.

Type of program: Progressive incentive scheme used to reward private doctors and community health workers for identifying and referring TB suspects and tracking treatment

Health focus: Tuberculosis

Date launched: October 2010

Stage: Scale up

Size: 1.2 million people screened

Countries: Pakistan (Karachi Province)

Key partners: Interactive Research and Development (IRD)

Mobile providers: Telenor (Easypasia); Zong (responsible for data transfer)

Funding: TB REACH Wave I Grant Recipient



Incentive payments (or ‘conditional cash transfers’) were sent electronically directly to doctors’, community health workers’, or screeners’ mobile banking accounts, which they could pick up at their convenience from a local shop or outlet. Screeners at family clinics received a monthly stipend of approximately USD \$23.50 (where \$1 = PKR 84), plus cash incentives for submitting a daily phone report (\$0.18), procuring an acceptable sputum sample (\$0.88), and identifying a smear-positive case (\$11.80) or other form of TB (\$4.88). Additional incentives were also provided for initiating treatment (\$1.76) and follow-up visits (\$0.58). In total, screeners earned on average USD \$50 per month and were paid on a monthly basis through their mobile banking accounts. Screeners also received regular SMS messages from the mobile phone system to inform them of how many cases they had helped to detect.

Results

Within the first year of implementation of the mobile-money enabled incentive scheme, the Indus Hospital saw a 300% increase in the detection of TB cases within their catchment area, spurred by increased motivation among screeners due to the incentives they receive via mobile money. In addition, patient adherence to TB treatment rose to over 90%. During the project’s 2.5 years of implementation funded by TB REACH, over 1.2 million individuals were verbally screened, resulting in the detection of 32,971 suspected and 3,668 confirmed TB cases.

Lessons Learned

- *Benefits of public-private partnership* – By partnering with physicians and community members, Indus Hospital was able to identify and report a greater number of TB cases. Through their use of mobile money, the project was able to more efficiently leverage a wider population as TB screeners, which would have been difficult if they were instead forced to rely on traditional cash payments.
- *Working with mobile providers* – In order to identify a mobile provider that could provide efficient, reliable and affordable mobile money services and offer coverage across a wide geographic range, the Indus Hospital and IRD explored partnerships with various mobile providers before forging agreements with two – one for transferring payments (Telenor) and one for transferring data (Zong).
- *Ensuring the number and location of mobile money service-points meets demand* – A limited number of mobile money cash-out points presented challenges to screeners, which eventually led to a switch in mobile providers.

Mobile Money Payment Process

1. Screeners report activities electronically using OpenMRS system
2. At the end of each month, the reported data is used to automatically calculate incentives earned by each screener
3. Incentive payments are made electronically through Easypasia, and sent directly to the screeners’ mobile phone
4. Screener can pick up incentive payments from local shops or outlets at their convenience

Challenges

- *Process to set up mobile money accounts inconvenient to users* – Screeners faced difficulties in setting up mobile money accounts due to stringent documentary requirements, which included having an up-to-date identity card and completing a signature verification process. Registration was inconvenient and time-consuming for screeners, who were most often informal sector workers with irregular hours and limited income, and for whom this registration process oftentimes represented loss of income.

- Distrust of *mobile money* – Although IRD required all screeners to open mobile money accounts, this request was met with initial resistance and skepticism. Any delays in sending incentive payments increased distrust among screeners. However, this mistrust dissipated over time as the project progressed and a regular, reliable payment schedule proved to be effective.

Looking Forward

Based on the experience of the TB REACH Wave I, IRD received an additional round of funding for scale-up of the intensive TB case finding project, starting in July 2013. This two-year project aims to build on the successes of Wave I funding and create a social business model to generate revenue in order to sustain the TB initiative in the future.

Sources

- Inputs from Saira Khowaja, Director of Program Development, Interactive Research and Development
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- <http://www.stoptb.org/global/awards/tbreach/interactive/pdfs/pakis-indus.pdf>
- http://whqlibdoc.who.int/publications/2012/9789241564465_eng.pdf