

Contribution of Public-Private-Mix in Tuberculosis case finding in Afghanistan

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Abstract

Background: Afghanistan National Tuberculosis Program (NTP), with support from Challenge TB (CTB) project, introduced Public-Private-Mix (PPM) and Urban DOTS (Directly Observed Treatment, Short Course) approach in Kabul in 2009 and expanded to other five cities of Kandahar, Herat, Jalalabad, Mazar-i-Sharif, Pulikhomri in September 2015 and three new cities Taloqan, Gardiz and Khost in January 2018. The PPM approach focused on strengthens coordination mechanisms and established partnerships between the NTP, public and private health sectors. The NTP assessed the implementation outcome to understand the impact of DOTS on case finding in public and private health facilities (HFs).

Intervention: NTP and CTB trained healthcare workers on TB service delivery, distributed anti-TB drugs, laboratory consumable and DOTS packages which included educational materials, sputum sample transferring materials and medication boxes with patients' entire treatment regimens. NTP and CTB conducted regular supervision and monitoring to urban DOTS HFs. Patients received free diagnosis and treatment in public and private HFs.

NTP and CTB evaluated the role of PPP on TB case notification and outcomes, reviewed TB data from 2015 - 2019 and compared it with national TB surveillance data.

Results and lessons learnt: DOTS coverage reached 52% (148 out of 282 HFs) in 2019; 11,500 TB cases notified in 2019 compared to 5,519 in 2016 (P-value < 0.00001). Of the 11,500 cases; 4,090 (2,177 in 2015) were bacteriologically confirmed TB (See Table 1).

Among 15,500 TB; 2,922 (25%) were detected by the private health sector that was 329 in 2015.

The treatment success rate increased by 6% and reached to 87% at the end of 2018.

Indicators/Years	2015	2016	2017	2018	2019
# and % of HFs covered by DOTS	49 (32%)	84 (50%)	106 (49%)	137 (49%)	148 (52%)
# of all form TB cases notified	4,727	6,492	8,147	10,813	11,500
# of bacteriologically confirmed TB patients	1,748	2,397	2,715	3,746	4,090
# of all form TB cases identified by private sector	276	1,166	2,030	2,584	2,922
% of treatment success rate of Bacteriologic Confirm TB cases	81	83	84	85	87

Table 1: Result of contribution of Public-Private-Partnership (PPP) in Tuberculosis case finding in Afghanistan

Conclusion: PPM and urban DOTS approaches contributed to significant improvements in case notification. The private health sector's contribution to case notification is significant. We recommend the scale-up of both approaches in other cities in Afghanistan and in similar settings globally.

Introduction

Tuberculosis is a contagious infection that typically attacks the lungs. It is usually caused by Mycobacterium tuberculosis (MTB) bacteria. The classic symptoms of active TB include chronic cough with blood-containing mucus, fever, night sweats, and weight loss. Tuberculosis is spread from one person to other through the air when people who have active TB in their lungs cough, spit, speak, or sneeze. Many strains of tuberculosis resist the drugs which are mostly used to treat the disease. People with active tuberculosis must take several sorts of medications for several months to eradicate the infection and prevent development of antibiotic resistance. People with latent TB do not spread the disease. Active infection occurs more often in people with HIV/AIDS and in those that smoke. Diagnosis of active TB is predicated on chest X-rays, also as microscopic examination and culture of body fluids. Diagnosis of latent TB relies on the tuberculin skin test (TST) or blood tests. The danger of developing active TB is higher in:

- Anyone with a weakened immune system
- Anyone who first developed the infection in the past 2–5 years
- Older adults and young children
- People who use injected recreational drugs
- People who haven't received appropriate treatment for Tb in the past

There are two common tests for tuberculosis, but they don't tell you whether you've got latent or active TB:

Skin test: This is often also referred to as the Mantoux tuberculin skin test. A health care worker injects a little amount of fluid into the skin of the lower arm. After 2 or 3 days, they'll check for swelling in the arm to work out the results. If the results are positive, it indicates that the person almost certainly have been infected with TB bacteria. But the results are often false positive. If the person had gotten a tuberculosis vaccine called bacillus Calmette-Guerin (BCG). The results also can be false negative, saying that you simply don't have TB when you really do, if your infection is recent. You would possibly get this test quite once.

Blood test: These tests, also called interferon-gamma release assays or IGRAs, measure the response when TB proteins are mixed with a little amount of the blood.