



TECHNICAL BRIEF



Taking Urban DOTS to Scale in Afghanistan

BACKGROUND

The World Health Organization (WHO) estimates that the incidence of TB in Afghanistan is 65,000 and that the number of annual deaths is 11,000 (WHO 2017). In 2017, out of the estimated incident cases, approximately 72% were notified and diagnosed. Among the 2015 new and relapse cohorts, the treatment success rate was 88%. Despite these facts, 97% of Afghans live in administrative areas where directly observed therapy, short course (DOTS) is available.

Over 7 million people live in Nangarhar, Kandahar, Herat, Balkh, and Baghlan provinces in Afghanistan. Within these crowded provinces, the Ministry of Public Health's (MOPH) National TB Control Program (NTP) has succeeded in detecting 16,272 all-form TB cases and placing them on treatment in 2017 alone. To make inroads on the TB epidemic, the NTP and partners must make significant progress in urban settings.

Urban health facilities (HFs) present particular challenges in TB service provision, especially private HFs. Major donors, such as USAID, the World Bank, European Commission, and Japan International Cooperation Agency (JICA), support nongovernmental organizations that work with

HFs to offer the basic package of health services (BPHS); however, they do not often work with the private sector. Another challenge is lack of motivation among public and private HF staff due to low wages. Infrastructure of private HFs presents another barrier to high-quality TB services: more than 85% of private HFs do not own the standard buildings they work in, but instead rent houses, where infection control (IC) protocols are difficult to implement, and so the houses often fail to meet national guidelines.

When the TB Control Assistance Program (implemented by Management Sciences for Health) introduced urban DOTS in July 2009 in the capital city of Kabul, urban TB services gradually expanded across both public and private HFs.

The NTP and partners evaluated TB programs at the end of 2014 and found that the urban DOTS achievements and results were positive. The NTP and partners agreed to expand the urban DOTS program to new cities and replicate the approach in other major cities (figure 1). Through the USAID-supported Challenge TB (CTB) Project, urban DOTS was gradually expanded to other cities, including Kandahar, Jalalabad (Nangarhar), Herat, Mazar-i-Shari (Balkh), and Pulikhomri (Baghlan).

AFGHANISTAN

STRATEGIC RESPONSE

With the achievements made by urban DOTS implementation in Kabul, NTP and partners expanded this approach to other major cities to cover more public and private HFs, thus bringing TB treatment closer to TB patients and better positioning the program to respond to the growing TB epidemic.

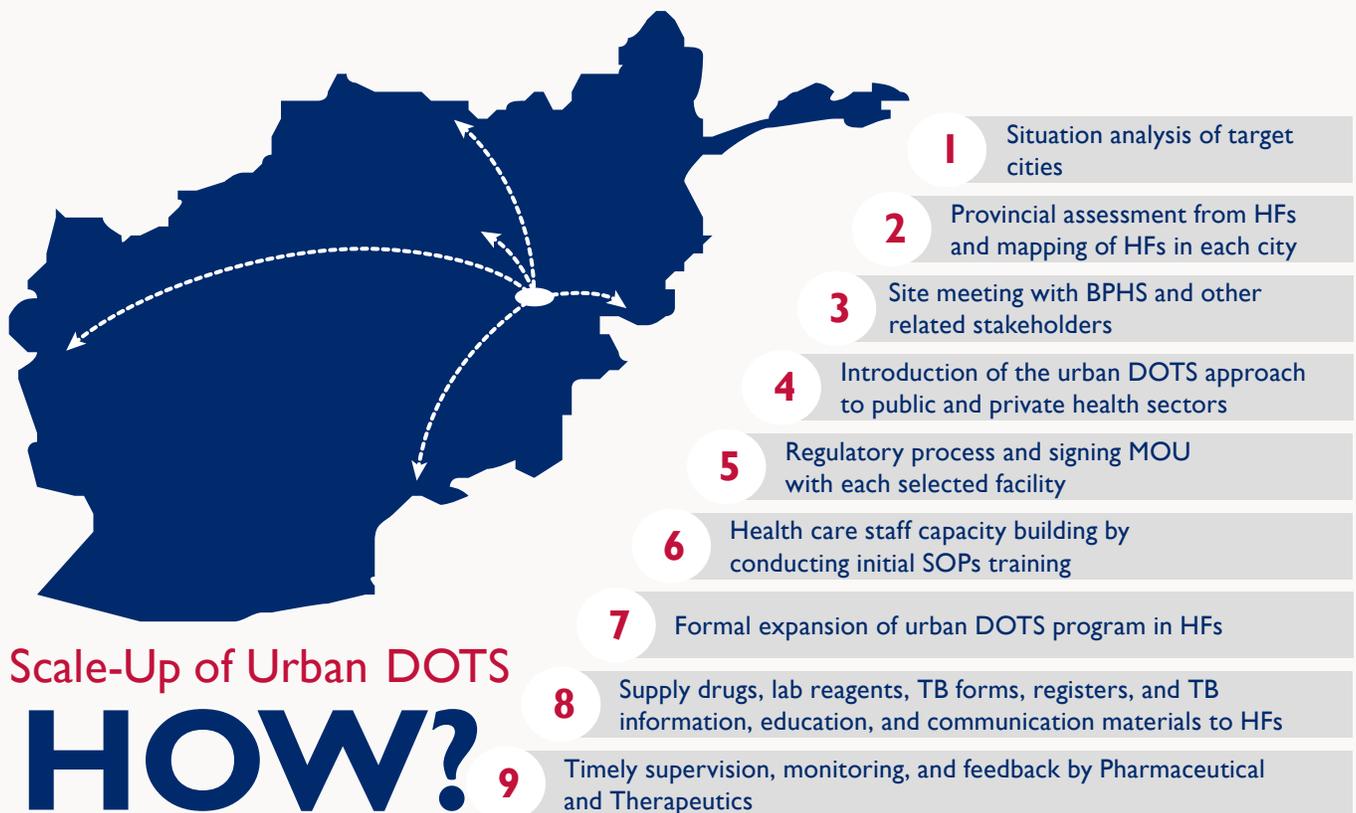
The urban DOTS intervention focuses on establishing strong partnerships among public and private HFs and all levels of health workers throughout an urban center, so that all health care providers and managers can expand their knowledge and skills in TB service provision, laboratory services, and coordination among themselves and other stakeholders, including NTP.

CTB and NTP established a coordination mechanism and relationship with all partners, including USAID, WHO, JICA, BPHS implementers, and the Afghan Private Hospitals Association, at central and provincial levels to work closely with each other and support the program in the aforementioned cities. The urban DOTS program also established monthly task force meetings for partners to discuss results, challenges, strategies, work planning, and monthly action plans to run the program smoothly in urban HFs to achieve the desired results.

STRATEGIES FOR URBAN DOTS

- Strengthening leadership and management for TB control at public and private HFs
- Strengthening health systems to minimize the existing gap in TB case notification
- Expanding access to DOTS and improving quality of care in public and private HFs
- Launching TB awareness-raising campaigns to reduce stigma
- Building frontline staff capacity on management of TB
- Implementing standard operating procedures (SOPs) for TB case detection, treatment, and IC
- Strengthening quarterly review workshop and target setting for HFs
- Applying active contact screening strategy
- Strengthening supervision, monitoring, and evaluation
- Using new technologies for TB case finding (digital X-ray, GeneXpert)

Figure 1. Scale-up of urban DOTS program in Afghanistan



IMPLEMENTATION

Implementation of key interventions required engaging stakeholders, training and capacity building, regular supportive supervision, upgrading HF infrastructure, and ensuring reliable supplies of TB medicines and lab consumables. Some of the key implementation components are described below.

Situation analysis of target cities and provinces

The urban DOTS program began with strong support from the NTP and CTB in assessing TB services in Kandahar, Herat, Jalalabad, Mazar-i-Sharif, and Pulikhomri, including collecting general information about health services and TB service availability, including laboratory services, number of general outpatient department clients, staff commitment, and interest of HF staff in engaging in TB service provision. This also included a provincial assessment and mapping of HFs in each city.

Stakeholder engagement

Led by the NTP and CTB, a site meeting was conducted with the Provincial Health Directorate (PHD) and other related stakeholders to review achievements and lessons from the Kabul urban DOTS program and to discuss how public and private HFs could align with NTP policies and guidelines to provide TB services free of charge. The NTP and CTB project also engaged the senior leadership of public and private associations and facilities, resulting in recognition of HFs by the government, which motivated MOPH to embrace TB guidelines.

Introduction of the urban DOTS approach

NTP and CTB conducted an introductory workshop on urban DOTS to orient public and private health sectors and related stakeholders; they encouraged them to be engaged in providing TB services in their HFs.

Regulatory process and signing a MOU with each selected HF

For better management and follow-up of TB services in newly engaged HFs, NTP, PHD, and private HFs officially signed a memorandum of understanding (MOU) that clearly outlined roles and responsibilities of all parties.

Building health staff capacity by conducting initial SOP training

CTB and NTP introduced SOPs on case detection, treatment, and IC to standardize the system in public and private HFs. While the new HFs engaged in the urban DOTS program, training needs assessments were conducted. Health care staff participating in this training included doctors, nurses, and lab technicians. Training reviewed NTP guidelines, SOPs, and sputum-smear microscopy examination. The SOP training was held for three days and sputum-smear microscopy training was conducted over five days.

Formal expansion of urban program

Upon completing the training, both parties agreed to officially begin TB service implementation in the newly engaged HFs. Elders, local government officials, and other stakeholders were invited to the official opening

ceremony and were informed about TB service provision in their HFs.

Supply drugs, lab reagents, TB forms, registers, and TB information, education, and communications materials to HFs

During the expansion of TB services and the opening ceremony, the provincial TB team handed over medicines, lab reagents, registers, recording and reporting forms, and communication materials to HFs and provided on-the-job training to doctors, nurses, and lab technicians.

Timely supervision, monitoring, and feedback by provincial TB coordinators and urban DOTS focal points

For smooth implementation and proper TB service provision, provincial TB teams, including CTB focal points, conducted regular supervision and monitoring of HFs and on-the-job training, which included oral and written feedback. During the joint supervisory visits to public and private HFs, challenges were identified and solutions suggested, such as on-the-job training for health care staff and commitment to strengthening technical support to frontline health care workers on a regular basis.

Beside the aforementioned implementing strategies, CTB conducted regular quarterly review workshops, collected the reports, and analyzed, interpreted, and set new targets for each HF.

RESULTS AND ACHIEVEMENTS

At baseline (September 2015), only 42 public HF's provided TB services in Kandahar, Herat, Jalalabad, Mazar-i-Sharif, and Pulikhomri cities. Under CTB, by the end of December 2018, 106 HF's provided TB control services, including 57 private facilities (table 1).

By the end of 2018, the project's ongoing engagement with public and private HF's and health care workers resulted in the following achievements:

- Detection of presumptive TB cases numbered 148,851 (28,515 in 2015), an increase of 422% from baseline
- Diagnosed and treated TB cases (all forms) numbered 8,873 in 2018 (5,519 in 2015), an increase of 61%
- New bacteriologically confirmed TB cases numbered 3,218 in 2018 (2,177 in 2015), an increase of 48%
- Treatment success rate of 84% in 2017 (81% in 2015) and a transfer-out rate of 12% (16% in 2015)

Despite these notable achievements, urban DOTS still has far to go. For example, the case notification rate for all TB cases is still only two-thirds, and for new sputum-smear-positive cases, only 46%. This translates to an estimated 4,075 TB patients undetected, untreated, and contagious. The treatment success rate is 84% (table 2) against a target of 89% at the national level.

Table 1. HF coverage of urban DOTS in five cities

PROVINCE	# OF PUBLIC HFS	# (%) OF PUBLIC HFS COVERED BY URBAN DOTS	# OF PRIVATE HFS	# (%) OF PRIVATE HFS COVERED BY URBAN DOTS	TOTAL # OF HFS	# (%) OF ALL HFS COVERED BY DOTS
Herat	26	15 (58%)	42	14 (33%)	68	29 (43%)
Mazar	8	5 (62%)	17	12 (70%)	25	17 (68%)
Jalalabad	19	9 (47%)	18	15 (83%)	37	24 (65%)
Kandahar	17	15 (88%)	13	12 (92%)	30	27 (90%)
Baghlan	13	5 (38%)	8	4 (50%)	21	9 (43%)
Total	83	49 (59%)	98	57 (58%)	181	106 (59%)

Table 2. Urban DOTS achievements by key indicators

INDICATORS	2015	2016	2017	2018
# of existing HF's with laboratory services, public	67	70	83	90
# of existing HF's with laboratory services, private	71	83	90	98
# of HF's covered by DOTS, public and private	15	62	90	106
# of general outpatient department visitors over 15 years of age	567,659	865,036	899,180	970,059
# of presumptive TB cases	28,515	42,671	46,327	148,851
# of presumptive TB cases identified by private sector	N/A	4,641	5,323	7,988
# of all-form TB cases notified	5,519 (17%)	6,362 (15%)	7,787 (17%)	8,873 (18%)
# of new bacteriologically confirmed TB cases identified	1,783 (6.2%)	2,347 (5.5%)	2,620 (5.6%)	3,218 (6.6%)
# of all-form TB cases notified by private HF's	329	1,166	2,030	2,093
# of all-form TB cases among children under 15	883	1,039	1,380	1,609
# of new bacteriologically confirmed TB cases among children under 15	98	102	997	1,003
% conversion of sputum-smear-positive cases	79	81	83	84
% treatment success of new bacteriologically confirmed TB	81	83	84	N/A
% transfer out of new bacteriologically confirmed TB (%)	16	14	12	N/A

Figure 2. Case notification in five urban DOTS cities

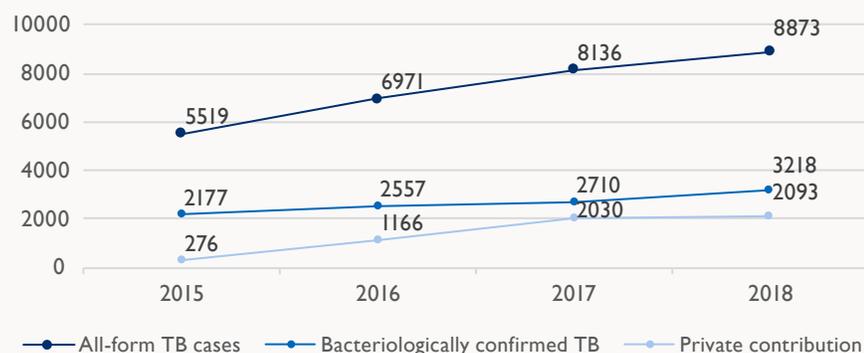
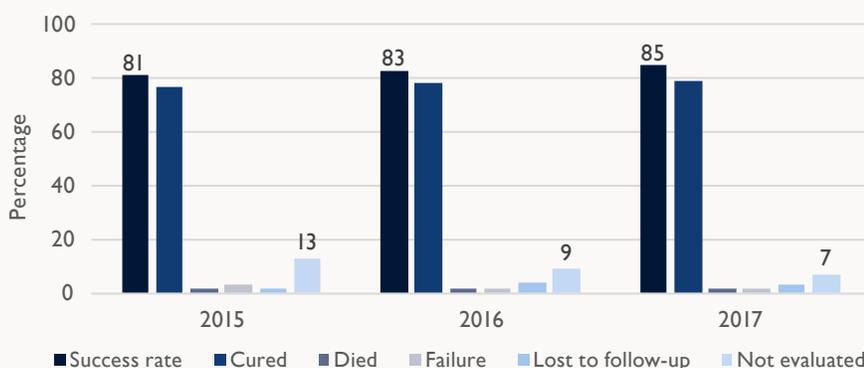


Figure 3. Treatment outcomes for TB patients from five urban DOTS cities



The case notification increased from 8,136 to 8,873 in 2017 (9% increase); if compared to the 2015 baseline (5,519), this represents a 61% improvement (figure 2).

Through effective implementation and follow-up of the urban DOTS program, the treatment success rate gradually improved and reached 85% by the end of 2017—a 4 percentage point increase from 2015 across the five provinces (figure 3).

The main challenges that were faced during the implementation were the high transfer rate and not evaluating new cases of sputum-smear-positive TB patients. The transfer rate was 13% in 2015 and came down to 7% at the end of 2017 (an improvement of 6 percentage points).

LESSONS LEARNED

The strategic and intentional collaborative approach of the urban DOTS program engaged a broad coalition of both public and private sectors in urban settings, contributing to an increase in case notifications and improvement of treatment outcomes and other TB-related indicators.

Strengthening regular monitoring, supervision, and feedback while also offering training on SOPs and on-the-job training not only increased capacity, but helped increase commitment and motivation of health care workers. Providing certificates of appreciation to well-performing HFs with successful World TB Day events and good TB

case detection results also reinforced the collaboration and camaraderie in achieving project objectives.

Conducting quarterly workshops to analyze data, review performance, and set targets for the next quarter helped ensure data-informed decision making and ultimately contributed to a regular supply of TB drugs and lab consumables, leading to improved TB case detection and case management.

Although active contact screening started in early 2016 across all five urban DOTS-supported provinces, results are already positive, and with continued support, more positive out-

comes are expected in the near future. Active contact screening has brought positive change to inpatient behaviors and has increased their trust that they will get their medicines regularly.

Challenges remain. Stigma continues to be a major problem, despite TB awareness events and campaigns to improve knowledge and reduce stigma in schools and universities, engage the community in detecting presumptive TB cases, and refer them to diagnostic HFs. Individuals often fear that knowledge about their TB status may result in discrimination or other repercussions from the community.

WAY FORWARD

NTP and CTB are committed to strengthening the existing urban DOTS program and expanding it to new cities to cover more HFs and bring TB services closer to patients. Universities and scientific institutions, patient advocacy groups, religious leaders, and civic organizations are being informed about the signs and symptoms of TB and what they can do about the epidemic. CTB is also planning to cover teaching hospitals to teach medical and university students and instructors the signs and symptoms of TB.

In an effort to keep cities and provinces connected and learning from one another on an ongoing basis, the project is helping establish a TB technical review panel in each city

composed of representatives from medical associations, such as the Surgeons' TB Association, Pediatricians' TB Association, Gynecologist TB Association, Diabetic TB Association, and TB/HIV Association. The goal is to have a practitioner group in each specialty that engages with the urban DOTS program and have these technical review panels technically support TB services at the central and provincial levels. A focal point or champion will guide the associations in provinces and encourage them to be engaged on how to screen presumptive TB cases and refer, diagnose, and treat or provide DOTS to TB patients. The champion will also represent the specialty on the TB technical review panel.

References

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Authors

This publication was written by Dr. Azizullah Hamim with contributions from Drs. Sayed Mirza Sayedi, Ghulam Qader, and Mohammad Khakerah Rashidi from CTB; Dr. Lutfullah Manzoor from NTP; and Mr. Luis Ortiz Echevarría from Management Sciences for Health.

For more information, please contact lessons@msh.org.