Sihanouk Hospital Center of HOPE

Cambodia

Innovating mobile diagnostics for active case finding for TB within high-risk populations in urban and rural Cambodia

Cambodia is one of the 22 countries with high burden of tuberculosis (TB). Case notification in Cambodia relies mainly on passive case-finding. The latest national tuberculosis prevalence survey revealed that a substantial proportion of TB cases – many with few or no symptoms - remain undiagnosed. Early detection and treatment of tuberculosis is critical to containing the spread of the disease. Active Case-Finding (ACF) is an approach to screening high-risk groups for tuberculosis through searching for the disease in individuals who would not normally seek care.

The Sihanouk Hospital Center of HOPE (SHCH) is an NGO hospital located in Phnom Penh. Cambodia. We provide free medical care to the poor, train health professionals, perform research, and improve health outcomes. In 1999, SHCH opened its TB clinic to meet the need for TB treatment among patients in the hospital's HIV/ AIDS cohort. It was registered as an NTP site in 2001, scaling up communitybased TB prevention, screening, and DOTS activities, while providing support to TB investigatory procedures. In the mycobacteriology laboratory, we perform smear microscopy (fluorescence), Xpert® MTB/RIF (Xpert) testing, and mycobacterial cultures with Drug Susceptibility Testing (DST).



In 2012, with support from TB REACH Wave 2 funding, SHCH piloted ACF activities, improving health systems in the peri-urban zone and highlighting the importance of community networks in TB control efforts. Our work strengthened relationships among local health officials, community leaders, and village health networks in targeted areas - those characterized by poverty, overcrowding, and substandard housing.

The SHCH Wave 4 project targets the population at risk of TB in Kandal province, including People Living with HIV (PLHIV), household contacts, children aged 5-14, and the elderly. The main interventions include: 1) outreach to local authorities and health workers to raise awareness about the SHCH Wave 4 Project; 2) recruiting community-based health volunteers for ACF; 3) conducting household surveys to identify presumptive TB patients; 4) deploying a Mobile Xray-Xpert Unit equipped with an X-ray with digital imaging capability and Xpert.



The Mobile Xray-Xpert Unit is the highlight of the project and it is deployed in target populations with restricted access to healthcare services, such as the remote villages. The intervention involves referring presumed TB patients to a Mobile X-ray Unit for sputum collection and chest X-ray. Collected sputum specimens are sent to a smear microscopy center or to SHCH for Xpert tests. SHCH provided LED microscopy and trained to the existing Operational District lab. Smear results are relayed from laboratories to the Mobile X-Ray Units and community TB teams through SMS: the team then contacts the patients and health centers to start treatment.

Through a combination of outreach activities and the deployment of the new technology, 277,414 people were reached, with 22104 presumed to have TB, 13,669 chest X-rays taken, 8,353 sputum smears collected and 4,865 Xpert tests accomplished by August 2015. Among those reached, 1250 PTB patients were diagnosed, comprising 209 bacteriologically positive, 686 smear negative and 355 extra pulmonary TB cases.





FINDING AND TREATING

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



Government Gouvernement of Canada du Canada

More than nine and a half million people around the world become ill with tuberculosis (TB) each year. About onethird 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.



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