Pakistan

Interactive Research and Development (IRD)

Every day Naik Muhammad, a community screener based in Karachi, works at a General Practitioner (GP) Clinic. During his work hours, he verbally screens every person who visits the doctor, along with their attendants, for symptoms and risk factors of TB. Following his shift, Naik leaves his cell phone number with neighborhood shopkeepers, pharmacists, relatives, friends and even strangers, asking them to refer symptomatic people to him for screening. For each person he screens, Naik collects a performanc- based monetary incentive. He records symptoms and patient contact data on his Android phone using a mobile application. The data saved into the application can be accessed on a web interface in real time. Naik's efforts are multiplied as he has successfully managed to engage and mobilize his entire community in the fight against TB.

Naik works within the TB REACH Wave 3 Project titled, "Mass screening for increased TB case detection and treatment in the private sector: A social enterprise model for GeneXpert MTB/RIF scale-up in Pakistan." A team of 180 community screeners like Naik have been assigned to GP Clinics and are encouraged to use their personal networks in Karachi to search for individuals with risk factors and symptoms of TB. The project has teamed up with local doctors to refer TB suspects to one of three newly constructed Sehatmand Zindagi or "Healthy Life" Centres.

The Sehatmand Zindagi Centre is the lung-health and diabetes initiative established through Community Health Solutions (CHS). Unlike International Research and Development which is a not-for-profit organization, CHS has been established as a socially based business and is dedicated to the sustainable provision of the highest quality medical care. Its core mission requires that all profits of CHS are reinvested directly into expanding care for the working poor in Karachi.

At these Centres patients pay affordable rates for the highest quality chest X-ray (CXR) available in the city. These images are taken on digital X-ray machines produced by Delft Imaging Systems. Within two minutes, each image is read by the state-of-the-art CAD4TB software developed by Radboud University. If the CAD4TB software detects an abnormality in the lung images, it provides an overall abnormality score. In scores that are deemed to be high, the examination is immediately followed by an Xpert MTB/RIF rapid diagnostic molecular test provided free-of-cost to the patient. The Xpert MTB/RIF testing has been financed through a generous donation from UNITAID through TB REACH's Wave 3 UNITAID Xpert Track. This "one-stop shop" can accurately diagnose a TB patient and immediately place him or her on treatment within approximately two hours.

For TB diagnosis and care, the Sehatmand Zindagi Programme is partnering with the National and Provincial TB Control Programmes and follows their guidelines for the provision of free treatment to all patients attending the Sehatmand Zindagi Centres. Drug Resistant cases are immediately referred to DR specialist treatment centres.

The project has also provided government facilities with GeneXpert machines, cartridges, and technical and laboratory assistance. All patients who are unable to pay for CXRs are supplied with information about free TB testing and treatment at government facilities, which are also supported by the National and Provincial TB Control Programmes. In these ways, thousands of patients will receive access to sustainable high quality diagnosis and care.