

Mass screening to combat childhood TB under diagnosis in rural Jamshoro, Pakistan

◆ Diagnosing childhood tuberculosis (TB) is

challenging and is often neglected, especially in high TB burden countries such as Pakistan. In 2011, childhood TB (0-14 years) comprised 10% of notified TB cases in Pakistan. However, this is likely an underestimation of the true childhood TB burden. Data from the Indus Hospital TB program indicate the proportion of childhood TB to be closer to 20% of the total TB notification.

Indus Hospital launched a project with funding support from TB REACH to increase the number of children reached, screened, tested, detected and put on anti-tuberculosis treatment in Jamshoro district. Jamshoro district is located in the province of Sindh with a population of 1.1 million, of which 76% live in rural areas. The average household size is six people. The target of the project is the pediatric population, which is estimated to be 35% of the overall population. Over the course of the project we expect to find 1,058 people with TB, including adults but mainly children, through active case-finding, contact-tracing and reverse contact-tracing.

With the assistance of the provincial TB control program, doctors and pediatricians in Jamshoro received training in the diagnosis and management of childhood TB. Health workers verbally screened all child contacts of newly diagnosed TB patients at the two largest outpatient clinics in Jamshoro. Identified children presumed to have TB were referred to trained physicians for further testing using smear microscopy and Xpert® MTB/RIF if sputum or gastric aspirate could be produced. Since childhood TB diagnosis is mostly clinical, the physicians in the project clinics were connected to pediatric TB specialists at the Indus Hospital via Skype and WhatsApp, enabling discussion of diagnostic test results and clinical management of complex cases, before initiating treatment.



In addition to active case-finding, systematic contact-tracing was conducted for all adult TB patients newly identified. Incentive was provided to the TB patients who brought their children for contact screening and the subsequent testing. All data from active case-finding and contact-tracing were collected using mobile phones and were automatically stored in a database. SMS reminders were sent to patients concerning appointments and to promote adherence to their treatment.

Lastly, reverse contact-tracing was also conducted in households of reported childhood TB cases in order to identify the primary TB cases; as families brought in other children for screening we often found more than one child with TB in the same family. This highlights the importance of screening other children in the household along with locating the as yet undiagnosed (likely adult) source case.

In the twelve months following the project's launch on October 1st 2014, we identified 844 children and put them on anti-tuberculosis treatment. This represents 80% of the target for case detection. Comparing the baseline during the same period of time, there was a 187% increase in case notifications of childhood TB in the intervention district. The project is ongoing and we hope to expand screening for pediatric TB at all centers in the province of Sindh.

Indus Hospital

Pakistan

Stop TB Partnership



TB REACH

FINDING AND TREATING
PEOPLE WITH TB
IN THE WORLD'S POOREST
COMMUNITIES



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More than nine and a half million people around the world become ill with tuberculosis (TB) each year. About one-third of them fail to get an accurate diagnosis or effective treatment and are more likely to die from this curable disease.

By supporting the many partners working in the field, TB REACH offers a lifeline to these people by finding and treating people in the poorest, most vulnerable communities in the world. In areas with limited or non-existent TB care, TB REACH supports innovative and effective techniques to identify people who have TB, avert deaths, stop TB from spreading, and halt the development of drug resistant strains.

TB REACH has supported a total of 142 projects in 46 countries. To date, 33 million people have been screened for TB in project areas, of which, 1.7 million have received TB treatment, accounting for 856,000 lives saved. Some projects have seen increases in TB notifications of more than 100%.

Our partners are providing evidence for new case finding approaches and are working with community and policy leaders as well as donors such as The Global Fund to integrate those approaches into national strategies that improve TB case detection.

TB REACH was launched in 2010 thanks to a CAD\$ 120 million grant from Global Affairs Canada.

TB REACH acts as a pathfinder, providing fast track funding for innovative projects, monitoring effectiveness and leveraging funding for scale up.

Stop TB Partnership

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