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EVALUATION REPORT

USAID TB CONTROL PROGRAM MIDTERM EVALUATION IN UZBEKISTAN AND TAJIKISTAN

September 2017

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USAID/Central Asia

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ACRONYMS

AFEW	AIDS Foundation East-West
AIDS	Acquired immunodeficiency syndrome
AMEP	Activity monitoring and evaluation plan
ARV	Antiretroviral
CA	Central Asia
CAR	Central Asia Republic
CCM	Country coordination mechanism
CDC	Centers for disease control and prevention
CDR	Case detection rate
CHC	Community health committees
COR	Contracts office representative
CSO	Civil society organizations
CSW	Commercial sex worker
CXR	Chest x-ray
DCC	Development coordination committee
DNK	Don't know
DOTS	Directly observed treatment, short course
DST	Drug susceptibility testing
EPTB	Extra-pulmonary tuberculosis
EQ	Evaluation question
EQUI	Evaluation, Quality, Use, and Impact
ET	Evaluation team
FEWS	Famine early warning systems network
FGD	Focus group discussion
GF	The Global Fund to fight AIDS, Tuberculosis and Malaria
GI	Group interview
HIV	Human immunodeficiency virus
HQ	Headquarters
IEC	Information, education, and communication
IOM	International Organization for Migration
IP	Implementing partner
IPT	Isoniazid preventive therapy
IT	Information technology
KII	Key informant interview
KM	Knowledge management
MCH	Maternal and child health
MDR-TB	Multi-drug resistant tuberculosis
MGIT	Mycobacteria growth indicator tube
MIS	Management information system
MLSP	Ministry of Labor and Social Protection
MOH	Ministry of Health
MOJ	Ministry of Justice

MOHSP	Ministry of Health and Social Protection
MSF	Médecins Sans Frontières
MTB	Mycobacterium tuberculosis
NGO	Non-governmental organization
NRL	National Reference Laboratory
NSP	National Strategic Plan
NTP	National Tuberculosis Program
PH	Project HOPE
PHC	Primary health care
PITT	Performance indicators tracking table
PLHIV	People living with HIV
PMDT	Programmatic management of drug resistant tuberculosis
PWID	People who inject drugs
QA	Quality assurance
QMS	Quality management system
RDCS	Regional Development Cooperation Strategy
RH	Reproductive health
RIF	Rifampin
SI	Social Impact
SOP	Standard operating procedure
SOW	Statement of work
SS	Sputum smear
STD	Sexually transmitted disease
TA	Technical assistance
TB	Tuberculosis
TBCP	Tuberculosis Control Program
TOT	Training of trainers
UN	United Nations
UNAIDS	The Joint United Nations Progamme on HIV/AIDS
UNDP	United Nations Development Programme
USA	United States of America
USAID	United States Agency for International Development
UV	Ultraviolet
WASH	Water, sanitation and hygiene
WB	World Bank
WHO	World Health Organization
XDR-TB	Extensively drug-resistant tuberculosis

EXECUTIVE SUMMARY

EVALUATION PURPOSE AND QUESTIONS

The $24 million USAID/Central Asia (USAID/CA) TB Control Program (TBCP), implemented by Project HOPE (PH), is being implemented in Tajikistan and Uzbekistan from September 2014 to 2019. USAID plans to utilize this midterm evaluation to inform decisions for improvements in the current programs, and as basic documentation for possible future support for the prevention, care, and control of tuberculosis (TB) in Uzbekistan and Tajikistan. The four evaluation questions to guide this evaluation focus on the extent to which the TBCP (i) increased access to TB services, especially for vulnerable populations; (ii) improved the quality of patient-centered services; (iii) supported, developed, and implemented evidence-based laws, policies, and strategies; and (iv) met client needs. The evaluation team (ET) also explored crosscutting gender and social issues to help understand the equity of USAID support.

EVALUATION METHODS AND LIMITATIONS

The ET began with a desk review of TBCP and Global Fund (GF) documents, as well as secondary documents gathered by WHO, and national TB data for both countries. In both countries, the team conducted key informant interviews (KIIs) and group interviews (GIs) with partner organizations and government agencies. In Tajikistan, the ET also held KIIs and GIs with regional- and district-level TB hospitals, TB clinics, and primary healthcare facility staff in three provinces where the USAID TB Control Program (TBCP) is implemented: Sughd province, Khatlon province, and Rasht Zone.

The key limitation experienced during data collection in Uzbekistan was that the ET was approved only for data collection in Tashkent, and was thus unable to interview a wide group of practitioners in clinics and hospitals or vulnerable populations, nor could it conduct direct observation. In Tajikistan, the sites were approved several weeks in advance, and may have been communicated to health facilities prior to the team's arrival which could have led to varying degrees of preparedness during site visits.

FINDINGS – UZBEKISTAN

QUESTION 1. TO WHAT EXTENT IS THE PROGRAM INCREASING ACCESS TO TB SERVICES, ESPECIALLY FOR VULNERABLE POPULATIONS?

TBCP increased access to TB care for vulnerable groups by supporting efforts to fully integrate services with institutions supporting women, people living with HIV infection (PLHIV), people who inject drugs (PWIDs), ex-prisoners, and migrants. TBCP interventions took place via community centers, committees, and activities, including outreach workers, NGOs, and *makhallas* (or community organizations). The broad approach for reaching these populations was often through a training-of-trainers (ToT) model, where TBCP engaged local community service organizations (CSOs) and parastatals to train their members, who then trained members of the community on TB prevention and service availability. These activities aimed to strengthen TB knowledge and awareness in order to encourage more people with suspected TB symptoms to seek screening. TBCP also worked to increase access for general and vulnerable populations through stigma reduction, which included training for *makhallas*, multi-disciplinary teams, patient support groups, and patient school leaders so they could address stigma in their communities.

QUESTION 2. TO WHAT EXTENT IS THE PROJECT IMPROVING THE QUALITY OF PATIENT-CENTERED TB SERVICES?

Through collaboration with the NTP and WHO, TBCP is implementing a range of activities in line with the patient-centered approach. For instance, they are establishing a National Center of Excellence for TB prevention, control, diagnosis, and management. TBCP also empowers patients to make decisions related to care and treatment by conducting outreach sessions, providing information, education, and communication (IEC) materials, and a referral voucher system. By training community leaders in planning implementation, and monitoring of community activities, TBCP has worked to build linkages between

primary health care (PHC), maternal child health (MCH), TB, and HIV services to improve TB diagnosis and treatment, thus empowering and activating patients and communities.

However, in reviewing the national algorithm the ET identified inconsistencies in its application and guidelines for TB care, control, and treatment through the course of KIIs. TBCP aims to integrate training materials into the curricula of medical nursing schools, and also carries out joint supervision visits to health facilities with the NTP. The TBCP has operationalized QuanTB, which is a system that enables the collection and reporting of timely, accurate data, especially related to drug management, at national and regional levels in all 53 facilities in the supported areas. However, it does not seem that the process of case detection of TB is assessed on a routine basis by the NTP and its partners by monitoring indicators on the identification and management of patients with presumed TB.

QUESTION 3. TO WHAT EXTENT IS THE PROJECT SUPPORTING THE DEVELOPMENT AND IMPLEMENTATION OF EVIDENCE-BASED LAWS, POLICIES, STRATEGIES, ETC., BASED ON IMPROVED DATA SYSTEMS AND QUALITY DATA?

TBCP was involved in the development and revision of the national strategic plan for TB prevention, care, and control in Uzbekistan and the national plan on Programmatic Management of Drug Resistant Tuberculosis (PMDT). TBCP is also collaborating with the National Tuberculosis Program (NTP) and other partners in the development of national guidelines and standard operating procedures (SOPs), including a recently developed guideline on TB care in outpatient settings with a focus on family doctors. The NTP reports that guidelines are available and accessible to all health facility workers. Though the NTP and its partners have made efforts to develop standardized guidelines, the criteria used to identify a presumed TB patient are inconsistently applied across health workers, and guidelines for diagnosis and outpatient care are applied differently across different regions.

QUESTION 4. TO WHAT EXTENT WERE THE CLIENT NEEDS MET OR NOT, AND WHY?

The contribution of TBCP is considered by the NTP and its provincial partners as paramount in the implementation of TB services in Uzbekistan. The major themes discussed during KIIs and GIs with partners were coordination, training, and sustainability. The GoU-sponsored central coordinating mechanisms for joint planning across TB partners is not fully functioning, which poses an issue for sustainability of implementation activities. Partners also expressed concern with the significant turnover among top management at the TBCP office in Uzbekistan and its effects on potential collaboration.

TBCP partners noted the following issues from the facility perspective: training, access to quality data, and availability of laboratory equipment. Regarding training, participants presented mixed views – some reported that PH-supported guidelines and training modules are endorsed by the GoU and used by TB health workers, while some explained that information from the trainings is not consistently used in practice. Partners acknowledged that TBCP has been supporting quarterly monitoring visits to primary health care (PHC) and TB clinics. Though TBCP has played a large part in supporting the Ministry of Health (MOH) with the rollout of GeneXpert maintenance systems, partners identified that some areas have an urgent need for Xpert machines.

CONCLUSIONS - UZBEKISTAN

TBCP has developed a successful model for promoting access to TB services for identified vulnerable populations by working through community organizations (e.g. *makhallas*) through IEC campaigns. TBCP has played a key role in the development of NTP policies, strategies, and guidelines in Uzbekistan, and has contributed to the integration of TB services within the PHC network through its targeted training of health workers. However, KIIs indicate that health facility training and guidelines are inconsistently applied across the four TBCP regions, and point to a need for greater clarity in the national algorithm and accompanying guidelines. Though TBCP is an active partner and collaborates effectively with the GoU and other partners working on TB in the country, the limitations of the central coordination mechanism results in inefficiency and inconsistent application of national guidelines for service delivery. This poses a threat

for sustainability, especially as the exit of one partner may trigger a need for re-training of health staff so that they are using another partner's service delivery guidance.

KEY RECOMMENDATIONS – UZBEKISTAN

1. TBCP should provide support to standardize processes and operating procedures throughout the TB identification and treatment lifecycle. This should include development of a clear national algorithm for identification and management of TB, standardization of definitions, and standardized use of Xpert testing.
2. TBCP and WHO should work together with the NTP to ensure that all training is built upon a full understanding of the essential elements of TB detection and care. Such training should include curricula on the patient-centered approach to care and implementation of national guidelines and policies.
3. TBCP and the NTP should conduct an assessment on the use of standard processes and operating procedures to identify gaps in implementation, understanding, and use.
4. TBCP should participate in information and experience sharing, and possibly co-implementation, with other partners in Uzbekistan. One avenue for this could be the Center of Excellence, by strengthening its linkages with other partners in Uzbekistan and advocating for consistent application of TB prevention, care, treatment, and control processes and operating procedures.
5. TBCP should support the NTP to bring the national strategic plan in line with current WHO recommendations.[1] TBCP should focus on defining appropriate indicators to monitor the process of identification and management (e.g. percent of patients identified as a presumed TB case) with disaggregation by sex and location to capture differential effects.

FINDINGS – TAJIKISTAN

QUESTION 1. TO WHAT EXTENT IS THE PROGRAM INCREASING ACCESS TO TB SERVICES, ESPECIALLY FOR VULNERABLE POPULATIONS?

By the end of Year 2, over 35,000 vulnerable individuals were reached through all types of program activities. Vulnerable populations included prisoners (or ex-prisoners), migrants, PLHIV, and PWIDs. There is evidence of effective coordination with HIV programming efforts at the sub-national level; for example, all ex-prisoner TB patients were supervised by social workers to continue TB treatment and receive HIV testing and counseling.

TBCP is closely supporting the continued management of prisoners released while they are still under TB treatment through their partner NGOs. TBCP is reported to also support partners in identifying and treating TB patients in the penitentiary system through its active participation in the thematic working group. TBCP has provided UV lamps, masks for prison staff and patients, and respirators to improve and strengthen TB infection control in the prison system.

TBCP is also partnering with NGOs to increase identification of TB among migrants. In Year 2, the total number of migrants in project areas identified who started TB treatment was 79 out of some 11,961 migrants reached by project activities, or about 6.6/1,000. Although the Global Fund supported PH regional efforts in Kazakhstan for agreements supporting cross border TB detection and care is underway, the ET found no clear current multi-national linkages between TB services for labor migrants, placing them at a disadvantage when it comes to diagnosis and seeking care.

During interviews with health workers and patients, the ET found that there is still strong TB stigma (90 percent, or 15 of 17) and the social and economic impact of stigma may influence patients' decision to seek medical care after the onset of symptoms associated with TB. GIs revealed that women, who tend

[1] World Health Organization. Toolkit to develop a national strategic plan for TB prevention, care and control. 2015.

to be more likely to access health services, felt TB stigma (80 percent) more strongly than men (30 percent). Women primarily face stigma in their communities and public places.

QUESTION 2. TO WHAT EXTENT IS THE PROJECT IMPROVING THE QUALITY OF PATIENT-CENTERED TB SERVICES?

TBCP has collaborated with its partners to strengthen the laboratory network in Tajikistan, and has been fully involved in the development and implementation of a quality management system (QMS) of TB laboratories. Also, TBCP provides TB prevention counseling and social support tailored to vulnerable populations, empowering patients and families to make decisions through educational materials and outreach work, and IEC campaigns. TBCP also engages communities in Tajikistan by forming CHCs and utilizing local organizations like Women's Committees to train community members on outreach, referrals, and adherence. Additionally, and as gleaned through KIIs, all health workers (nurses, family doctors, TB specialists) met by the ET in the TBCP areas had been trained and retrained on TB prevention, care and control. In line with the program's objectives to use electronic TB MIS and quality data for evidence-based decision making at all levels, the program reported above the number of targeted facilities using electronic MIS systems according to WHO standards in Year 2. Despite these achievements in improving the quality of patient-centered services, the ET determined through field visits that the monitoring of treatment administration and follow-up of TB patients were not standardized, nor were they entirely in line with WHO recommendations.

QUESTION 3. TO WHAT EXTENT IS THE PROJECT SUPPORTING THE DEVELOPMENT AND IMPLEMENTATION OF EVIDENCE-BASED LAWS, POLICIES, STRATEGIES, ETC. BASED ON IMPROVED DATA SYSTEMS AND QUALITY DATA?

TBCP is actively collaborating with senior government officials, policy makers, and health leaders to increase awareness of TB control in Tajikistan, thereby strengthening the political commitment of the government. TBCP has been fully involved in the national policy to control TB in Tajikistan as well as in the adaption, development, and revision of many national guidelines. The essential TB information system, OpenMRS, both exists with all needed registers and reports and is properly completed using standard definitions. OpenMRS is fully in line with the recording and reporting system of the NTP. Data collected through these systems, though, are not fully analyzed to improve the management aspect of NTP even at the central level. The case-based recording system is under-utilized for data analysis.

QUESTION 4. TO WHAT EXTENT WERE THE CLIENT NEEDS MET OR NOT, AND WHY?

Partners reported positive findings on collaboration and coordination with PH's implementation.[2] Another common theme discussed with partners was PH's active support to the supervision of health facilities, including monitoring and evaluation of facilities, and its training and capacity building programs. Despite current efforts to improve sustainability, national and international partners remain concerned with the sustainability of their TB programs, particularly with the anticipated reduction of GF funding from 2019 onwards. The ET carefully observed guidelines, protocols, and reports that were made available at the TB clinics and found that all but one of PH-supported guidelines were commonly found at TB hospitals, clinics, and PHC centers. However, and importantly, the basic Directly Observed Treatments (DOTS) directly observed treatment, short-course guidelines were not widely available.

There were mixed views regarding sustainability. On a positive level, interviews with patients confirmed that PH's supported community based and patient schools support systems contribute to stigma reduction, TB care seeking, compliance, and overall program sustainability. However, at a district level, TB facilities in two regions report high staff turnover resulting in a continuing training requirement.

[2] In multiple cases, USAID and PH were discussed interchangebaly among partners and among health facility providers and patients.

CONCLUSIONS – TAJIKISTAN

Particularly within the penitentiary system, TB prevention and control efforts are highly visible. There are appropriate collaborative TB/HIV activities at the operational and central levels, helping to ensure that HIV/AIDS patients are tested for TB in a timely manner and that they receive appropriate preventive drugs. TBCP has improved the quality of patient-centered services through its partnerships and activities, such as its engagement with stakeholders to conduct various trainings on aspects of TB prevention, care, and control, and its involvement in the development and implementation of a quality management system (QMS) of TB laboratories. TBCP is well recognized in empowering patients and communities by forming CHCs and utilizing local organizations to train community members on outreach, referrals, and adherence. TBCP is also well respected in recognizing patient rights through providing TB prevention counseling and social support tailored to vulnerable populations. Monitoring and treatment administration and follow-up of TB patients, are however not standardized, nor are they entirely aligned with WHO recommendations.

TBCP is supporting the development and implementation of evidence-based laws, policies and strategies by being fully involved in the national policy to control TB as well as in the adaption, development, and revision of national guidelines. However, data collected through these systems are not fully analyzed to improve management and the case-based recording system is under-utilized for data analysis. PH's leadership role in supporting and improving TB care in Tajikistan is highly regarded by all partner organizations and health officials interviewed. The contribution of TBCP is considered by the NTP and its provincial partners as paramount in the implementation of TB services.

KEY RECOMMENDATIONS - TAJIKISTAN

1. TBCP should continue to collaborate with partner NGOs, especially Caritas Luxemburg, to have more leverage into the penitentiary system.
2. In the remaining years of the project, TBCP should focus on strengthening the following policies and guidelines with the NTP: existing treatment guidelines in line with the new WHO recommendations;[3] establishing a clear diagnosis and treatment algorithm to manage presumed and definite TB patients; establish procedures to monitor and evaluate the process of identification and management of patients with presumed TB; creating national guidelines document on conducting supervision activities at the regional, district, and facility levels in Tajikistan.
3. TBCP should develop and provide training courses on data analysis for regional teams and the relevant staff of the NTP Central Unit. The presumed TB register should include individual information on gender in order to monitor the process of identification of presumed TB patients, especially among women.
4. TBCP should routinely evaluate and readjust training activities to address the periodic inconsistencies inherent to the health staff practices. TBCP should collaborate with government institutions to increase the likelihood that trainings continue, thus ensuring the sustainability of trainings.
5. TBCP should provide proposal development and program planning capacity building to help the NTP prepare proposals to build its funding base with Tajikistan's internal potential donors, its diplomatic community, and other bilateral and private donors.
6. Although it is not in TBCP's programmatic objective to focus on other high-risk groups such as contacts or minors, TBCP could widen its focus to these groups which could result in TB cases being more easily identified.

[3] World Health Organization. Guidelines for treatment of drug-susceptible tuberculosis and patient care: 2017 update. 2017.

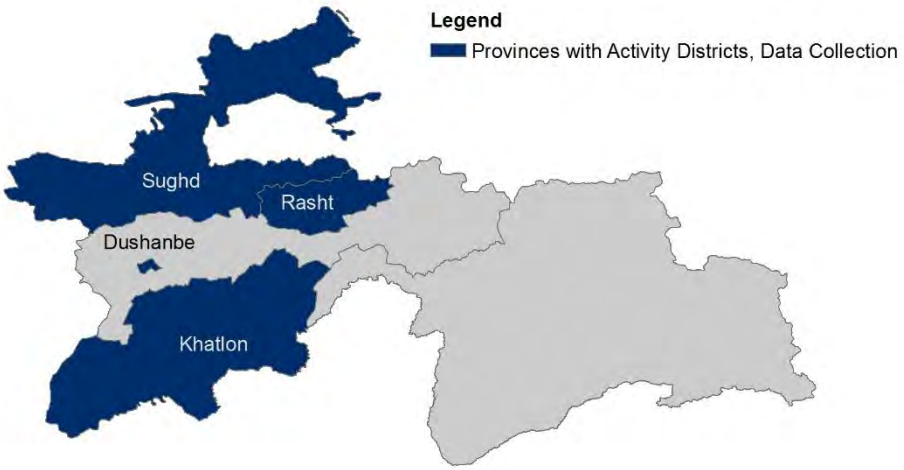
PROJECT BACKGROUND

The USAID/CA TB Regional Program is being implemented by Project HOPE – People-to-People Health Foundation, Inc., USA (PH) for five years from September 1, 2014 through August 31, 2019. The activity is being implemented in two Central Asian republics, Tajikistan and Uzbekistan, with a planned budget of approximately $24 million. The contractual objectives for both countries are the same. Uzbekistan and Tajikistan are among the WHO European Region's high-priority countries for TB control. In Uzbekistan there were 24,000 new cases in 2015, or 79 cases per 100,000 population; in Tajikistan there were 7,400 new cases of TB in 2015, or 87 per 100,000 population. Further information on the state of tuberculosis (TB) in both countries can be found in Annex B: Country Context.

Due to specific operating requirements in Uzbekistan, the activity is being implemented under the official title "USAID TB Control Program in Uzbekistan" (*Программа USAID по борьбе с туберкулёзом в Узбекистане*). In Tajikistan, the subcontractors of USAID/CA TB Regional Program are KNCV, AFEW, and IOM. The activity engages these organizations, present in both countries, and strengthens their capacity as a means of increasing community involvement in TB control, and in healthcare issues in general.

Figure 1: Activity and Data Collection Areas in Uzbekistan

Figure 2. Activity areas and data collection areas in Tajikistan



The selected geographic coverage for program activities is based upon the successes of previous and current activities in both countries. Navoi, Khorezm, Bukhoro and Kashkadarya regions in Uzbekistan, and Sughd, Rasht, and Khatlon provinces in Tajikistan are targeted for priority support, as displayed in the maps below.

PROGRAM ACTIVITIES

The TB Control Program (TBCP) aims broadly to increase access to TB services, improve the quality of TB services, and establish evidence-based policies and processes for sustainability. TBCP's seven objectives within these three domains are detailed in Box 1. Specific program activities are organized by intervention area: facility and community level service improvement; human resources capacity building; advocacy and policy development; and strengthening monitoring and data use. Activities under each intervention area specific to Year 3 are detailed and displayed below in Figure 3.

FACILITY AND COMMUNITY LEVEL SERVICE IMPROVEMENT

TBCP emphasizes a patient-centered approach throughout the design and implementation of activities. The five principles of a patient-centered approach, as defined by the USAID TB CARE I cooperative agreement, are: 1) enable partnerships, recognize patient rights; 2) empower and activate patients and communities; 3) engage all stakeholders; and 4) monitor and document. Though activities within each aspect of the patient-centered approach differ between countries, the shift from a hospital-based system to ambulatory care is a program-wide focus, as is patient education. Four of the main approaches to community-level support are:

Box 1: TB Control Program Objectives

Objective 1. More equitable access to comprehensive and appropriate TB diagnostic and treatment services for vulnerable populations

Objective 2. Laboratory services provide more timely, quality TB and MDR-TB diagnosis

Objective 3. Patient-centered system for TB and MDR-TB implemented widely in the region

Objective 4. Enhanced enabling environment promoting TB services that meet international standards

Objective 5: Human and institutional capacity of health systems to manage TB and MDR-TB services strengthened

Objective 6. Coordination and linkage of TB with other sectors and CSOs increased

Objective 7. TB service providers and managers using electronic TB MIS and using quality data for evidence-based decision making at all levels

- **Multi-disciplinary teams (MDTs)** – groups of experts established to provide comprehensive assistance to vulnerable populations through improving access to services for prevention, diagnosis, and treatment.
- **Patient support groups (PSGs)** – groups formed at the primary health care (PHC) level to improve adherence of TB patients receiving treatment in outpatient settings and provide socio-psychological support.
- **Patient schools** – educational sessions organized on the sites of TB hospitals, with the goals of improving access to treatment and other health and social services, and improving adherence to treatment for TB among vulnerable populations.
- **Community health committees (CHCs)** – rural community-level committees that include representatives of local authorities, women's committees, and medical workers, with the goal of conducting educational activities to reduce stigma and discrimination towards TB patients and families, assist with referrals, and provide socio-psychological support.

In addition to the patient-centered approach, TBCP includes a range of quality improvement activities for laboratories (Figure 3).

HUMAN RESOURCES CAPACITY BUILDING

The direct trainings and training-of-trainer (ToT) approaches are a large, cross-cutting component of TBCP. The trainings encompass a range in both target audience and across subject area. Between the two countries, trainings are conducted with health facility staff, laboratory staff, CSOs, members of community organizations, and medical/nonmedical staff in prisons and other access points to health care. In addition to pre-service and in-service approaches, TBCP employed a "cross-visit" program for managers to observe best practices. The specific subject matter for the trainings varies by audience and country, but all trainings seek to increase knowledge of TB and available services, or increase local capacity for TB diagnosis and management, while emphasizing adherence to guidelines and a patient-centered approach. The trained community leaders are expected to contribute to improving public awareness of TB and strengthen the available social support mechanisms provided to TB patients in their communities (e.g. patient support groups).

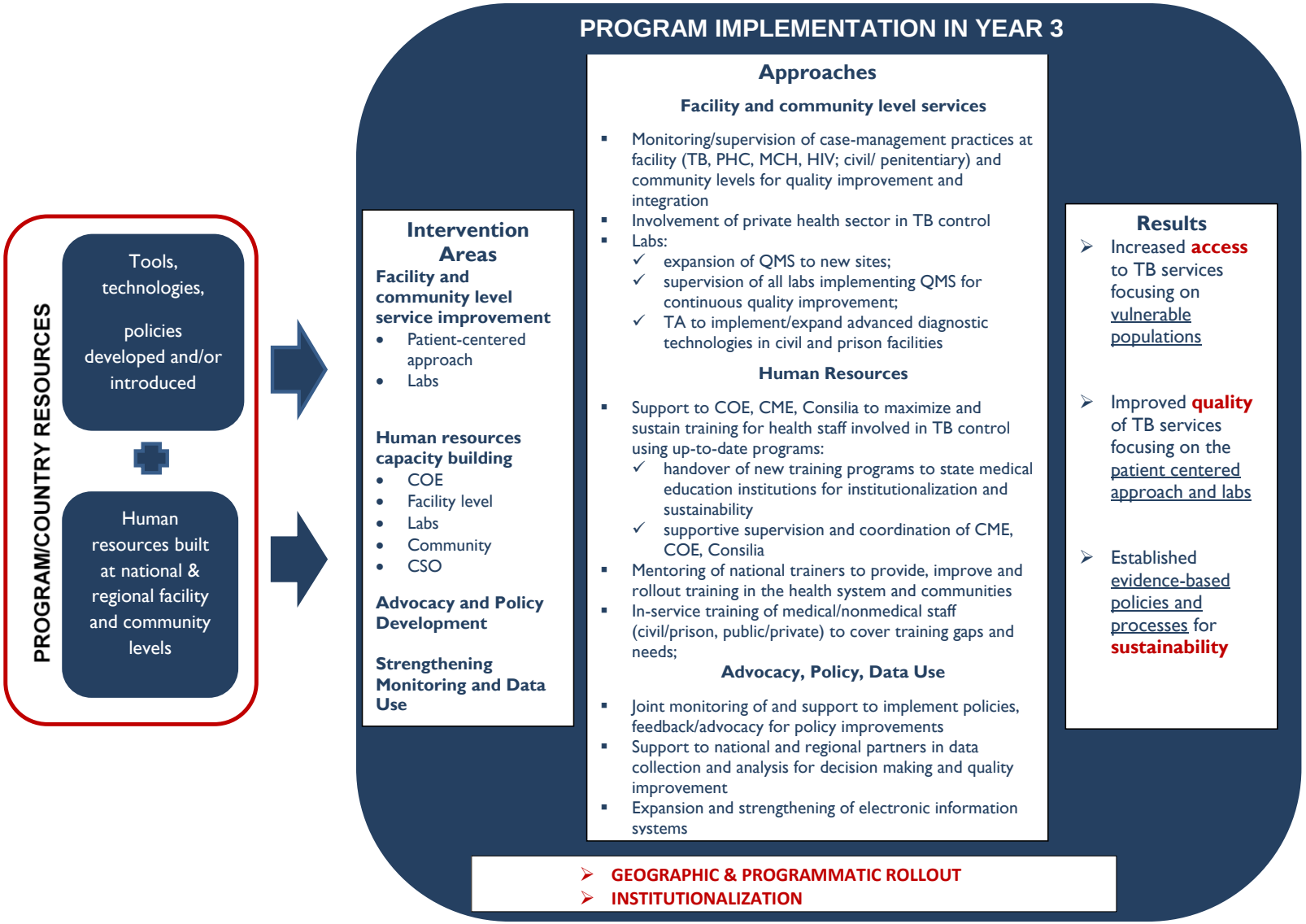
ADVOCACY AND POLICY DEVELOPMENT

In addition to activities aimed at directly improving the patient experience, TBCP works with national and regional partners in both countries to support the implementation and improvement of TB policies. TBCP is involved in developing national guidelines and SOPs on TB prevention, care, and control, developing advocacy and communication strategy frameworks, and leading collaboration with the National Tuberculosis Program (NTP) and partners through working groups, committees, and coordination meetings.

STRENGTHENING MONITORING AND DATA USE

TBCP has responded to needs for increased access to data and capacity for analysis through a set of activities supporting evidence-based processes and sustainability. The TBCP is heavily involved in the rollout of new data systems and processes, such as QuanTB and QMS, for quality assurance in Uzbekistan and Tajikistan, respectively. In addition to technical implementation of the systems, TBCP provides trainings and monitoring support to users of the system and the data.

Figure 3: Program implementation in Year 3



EVALUATION PURPOSE AND EVALUATION QUESTIONS

EVALUATION PURPOSE

The USAID TB Control Program (TBCP) is a five-year activity aiming to increase accessibility and quality of TB diagnosis and treatment with a focus on vulnerable populations. The program aims to reduce the burden of TB and the development of drug-resistant TB in Central Asia (CA) by working with partners in selected provinces (oblasts) in Tajikistan and Uzbekistan. TBCP started on September 1, 2014, and will operate through August 31, 2019. The initial five-year budget for USAID's support for this effort in Uzbekistan and Tajikistan is approximately $24 million.

This midterm evaluation report seeks to provide information on the status of program activities and recommendations for adjustments to the activity's design. The primary users of this evaluation include USAID/CA's Health and Education Office, the Tajikistan Country Office, and the Uzbekistan Country Office. In addition to Project Hope (PH) and its subcontractors KNCV, AFEW, and IOM, this report may also be useful to other donors and partners supporting TB control efforts in the CA region. These donors and partners include the Global Fund to Fight AIDS, TB, and Malaria (GF), the World Health Organization (WHO), Médecins Sans Frontières (MSF), Kreditanstalt fur Wiederaufbau (KfW), and Caritas Luxembourg.

EVALUATION QUESTIONS

The evaluation questions were modified from the original scope of work (SOW) questions on July 21, 2017, prior to the submission of the work plan and fieldwork (see Annex A). The evaluation questions were simplified and streamlined to make them more clear and tenable. The evaluation questions cut across the seven program objectives listed in Box 1 above in the Project Background section. The four evaluation questions are:

Category 1: Progress toward achieving objectives

1. To what extent is the program increasing access to TB services, especially for vulnerable populations?
2. To what extent is the project improving the quality of patient-centered TB services?
3. To what extent is the project supporting the development and implementation of evidence-based laws, policies, strategies, etc. based on improved data systems and quality data?

Category 2: Client satisfaction (ministries of health, national TB programs, oblast health and TB authorities

4. To what extent were the client needs met or not met, and why?

EVALUATION METHODS AND LIMITATIONS

DATA COLLECTION

The ET applied a utilization-focused and mixed-methods evaluation approach to this evaluation, with consideration for ethnic, gender, and social analysis, that incorporated findings from desk reviews, key informant interviews (KIIs), group interviews (GIs), and direct observation. The data collection approach differed slightly in both countries due to their unique contexts, and because of increased restrictions in Uzbekistan, which are further discussed in the Limitations section. The ET conducted KIIs and GIs, as well as direct observation in Tajikistan. In Uzbekistan, the team was limited to KIIs and a small sample of GIs. The evaluation was designed in response to the SOW (see Annex A) and approved work plan submitted prior to fieldwork. The ET consisted of Team Leader Robert Hagan, TB Technical Specialist Dr. Salah Eddine-Ottmani, and TB/Health Financing Specialist Dr. Jargalmaa Radnaabazar. In addition, the team was supported by a logistician/interpreter in both countries to facilitate interviews.

EVALUATION PREPARATION AND DESIGN

The steps taken to prepare and design the evaluation for both countries are explained below in summary, and in detail in Annex D: Evaluation Design and Methodology.

Desk review: The ET completed a desk review of 26 existing TBCP and USAID documents to inform the development of data collection tools, including workplans, monitoring and evaluation plans, project reports, national guidelines, other USAID health evaluations in Central Asian republics, and WHO and GF reports on TB control. In addition, the ET requested monitoring data from TBCP for both Uzbekistan and Tajikistan to supplement the desk review documents provided. The ET also consulted peer-reviewed literature related to TB in Uzbekistan and Tajikistan, as well as reviewed current WHO/CDC TB evaluation methodology documentation. (See Annex G for the full list of documents reviewed.)

Sampling design:

(i) Uzbekistan: Although Bukhara, Navoi, Khorezm, and Kashkadarya oblasts in Uzbekistan benefit from the program, the ET limited data collection to Tashkent due to travel restrictions.

(ii) Tajikistan: The ET conducted interviews in Dushanbe with government authorities, project partners, and implementers purposively sampled in collaboration with USAID and PH, as well as with staff from TB facilities in the provinces where the project is implemented. These three provinces include Sughd, Rasht, and Khatlon. In consultation with USAID and PH, the ET purposively selected up to three government approved districts per province where TBCP operates.

DATA COLLECTION METHODS FOR UZBEKISTAN

Given the restriction to Tashkent with key informants, the ET focused on KIIs and GIs with respondents, including PH, the MOH, the National TB Institute, the Institute of Health and Medical Statistics, and project partners such as WHO and MSF. The ET conducted 14 interviews with 29 respondents, of which 10 were KIIs and 4 GIs (16 female; 13 male). See Annex F for a full list of respondents.

DATA COLLECTION METHODS FOR TAJIKISTAN

Data collection: Prior to fieldwork and site visits, the ET conducted interviews in Dushanbe with PH, its partners – including, but not limited to, MSF, KNCV, and AFEW – CSOs, and public officials. The ET spent between one to three days in each sampled district conducting KIIs and GIs with health professionals and patients, as well as conducting site visits to TB and HIV health facilities. To maximize participation, site visits were conducted to the extent possible at times that were convenient for both working women and men. GIs were conducted separately with women to enable women and men to speak openly about their respective access to TB services and quality of care. The ET conducted a total of 34 interviews with

114 respondents, of which 20 were KIIs and 14 GIs (37 female; 77 male). See Annex F for a full list of respondents.

Gender and social equity: To evaluate gender and social equity, the ET used desk reviews, KIIs, GIs, and direct observation, with the primary source of data being GIs. Patients with TB were invited to participate in three GIs that were separated by sex. These respondents' experience navigating local healthcare services provided insight into how these systems worked. Through these discussions, the ET could better understand patient/healthcare worker communications, community relations, experiences of stigma, healthcare services, and financial difficulties from TB diagnosis to treatment and follow-up. The ET also explored the main gender and social barriers and challenges to the organization and implementation of early diagnosis of TB, the referral system, access to services, and provision of social assistance for TB patients.

The ET ensured all participants that their statements would be held in the strictest confidence, and asked respondents for their consent to the ET's use of anonymized responses. The ET informed all participants that they were not required to answer all questions asked, and that they could abstain from answering any question without penalty. Prior to all patient interviews, the ET explained the nature of the questions and obtained consent. The ET also informed patients that, should they choose not to directly participate in interviews, they were free to listen as they wished.

ANALYSIS

All ET members read the documents and pulled relevant information into a desk review findings matrix, where the ET connected the findings to the relevant evaluation questions and identified information gaps to be filled by data collection during fieldwork. The ET's handwritten notes taken during KII interviews and GIs were transcribed at the end of each day and consolidated under each of the four evaluation questions. The daily notes were subsequently accumulated and categorized under each evaluation question. Upon completing fieldwork in each country, the ET drafted a findings, conclusions, and recommendations matrix organized by evaluation question, inputting relevant findings from the field notes and direct observation to identify themes and patterns. The matrix was then combined with findings from the desk review and peer review to test and refine theories, corroborate and expand upon existing findings, and fill information gaps. This matrix became the empirical basis of the report.

Reports, KII, and GI data were utilized to confirm or contradict the initial hypothesis, which was that TBCP was appropriately assisting the Ministry of Health for the control of TB in all areas, as indicated in its annual reports and performance indicators. The information and statements obtained were uniformly uncontested, thereby eliminating the need to weight divergent information and opinions.

LIMITATIONS

LIMITATIONS FOR UZBEKISTAN

There were several limitations that the ET faced during fieldwork in Uzbekistan. First, the ET was limited to two team members – the Team Leader and TB Specialist – as the third team member, the TB Health/Finance Specialist, joined the team too late to obtain Government of Uzbekistan (GoU) permission and a visa in time for fieldwork. Further, the ET was limited to interviews in Tashkent, as it did not receive GoU approval to conduct interviews in the regions beyond Tashkent where the activity is implemented. However, the ET did have the opportunity to meet and interview four TB dispensary chiefs from the project regions. This reduced the sample size to 29 respondents across 14 interviews with implementing partners, public officials, and other international organizations. The restriction to Tashkent served as a barrier to a comprehensive understanding of the program's success, particularly at the clinic and hospital levels, as well as in reaching vulnerable groups. Overall, the absence of clinic visits and the unavailability of related patient data limited the ET's assessment of TB program quality in Uzbekistan. To the extent

possible, the ET attempted to compensate for data gaps from fieldwork with data from desk reviews and careful probes on questions to provide comprehensive respondent data for analysis.

LIMITATIONS FOR TAJIKISTAN

The ET's work in Tajikistan was somewhat limited by the day-long travel times required to visit a representative number of TB hospitals, TB clinics, and primary healthcare facilities. The long distances limited the number of sites the ET could visit in a day, and increased the time spent traveling between sites. The ET did not have the opportunity or approval to interview all vulnerable groups (e.g. prisoners). Also, the timing of Ramadan affected the final leg of the ET's fieldwork, as they were not able to conduct interviews for two consecutive days. In accordance with government policy, the ET submitted its preferred site selection to USAID for approval by the Government of Tajikistan (GoT) several weeks prior to fieldwork; health facilities may have received notice ahead of the ET's arrival, and showed varying degrees of preparedness during site visits.

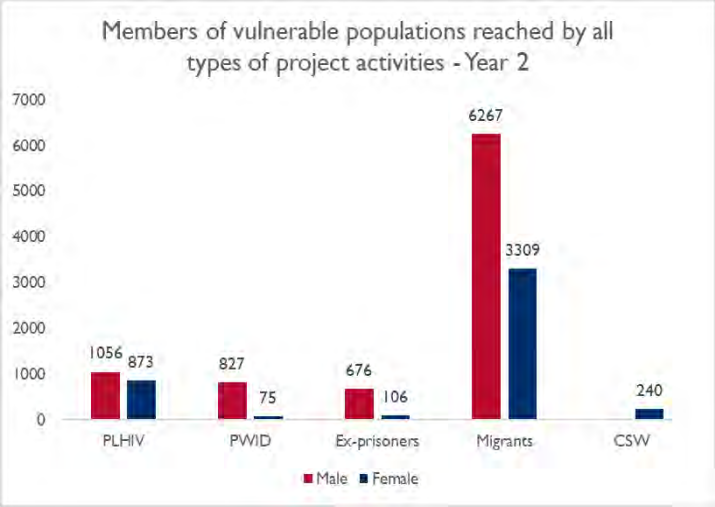
FINDINGS – UZBEKISTAN

UZBEKISTAN EQ 1: TO WHAT EXTENT IS THE PROGRAM INCREASING ACCESS TO TB SERVICES, ESPECIALLY FOR VULNERABLE POPULATIONS?

TBCP implemented a range of activities in Uzbekistan to increase access to TB services among vulnerable populations, including women, people living with HIV/AIDS (PLHIV), ex-prisoners, and migrants. These activities included: a multi-disciplinary team in each of the four project provinces, 49 patient support groups, and seven patient schools (similar to the model in Tajikistan with Healthy Lifestyle Communities). TBCP provided information to these groups to counter the stigmatization associated with TB.

The broad approach for reaching vulnerable populations often employed a training-of-trainers (ToT) model; TBCP engaged local CSOs and parastatals to train their members, who then trained members of the community on TB prevention and service availability. Community members were reached through *makhalla* leaders and other CSOs and parastatals. These activities aimed to strengthen TB knowledge and awareness in order to encourage more people with suspected TB symptoms to seek screening. While TBCP fell slightly below target reach in Year 1, the number of members of vulnerable populations reached by all types of project activities dramatically increased from 2,607 in Year 1 to 13,429 in Year 2. Figure 4 below shows the breakdown of this indicator disaggregated by population group and sex for Year 2 (disaggregated data were not available for Year 1).

Figure 4: Performance Indicator Tracking Table (PITT) indicator 1.7, Uzbekistan



PH's reports indicated that out of 21,459 vulnerable persons reached through community outreach activities, 110 TB cases were identified, or about 5/1,000. In other words, to detect one TB case, some 195 vulnerable individuals were contacted. TBCP also reported that 91 percent of the referred vulnerable populations were tested for TB. While data were not available for Year 1, performance on this indicator was well above the target of 80 percent. NTP data were not available to properly assess the contribution of TBCP's vulnerable group target approach to the national program's success.

ACCESS AMONG PLHIV

Integration of services between HIV and TB care centers was a large focus of TBCP in Years 1–3. In Year 1, the program built the capacity of a variety of CSOs and heads of PHC and TB facilities to reach HIV-positive patients. The program also worked with health facilities to increase knowledge of TB/HIV co-infection among primary healthcare and TB care providers, with the goal of increasing referrals to the appropriate services. Finally, TBCP supported the creation of multi-disciplinary teams (MDTs) to improve access to diagnostic and prevention services in vulnerable populations, including PLHIV.

Each of the four districts had at least one team consisting of an infectious disease specialist, a TB doctor, and five outreach workers. TBCP trained the MDTs, who then trained NGO members and outreach workers. The MDTs also facilitated patient support groups, patient schools and health fairs. Once in treatment, TBCP provided TB case management for populations vulnerable to TB and multi-drug resistant (MDR)-TB. In Year 2, the program focused largely on expanding evidence-based TB/HIV trainings for

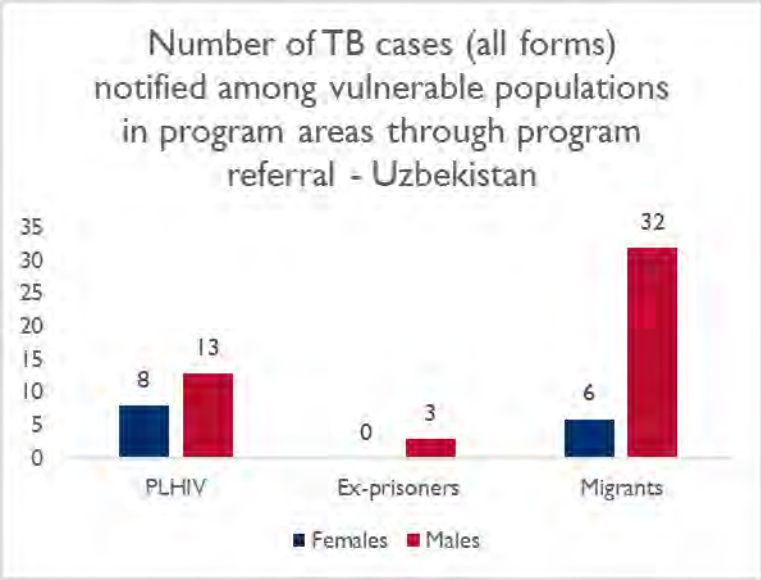
medical and non-medical staff in civil facilities, as well as continuing efforts on current activities and addressing stigma. TBCP trained 1,092 health providers and non–health providers on different aspects of TB control in Year 2. In Year 3, TBCP added monitoring/supervision of case management practices at TB, PHC, MCH, HIV, and civil facilities to its approach to TB/HIV integration. TBCP also planned to support the implementation of national guidelines and policies on collaborative TB/HIV activities.

The percentage of TB patients with an HIV test result recorded in the TB register remained constant at 97–98 percent from baseline through Year 2. All four TBCP-supported provinces reported successful performance in this indicator. Conversely, the reported percentage of HIV-positive patients who were screened for TB in HIV care or treatment settings (Indicator 6.2) was much lower at baseline (63 percent) but improved markedly to 74 percent by the end of Year 2. While this increase suggests that the program overall has been successful in integrating TB screenings to HIV care, performance on this indicator differs dramatically between provinces. Bukhara, Navoi, and Khorezm Provinces reported high levels of TB screenings in HIV-positive patients (>96 percent), while Kashkadarya province reported low levels (31 percent) at the end of Year 2. Performance indicators tracking table (PITT) analysis from TBCP shows that this disparity may be due to a shortage of TB specialists in the Kashkadarya AIDS center, preventing HIV-positive patients from receiving TB screening. TBCP reports that the Kashkadarya AIDS center hired a TB doctor in July 2016, indicating that performance in this indicator may increase again in Year 3.

ACCESS AMONG MIGRANTS

Though there are few data available on immigration specific to Uzbekistan, labor migration is a common driver of migration in Central Asia. Foreign migrant workers in Uzbekistan have the same legal protections as Uzbeks in the workforce, but access to healthcare is variable; those without an officially registered address do not have access to government health facilities, which represent the vast majority of facilities available throughout the country.[4] Estimates of the total annual outflow and return flow of Uzbekistan labor are not available, but it is estimated that Uzbek citizens account for 45% of work permits issued by Russia during 2016. Although Uzbeks are reported to have the weakest legal protection in Russia, these workers are estimated to have contributed $2.74 billion to Uzbekistan's economy.[5] The UN reports the top five countries of origin for migrants in Uzbekistan as of 2013 as follows: Russian Federation (586,089); Ukraine (189,709); Kazakhstan (91,711); Belarus (70,495); and Azerbaijan (33,157).[6] TB services for this flow of itinerant and returning migrant workers to Uzbekistan is supported, in part, by TBCP. Figure 5 details the number of TB cases notified among vulnerable populations in Year 2. Sixty-two total

Figure 5. PITT indicator 1.1, Uzbekistan



[4] U.S. Embassy in Uzbekistan. 2016 Country reports on human rights practices: Uzbekistan. 2016.
[5] Central Asia Today, Uzbekistan Reaches With Russia on Labor Migration, April 7, 2017.

cases were notified, which was well above the activity's target of 44 cases. The majority of those notified were male migrants.

In Year 2, the total number of notified migrants in project areas who began TB treatment through referral was 38 out of 9,576 migrants, or about 4/1,000 reached. Similarly, in Year 2, three ex-prisoners were notified and began TB treatment out of 782 ex-prisoners reached by the project, or about 4/1,000 reached. All (100 percent) of notified TB cases in Year 2 started TB treatment (data were unavailable for Year 1). This means that to detect and treat one TB case among migrants or among ex-prisoners, the activity had to reach 252 migrants or 261 ex-prisoners through program referrals. These numbers are much lower than in the general population, and indicate higher TB incidence among this population; Uzbekistan's 2015 incidence of 79/100,000 people implies that 1,265 members of the general population would have to be reached to detect and treat one case of TB.

ACCESS AMONG WOMEN

Access to TB services for women was a large focus of workplans for Years 1–3. In Year 1, collaboration with and strengthening of CSOs that support women was a large focus of TBCP's strategy. Specifically, TBCP employed a ToT approach; trainers from CSOs and parastatals were trained on TB, and who later shared the information with *makhalla* leaders and other CSOs and parastatals. In Year 2, TBCP continued these efforts and enhanced the CSOs' role in patient referrals between TB and other services (HIV, PHC, and maternity and child health (MCH)). A total of 225 non-healthcare providers were trained in Year 2 as trainers, and 82 percent of those trained were women. The recruitment for the *makhalla* trainings was particularly successful in Year 2; on average, two to three more people than planned attended each session.

Figure 6. PITT indicators 1.2 and 1.4, Uzbekistan

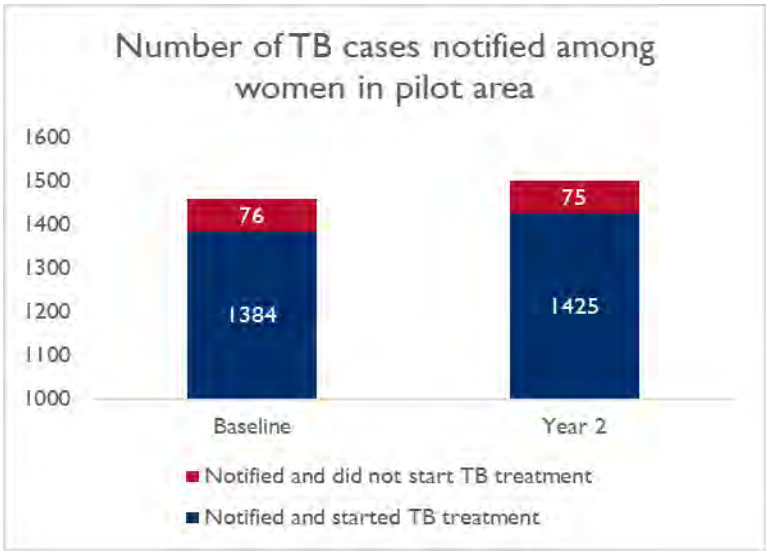


Figure 6 shows the proportion of notified TB cases among women to those notified who also started treatment at baseline and Year 2. Though slightly more women were notified cases in Year 2 than at baseline (1,500 in Year 2 versus 1,460 at baseline), the proportion of women who started treatment held steady at 95 percent in both years. The program in Uzbekistan is performing well above its set targets for this indicator. Analysis from TBCP attributes much of this success to more interest than anticipated in the trainings from *makhalla* leaders, though it should be noted that there is no set target for the percentage, which remained unchanged from baseline to Year 2.

IMPORTANCE OF COMMUNITY NETWORKS

TBCP's model for the involvement of community networks and groups was highly regarded by individuals representing the organizations interviewed. MSF suggested that the approach be implemented nationwide. These TB support services targeting women, PLHIV, migrants, and people who inject drugs (PWID) were reported to have been developed and implemented by TBCP in all four project provinces (Bukhara, Kashkadarya, Navoi, and Khorezm). PH noted during their interview that their approaches are adapted to local *makhallas* with each multi-disciplinary team, including representatives of local NGOs.

KfW and Nanouz note that other vulnerable populations would also benefit from PH's interventions. Recommendations were specifically made for TBCP to consider collaboration with the Rehabilitation Center for Migrants. Aside from its suspected strong linkages with the GoU, the umbrella NGO Nanouz was highlighted as an efficient forum for collaboration with a wide range of NGOs supporting a range of vulnerable groups.

UZBEKISTAN EQ 2: TO WHAT EXTENT IS THE PROJECT IMPROVING THE QUALITY OF PATIENT-CENTERED TB SERVICES?

ENABLING PARTNERSHIPS

TBCP collaborated with the NTP and WHO to implement a range of activities to improve the quality of TB diagnosis and management in line with the patient-centered approach. This included establishing a National Center of Excellence for TB prevention, control, diagnosis, and management; TBCP is expected to play a key role in the development of operational capacities at this center, and is in the process of procuring the center's equipment.

In Year 1, TBCP worked with the MOH to integrate GeneXpert MTB/Rifampicin resistant technology in pilot regions, and trained 15 laboratory specialists in the use and maintenance of GeneXpert. Efforts to improve the quality of diagnostics and ensure optimal use of GeneXpert continued with additional trainings and an emphasis on cultivating local capacity in Year 2. The error rate at the end of Year 2 was 2.9 percent, well below the acceptable error rate for GeneXpert of up to 5 percent. In Year 3, TBCP planned to provide technical assistance in the national strategy for GeneXpert rollout. Specifically, TBCP was responsible for identifying new sites, developing transportation schedules, providing access to rapid tests, and developing a GeneXpert maintenance plan. ET data show that in each of the four regions covered by TBCP (Bukhara, Navoi, Khorezm, and Kashkadarya), there is one Xpert machine with four modules. On average, each machine performs 12 tests per day. This indicates that the available Xpert machines are actively used. However, these four TBCP regions account for 25 percent of Uzbekistan's population, and, given the burden of MDR/rifampicin-resistant TB in the country, the number of available Xpert machines is likely to be insufficient for these four regions.

RECOGNIZING PATIENT RIGHTS

TBCP in Uzbekistan recognizes patient rights by empowering patients to make decisions related to care and treatment through conducting outreach sessions, providing information, education, and communication (IEC) materials, and managing a referral voucher system. Multi-disciplinary teams (MDTs) and their networks of NGOs reached 12,753 members of vulnerable populations with group and individual information sessions for target populations in Year 2, and referred 8,336 people to TB treatment. Of the 8,336 referred, 7,577 (90 percent) were tested, and 62 were diagnosed with TB (0.8 percent). The MDTs then worked with patients to form a clear plan for follow-up and treatment, and ensured that patients successfully completed treatment. This process "puts the patient at the center of care and the healthcare provider at the center of TB control."[7]

Though the capacity for diagnostics differs across regions, the treatment regimen used for new TB cases is standardized and aligned with the WHO recommendation (2RHZE/4RH), and this regimen is well understood and routinely used by the four interviewed TB dispensary chiefs. The ET could not assess the practices of these four TB dispensary chiefs in monitoring the administration of TB treatment regimen; however, interviews suggest that the utilization of Xpert testing in TB patients who are still smear-positive at critical check-points (e.g. the end of the intensive or at the end of treatment) may not be widely used.

[7] USAID TB Control Program Year 2 Annual Report

Many partners acknowledge that TBCP has been promoting outpatient management of TB cases through its training program to implement and expand directly observed treatment, short course (DOTS) activities. In Year 1, TBCP focused on building the capacity of health workers and patient support groups to improve management of TB and MDR-TB in outpatient settings. Consistent with a patient-centered approach, these trainings included the provision of social, psychological, and informational support to TB patients and their families. As a result, many small TB hospitals at the district level either stopped their inpatient TB services or closed, and the number of hospital TB beds decreased by 30–40 percent. The number of TB cases managed on an ambulatory basis increased by 30 percent in Uzbekistan overall from 2014 to 2015 (Year 1 of TBCP was September 1, 2014 – September 30, 2015). Ambulatory treatment is often preferable to hospitalization because it tends to make better use of scarce resources and can achieve the same (and sometimes better) outcomes. Most transmission occurs before diagnosis and hospitalization, and the risk of infection drops significantly after the first 2-14 days of effective treatment. Furthermore, hospitalization can promote the spread of TB in hospitals with poor airborne infection control measures.[8]

These efforts were amplified in Year 2 and planned to continue in Year 3, with the addition of treatment adherence training and increased technical support to patient schools. To ensure sustainability of the outpatient model, TBCP planned to train Center of Excellence trainers to then provide trainings to TB doctors and nurses on outpatient treatment. For PH, outpatient management occurs when TB treatment is provided to a patient on an ambulatory basis from the beginning or within one month of inpatient care. This definition is not consistent with that used by MSF in Karakalpakstan region, which considers outpatient management to occur when TB treatment starts from the commencement of ambulatory care without any hospitalization. The use of a non-standard definition may result in inconsistent monitoring of outpatient management across regions over time. Performance fell far below the activity's target of 25 percent for indicators related to TB and MDR-TB patient treatment in ambulatory settings, despite significant efforts to increase the percentage of both drug-susceptible TB and MDR-TB managed in outpatient settings. PH attributes the underachievement on these indicators largely to excessive bed capacity, encouraging hospitalization of sputum smear (SS)-TB patients to fill vacant beds.

The treatment success rate was 87 percent in new TB cases in 2014 in Uzbekistan.[9] The four TB dispensaries chiefs who were interviewed by the ET reported that, every year, this rate is 80–90 percent in Bukhara Region, 85–90 percent in Kashkadarya Region, 80–90 percent in Navoi Region, and 90 percent in Khorezm Region. However, the definition provided for "TB treatment success" by each of these four TB specialists is different, and not aligned with the WHO definition.[10]

EMPOWERING AND ACTIVATING PATIENTS AND COMMUNITIES

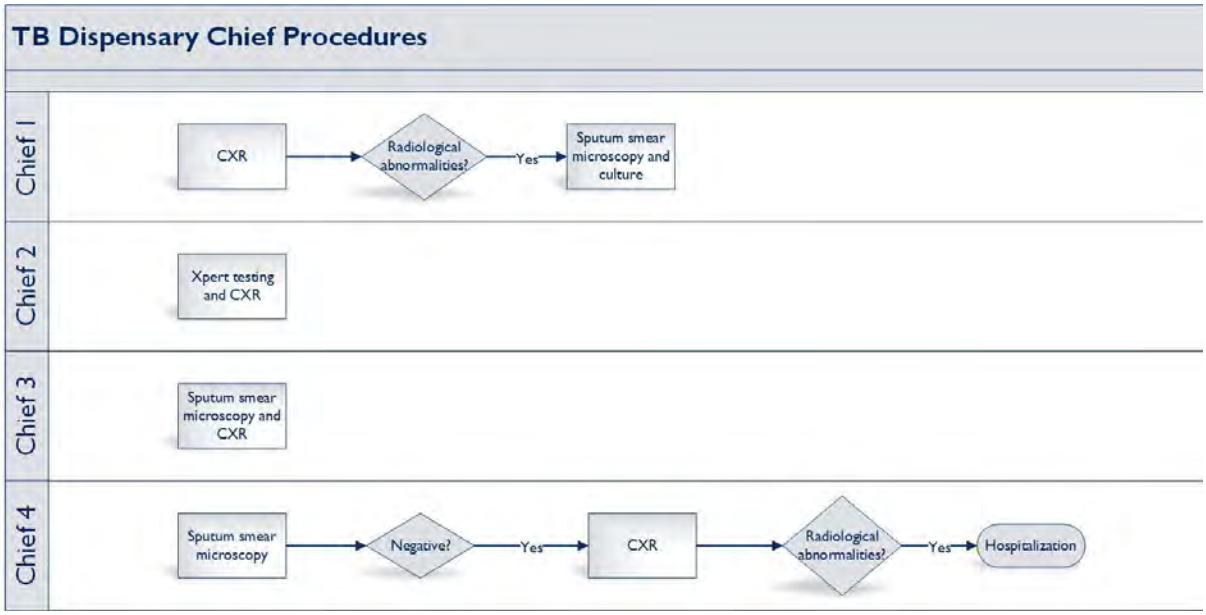
TBCP aims to empower communities and patients in Uzbekistan by engaging with CSOs and parastatals to increase TB and MDR-TB case detection rates and reduce stigma against TB patients. Between Years 1 and 2, TBCP trained about 190 community leaders in planning, implementation, and monitoring of community activities. TBCP has also worked to build linkages between PHC, MCH, TB, and HIV services and community-based referral systems to improve TB diagnosis and treatment.

There are a number of tests that a TB patient may undergo, including chest x-ray (CXR), sputum smear microscopy, culture, Xpert testing, and drug susceptibility testing (DST). Most TB programs have a national algorithm to outline the sequence for these different tests. In reviewing the national algorithm for Uzbekistan, the ET found that the algorithm does not indicate which test must be undertaken at the first step, nor the appropriate decision to be made according to the results of each subsequent step; rather,

[8] The Regional Collaborating Committee on Tuberculosis Control and Care. Ambulatory TB care: A key to achieving better tuberculosis outcomes in the WHO European Region.
[9] World Health Organization. Uzbekistan tuberculosis profile. 2017.
[10] World Health Organization. Definitions and reporting framework for tuberculosis – 2013 revision. 2014.

all tests may be conducted at the same time. This design of the algorithm does not facilitate the implementation of standardized procedures to manage patients with symptoms compatible with TB and to establish TB diagnosis. Moreover, NGO partners reported that medical staff do not follow any clear algorithms despite extensive training, and that various procedures are used to manage patients with presumed TB in different oblasts. In discussions with senior staff from NTP, the ET found that some staff members could not highlight priority symptoms (e.g. productive cough for more than two weeks) to identify a patient with presumed TB.[11] Four TB dispensary chiefs explained that each of them uses a different procedure to manage patients with presumed TB. These procedures are outlined in Figure 7 below.

Figure 7. Dispensary chief procedures



ENGAGING STAKEHOLDERS

TBCP in Uzbekistan worked with the MOH to establish steering committees to facilitate information exchange with stakeholders, including the NTP, MOH, partner organizations, and government and non-government organizations. Partners recognize that TBCP has been a key partner in the implementation and expansion of DOTS activities through the development of its training programs for family doctors and nurses practicing in PHC settings. As a result, TB prevention, care, and control have greater visibility within the PHC network.

TBCP has contributed to the establishment of a pool of national trainers to implement TB activities in collaboration with the NTP Central Unit. The TB dispensary chiefs were trained as trainers in their respective regions; however, they have never been invited to engage in any TB training of health workers, even in their own regions.

All the partners who met with the ET acknowledge that TBCP has made significant efforts to train health workers in the areas of TB prevention, care, and control. TBCP-supported training included basic DOTS, TB laboratory diagnosis (microscopy, Xpert testing, Xpert machines calibration and maintenance, culture, and second-line TB drug susceptibility testing), programmatic management of drug-resistant TB (PMDT),

[11] World Health Organization. Treatment of tuberculosis guidelines: Fourth edition. 2010.

drug management practice improvement within the NTP network, and implementation of a computer program (QuanTB) to manage second-line TB drugs.[12] Many training workshops were organized and led by TBCP in collaboration and coordination with the NTP Central Unit. TBCP is also involved in training on advanced procedures; for instance, it organized the training of 13 laboratory staff on second-line TB drug testing, ensured the training of 23 laboratory staff on quality management systems, and financially supported the training of one laboratory technician on Xpert testing and Xpert machine calibration and maintenance in Toulouse, France.

According to the four TB dispensary chiefs interviewed by the ET, 851 health workers practicing in the four TBCP regions were trained by PH; 64 percent were medical officers, 19 percent laboratory staff, and 17 percent nurses. The four TB specialists highlighted that they were trained many times on different topics such as TB prevention, care, and control; however, they have not been trained again on basic DOTS since 2004. According to their reports, many of the four TBCP regions' staff have been trained many times on various aspects of TB prevention, care, and control.

There is a commitment from stakeholders involved in TB activities in Uzbekistan, especially WHO and PH, to explore the possibilities of including the NTP guidelines in the curricula of medical nursing schools with the help of the National Medical Academy of Tashkent. In addition, TBCP is planning to ensure long-distance training activities that will take place in the coming years. Long-distance training is intended to reduce the cost of required continuing education programs, and facilitate timely knowledge transfer for new staff. TBCP is collaborating with the NTP and WHO to establish a national center of excellence for TB prevention, care and control. This center is likely to play a key role in this long-distance training process; however, an investment in the implementation of information technology, especially computers in the national center for excellence, is highly needed to make the training process fully operational.

TBCP and NTP carry out joint supervision visits in the health facilities of the four regions covered by TBCP. These supervision visits are undertaken from the central level, as well as from the regional level. The NTP regional staff are usually involved in the supervision activities carried out from the regional level. TBCP, along with GF, financially support the supervision activities undertaken in the regions. Though the NTP guidelines call for timely supervision visits, it is not clear how well these guidelines would be followed without the support of external funding.

MONITORING AND DOCUMENTING

TBCP supported the rollout of a laboratory quality management system (QMS) to promote quality-assured microscopy, culture, and DST. The steering committees mentioned above evaluate treatment results of TB and MDR-TB case management on a quarterly basis. Based on the monitoring of indicators related to the identification and management of patients with presumed TB, it is not apparent that the process of case detection is routinely assessed by NTP and partners, including TBCP. Thus, the ET did not have access to monitoring data regarding: 1) the number of presumed TB patients who were identified in PHC settings, 2) the number of identified presumed TB patients who were assessed for TB, and 3) the proportion of assessed presumed TB cases who were bacteriologically positive.

[12] QuanTB is an electronic forecasting tool and early warning system that displays key quantification and planning information and alerts on risks of stock-outs or expiries.

UZBEKISTAN EQ 3: TO WHAT EXTENT IS THE PROJECT SUPPORTING THE DEVELOPMENT AND IMPLEMENTATION OF EVIDENCE-BASED LAWS, POLICIES, STRATEGIES, ETC. BASED ON IMPROVED DATA SYSTEMS AND QUALITY DATA?

FINDINGS RELATED TO POLICY, GUIDELINES, AND STANDARDS

When discussed, all stakeholders that met with the ET stated that TBCP has been collaborating with the NTP and other partners in the development of national guidelines and SOPs covering various areas of TB prevention, care, and control. Some of the guidelines developed by TBCP, such as those on the quality management system for TB laboratory activities (including microscopy external quality control), were adopted in 2016 by the Ministry of Health as a component of the NTP policy.

TBCP is also contributing to the development of strategy frameworks; for instance, at the time of fieldwork, TBCP was in the process of finalizing a framework document on advocacy and communication regarding TB control. This document is intended to improve regional and national opinion leaders' knowledge of TB and its economic importance to families and communities. It also aims to establish a funding commitment to influence national decision makers to prioritize TB.

The QuanTB rollout is intended to aid in data analysis that better equip TB managers to make decisions related to drug management. TBCP contributed to the development of QuanTB system to improve TB drug management; this system has been implemented in 53 health facilities in the four TBCP regions.[5] The four dispensary chiefs interviewed highlighted that very few TB drug stock-outs occurred within the last two years, and that no shortages in laboratory consumables have been reported in the TB laboratories of the four TBCP regions. The low number of drug stock-outs may also be due to monitoring visits to TB facilities in program sites conducted by TBCP, which focused, in part, on properly calculating drug needs.

FINDINGS RELATED TO PROGRAM MANAGEMENT

Besides its involvement in the development of TB prevention, care, and control policy in Uzbekistan, TBCP was also a key partner for the NTP in the development and revision of its national strategic plan, as well as in the development of its national plan on PMDT (previously DOTS-Plus). The heads of the Program Management Unit for TB Global Fund Grants in Uzbekistan and the Republican DOTS Center, the principal recipient of the ongoing GF grant, expressed appreciation for the collaboration with TBCP.

Monthly meetings are organized in each TBCP region to discuss progress and problems with TB activities. Despite the organization of these in Uzbekistan, there is no functional coordination mechanism that supplies stakeholders with a chairperson, a secretariat, and a clear mission and agenda. The NTP has established a collaboration channel with every stakeholder, but there was no evidence of a centralized coordination mechanism simultaneously operating among all partners. As a confounding factor, WHO and NTP reported that numerous changes have occurred in TBCP leadership in Uzbekistan, which have affected the mechanisms of collaboration and coordination already established between TBCP and its partners.

FINDINGS RELATED TO RECORDING AND REPORTING SYSTEM AND USE

The NTP Central Unit could not provide data on the extent of TB control in Uzbekistan, nor could it provide a simple description of TB epidemiology. The ET was also not provided access to data on the TB status of the four regions covered by TBCP.

Although WHO has conducted some training, key informants at the NTP report that they have limited capacity to undertake in-depth data analysis. This corroborates the team's observations that there is little analysis done of the data in the NTP information system.

UZBEKISTAN EQ 4: TO WHAT EXTENT WERE THE CLIENT NEEDS MET OR NOT MET, AND WHY?

To better assess the extent to which clients' needs have been met by TBCP, it was important to first define what constitutes a client. The ET determined that clients served fall into two broad categories: (1) PH's partners in the prevention of TB care and control; and (2) health facilities that serve patients receiving TB care and control services, as well as health practitioners and managers working in TB clinics. Neither at the outset of the project nor during project design did TBCP conduct a systematic needs assessment. To establish client needs, the ET reviewed the Mission Regional Development Cooperation Strategy (RDCS) and inquired about existing needs, TBCP contribution, and satisfaction with the project during meetings with key informants.

FINDINGS RELATED TO PARTNERS

The contribution of TBCP is widely considered by the NTP and regional partners as paramount in the improvement of TB access and services in Uzbekistan. The major themes discussed during KIIs and GIs with partners were coordination, training, and sustainability. When partners discussed coordination with TBCP, responses were generally positive. The ET found that the NTP must approve PH's monthly workplan, which ensures a high level of information sharing between programs. TBCP participates in quarterly meetings at the WHO, and in other partner meetings as needed. Many respondents discussed the leading role that TBCP has taken in TB control in the country. One respondent said, "PH was the first [organization] to help with TB," and many others acknowledged the value of PH's leading contributions to the NTP.

Respondents did, however, make a few recommendations for improving coordination with TBCP. Respondents from two organizations interviewed stated that while they do meet with TBCP and collaborate on activities, there is no mechanism for coordination between organizations. One respondent suggested that TBCP try to involve the private sector to a greater extent, as well as police and military health systems. Finally, respondents from another organization explained that significant turnover among top management at the TBCP office in Uzbekistan creates challenges for strengthening collaboration with TBCP.

Respondents often cited PH's trainings as highly valuable parts of the activity. One respondent specifically said, "We like PH's activities and they should continue their training." Another said, "PH is very effective at psycho-social support, advocacy, and training." Others expressed interest in expanding the reach and subject matter of available trainings. One respondent mentioned the low proportion of nurses trained by TBCP, and recommended that TBCP train more nurses to counteract the high turnover rate. Another respondent suggested TBCP broaden the training material to include methods for TB stigma reduction, contact investigation, and the new short course for MDR-TB.[13]

Respondents stressed the importance of strong partnerships and coordination regarding sustainability. Some specifically mentioned the CCM meetings as an important means of sustainability, and others commended the strong collaboration between TBCP and NTP. However, different funding mechanisms, different indicators, and lack of consistent access to national data were cited as challenges to coordination between partners. Additionally, partners mentioned that the GoU collaborates independently with TB partners, with no mechanism in place for joint planning. Finally, one respondent suggested increased coordination with the private sector as a means of increasing sustainability.

[13] This is being covered through a different USAID activity

FINDINGS RELATED TO FACILITIES

The main themes discussed among partners in relation to health facilities were training, access to quality data, and availability of laboratory equipment.

Regarding training, participants presented mixed views. One respondent said that PH-supported guidelines and training modules are endorsed by the GoU and used by TB health workers. While many others were highly appreciative of PH's trainings, some also explained that information from the trainings is not consistently used in practice. One participant said that a significant number of health workers have been trained by TBCP, but the basic DOTS definitions are not well used. Two more respondents said that doctors do not follow TB algorithms despite ample training.

Partners acknowledged that TBCP has been supporting quarterly monitoring visits to PHC and TB clinics, and visiting a different district in each oblast every quarter as planned. However, one respondent stated that though TBCP is trying to support a centralized database, it is "not so successful with E-TB Manager," and Epi Info 6 is used by some. One respondent also mentioned a lack of capacity to undertake in-depth analysis of TB data at the regional and national levels as another barrier to effective data use.

Though TBCP has played a large part in supporting the MOH with the rollout of GeneXpert systems, partners identified that some areas have an urgent need for Xpert machines. It is not clear, however, whether this respondent was referring to TBCP regions, or other regions supported solely by the MOH. Another respondent raised the point that TBCP was unable to contribute to equipment procurement in some cases due to limits established in the contract with USAID.

CONCLUSIONS - UZBEKISTAN

The conclusions for the four evaluation questions are discussed below per broadly identified sub-themes emerging from findings: vulnerable populations, patient support, health facility report, collaboration with government and donors, guidelines and application of guidelines, monitoring and reporting, and sustainability.

VULNERABLE POPULATIONS

TBCP has developed a strong model for promoting access to TB services for identified vulnerable populations, including women, migrants, and PLHIV, by reaching out through community organizations such as *makhallas*. As documented in TBCP 's monitoring data, TBCP has continued to achieve success in reaching vulnerable populations with IEC. However, this has not yet translated into noticeable changes in TB detection and cure rates.

Trainings for service providers represent a valuable opportunity for TBCP to address multiple critical issues identified by the RDCS, not only in the basic need for ToTs for the public sector and CSOs, but also for increased rates of MDR-TB and in addressing the needs of vulnerable populations. Respondents specifically requested trainings on the new short course for MDR-TB. Some also suggested the trainings include contact investigation and methods for stigma reduction.

PATIENT SUPPORT

Though the TB laboratory network is suitably developed to cover the national territory, the number of Xpert machines is insufficient to equitably cover the needs of the four TBCP regions. This diagnostic capacity gap contributes to the low diagnosis and treatment rate for MDR-TB cases. KII responses raise the suspicion that WHO recommendations on the utilization of Xpert testing are not fully implemented by medical officers. The diagnosis to referral ratio (0.8 percent) is also low, and suggests that the criteria to identify presumed TB cases are inadequate, resulting in over-testing and inefficient use of resources. There is a standardized treatment regimen, however, and it is well understood by TB dispensary chiefs.

HEALTH FACILITIES

Significant progress has been made in the outpatient management of TB cases, but it appears that key definitions are not used in a standardized manner by the relevant stakeholders involved in the provision of TB care and control services.

Though the GoU has standardized some elements of TB control and treatment, some gaps remain in policies, and there is inconsistent application of definitions and guidelines by health workers across the country, and particularly across the four target regions. These differing approaches signal ineffective supervision and coordination among health implementers in Uzbekistan. Inconsistent TB control practice may also indicate the need for improved training, such as in the use of the national algorithm for TB-related decision-making among health providers.

GUIDELINES AND APPLICATION OF GUIDELINES

TBCP has played a key role in the development of NTP policies, strategies, and guidelines in Uzbekistan. It has significantly contributed to the integration of TB services within the PHC network through its training programs, which have targeted family doctors.

In the absence of fully implemented national guidelines and clear algorithms, though, continued inconsistent reporting and patient management is expected. These inconsistencies call into question the sustainability of project activities and achievements. Changes in regional implementer support must now be accompanied by a review of guideline adherence and algorithm interpretation, and with appropriate re-training to standardize approaches according to NTP guidelines.

MONITORING AND REPORTING

The monitoring of the process of identification and management of presumed TB cases is not fully integrated in the existing NTP information system. This calls the reliability of the data collected and recorded into question. The issue of standardization (or lack thereof) carries over into the electronic registry system. This system is not fully used within the NTP network, as its implementation appears cumbersome and inefficient to users.

Some partners may use their own case-based information system. This lack of standardization is likely to create confusion in the process of data collection and compilation. Furthermore, the self-recognized analytical capacity within the NTP is insufficient for making effective use of the data. Lack of capacity for data analysis may also prevent data-driven decision making at the regional and national levels, as well as the absence of an open data policy. TBCP is making efforts to supplement the data available to partners and health facilities, but consistent uptake of systems presents a barrier to effective data use.

COLLABORATION WITH GOVERNMENT AND DONORS

TBCP has high visibility among partners in Uzbekistan, and has established satisfactory collaboration mechanisms. However, collaboration tends to happen on a one-to-one basis, as there is no national effort to coordinate across all partners. This may be contributing to the inconsistent application of guidelines across the regions. Collaboration has not been established between TBCP and Nanouz despite Nanouz being a major umbrella NGO covering all of Uzbekistan with 169 affiliated local NGOs.

SUSTAINABILITY

Many of the initiatives currently addressed through project activities (e.g. training, supervision visits) do not appear to be sustainable, given their heavy reliance on external funding and IP support. TBCP has taken some steps to improve sustainability of the activities, notably the effort to integrate training into health education curricula and make it available for distance learning. It is not clear, though, the extent to which the NTP would be able to continue some activities, or execute them in line with guidelines and standards, without external support.

TBCP has played a crucial role in the development and expansion of training activities. However, among all the health staff trained by TBCP, the proportion of nurses is low (17 percent in the four TBCP regions). Additionally, the retraining of health workers on basic DOTS appears as a clearly unmet need.

RECOMMENDATIONS – UZBEKISTAN

SHORT TERM

1. TBCP, in coordination with the NTP, should conduct an assessment on the use of standard processes and operating procedures to identify gaps in implementation, understanding, and use.
2. TBCP should provide technical assistance in standardizing processes and operating procedures throughout the TB identification and treatment lifecycle. This should include:
    a. Development of a clear national algorithm for the identification and management of patients with presumed TB.
    b. Standardization of definitions (including "presumed TB case", and "outpatient management")
    c. Utilization of Xpert testing in management of patients with presumed TB and in the monitoring process for TB treatment administration
    d. Continued support for the Centers of Excellence to make them fully operational as a national training resource to promote the use of standardized processes and operating procedures for TB detection and management.
3. TBCP should provide feedback and track supervision checklists to monitor the application of key definitions by health staff and assess the process of management of TB patients who are under treatment
4. TBCP and WHO should work together with NTP to improve basic TB training, to include:
    a. Curriculum for a patient-centered approach to TB care in the existing nursing and medical schools
    b. Reinforce the implementation and application of national guidelines and policies
    c. Strengthened integration of TB prevention, care, treatment, drug management, and control activities among family doctors and nurses
5. TBCP should participate in information and experience sharing, and possibly co-implementation, with other partners in Uzbekistan. Specifically, the ET recommends further exploring collaboration with Nanouz and the Rehabilitation Center for Migrants to take advantage of their respective links to vulnerable populations.
6. In collaboration with the Challenge TB Program and the NTP, TBCP should contribute to development of a strategic plan for TB laboratory activities to prioritize implementation and recommended use of Xpert testing across the regions.

LONG TERM

1. After alignment of the strategic plan with WHO requirements, TBCP should work with NTP to define appropriate indicators to monitor the process of identification and management, such as: 1) the number of presumed TB patients who are identified; 2) the number of presumed TB patients who are assessed for TB; and 3) the percentage of patients seen identified as a presumed TB case. This will both help assess the effect of TBCP activities on the improvement of TB detection and help to identify locations with possible performance issues.
2. TBCP should comparatively and continually monitor the trends of TB notification in the 4 regions covered by TBCP activities. This will help assess the comparative effectiveness of TBCP activities in intervention areas on the improvement of TB detection and treatment outcomes.
3. TBCP should collaborate with Challenge TB to implement the short course treatment regimen for MDR-TB cases in the 4 TBCP regions through, for example, the inclusion of this regimen in its training program.
4. The organization of training undertaken by TBCP should be evaluated and revised to improve and strengthen the implementation of national guidelines and their application by health workers involved in TB prevention, care and control. TBCP should fully involve the NTP in the training process, particularly the NTP staff operating at regional level who are trained to be trainers.

FINDINGS – TAJIKISTAN

TAJIKISTAN EQ 1: TO WHAT EXTENT IS THE PROGRAM INCREASING ACCESS TO TB SERVICES, ESPECIALLY FOR VULNERABLE POPULATIONS?

TBCP implemented a wide variety of activities in Tajikistan to increase access to TB services among vulnerable populations. As in Uzbekistan, the broad approach for reaching these populations was often a ToT model; TBCP engaged local organizations to train their members on essential TB knowledge. These trainers would then transfer the knowledge to communities through formal or informal events. Figure 8 shows the number of people in vulnerable populations reached by all types of project activities from baseline through Year 2. Though performance on this indicator increased dramatically from Year 1 (3,883) to Year 2 (35,403), actuals for Year 2 were 24 percent below target. TBCP attributes this underperformance to the inability to sub-contract (per PH's contract with USAID), which precluded TBCP from providing small grants to CSOs to provide outreach to vulnerable populations, including PWID and PLHIV. The difference between the target and actual for this indicator is attributed largely to the fact that TBCP had included these groups in estimates when the target was first established.

Figure 8. PITT indicator 1.7, Tajikistan

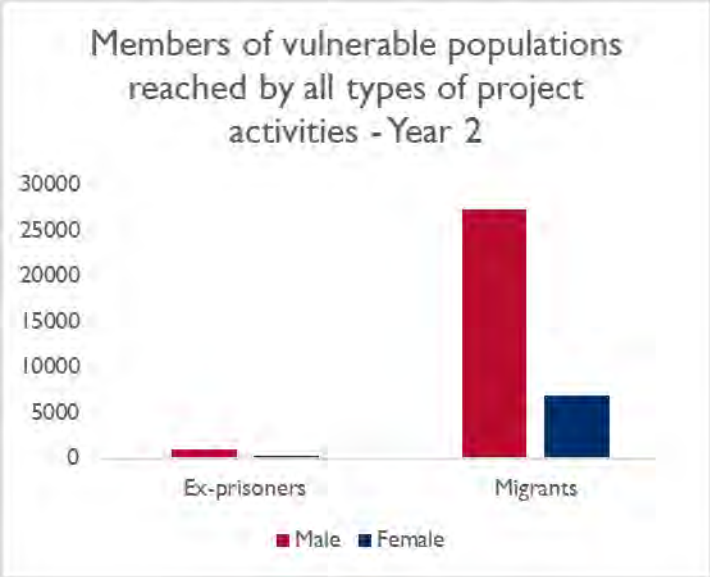
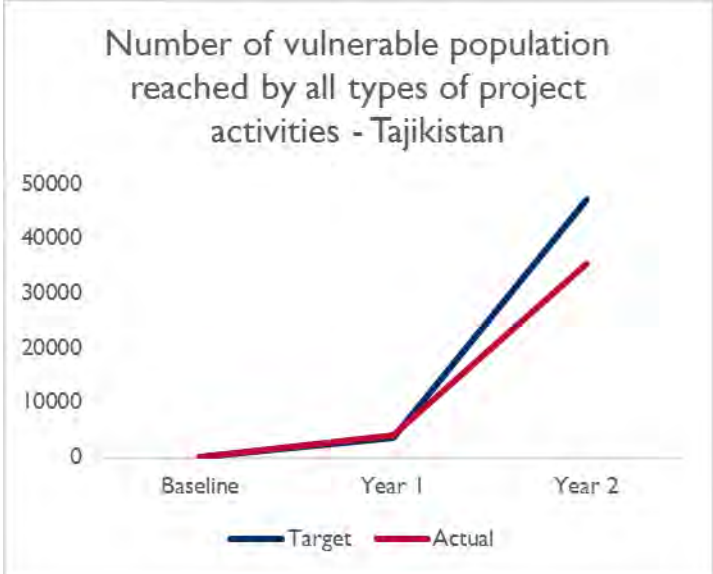


Figure 9. PITT indicator 1.7, Tajikistan



ACCESS AMONG PLHIV

TBCP included activities to strengthen the integration of HIV and TB services in Years 1–3. In Year 1, TBCP supported NTP efforts to track the quality of testing TB patients for HIV, developed materials for counseling on HIV/TB co-infection, conducted trainings with PHCs, and provided information sessions on TB and safety at the workplace for non-medical staff in prisons. In Year 2, TBCP collaborated with CHCs, Women's Committees, religious leaders, elders, community leaders, and other groups to strengthen the integration of PHC, MCH, HIV, and TB services for PLHIV. The activity worked with social workers to specifically target ex-prisoners; all ex-prison TB patients were provided with "social kits" and supervised by social workers to continue TB treatment and receive HIV testing and counseling. To further enhance integration of services, TBCP held meetings with high-level officials

and representatives of *hukumats* to advocate for patient-centered services and collaboration with social support services and the private sector. In Year 3, TBCP planned to collaborate with the USAID Flagship HIV Project to improve TB testing for PLHIV and PWID, as well as continue with its efforts to develop educational materials and provide trainings to medical and non-medical workers. TBCP also planned to work within the START Plus Program framework and involve local CSOs to reach TB patients recently released from prisons with TB and HIV support.

While the percentage of TB patients who had an HIV test result recorded in the TB register remained at a constant high from baseline to Year 2, TBCP PITT data show a major improvement in HIV-positive patients screened for TB in HIV care or treatment settings. As shown in Figure 10, performance on this indicator increased from 71 percent at baseline to 95 percent at the end of Year 2 (there were no data available for Year 1). Though all activity regions demonstrated good performance for TB patients with an HIV test result in the TB register, there was variation between regions in HIV-positive patients screened for TB; Sughd reported 96 percent, Khatlon reported 92 percent, and Rasht reported 86 percent.

Figure 10. PITT indicators 6.1 and 6.2, Tajikistan

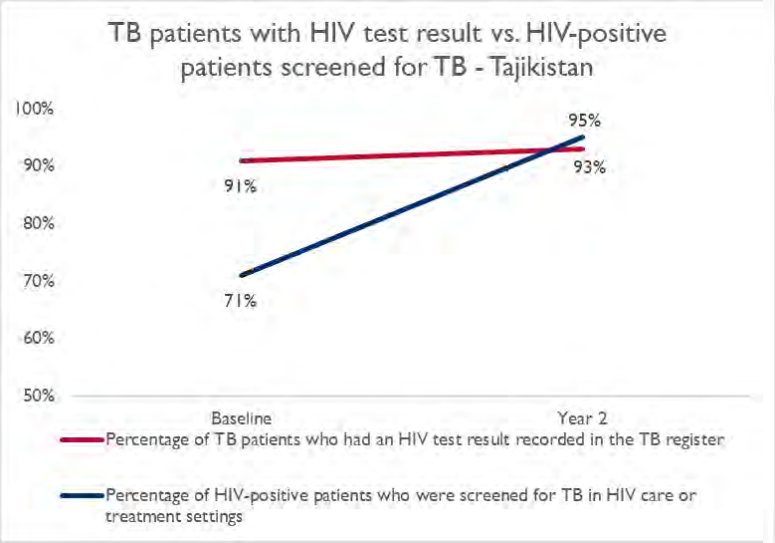
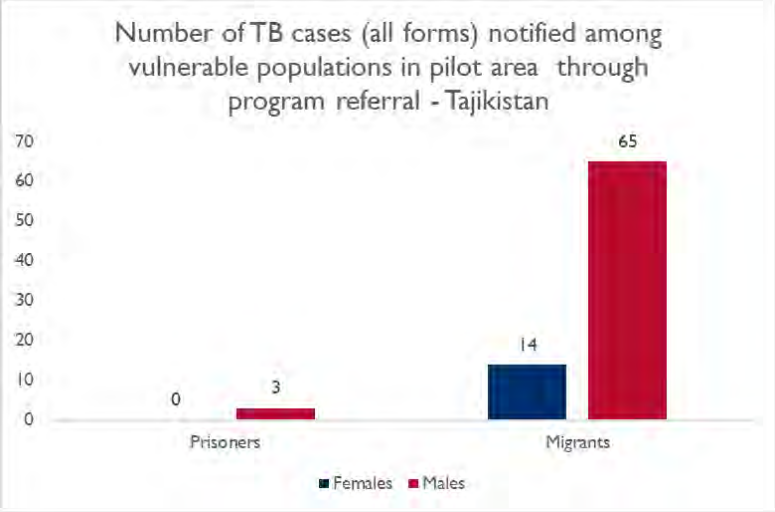


Figure 11. PITT indicator 1.1, Tajikistan



At the operational level, there are functioning mechanisms for coordination between TB and HIV programs. These mechanisms coordinate reciprocal testing, required care services (systematic TB screening, IPT in PLHIV, and antiretrovirals (ARVs) in TB patients), and social services. TBCP is performing well on indicators associated with the integration of TB and HIV services. For example, TBCP has provided technical assistance to NTP in developing the guideline on TB/HIV case management, which is currently undergoing approval at the MoHSP level. The team found that five HIV/AIDS sites have an Xpert machine used only for assessing viral load, and these machines are not used to establish TB diagnosis in PLHIV. Rather, the USAID Flagship Activity conducts verbal screening of PLHIV and refers to TBCP as needed. That said, according to one partner, there is no collaboration between the NGOs promoting HIV services and those promoting TB services at the community level in Sughd province.

ACCESS AMONG PRISONERS

In 2016 100 prisoners were released through an amnesty program and received social welfare to facilitate their integration in communities; of them, 10 to 15 were TB patients. TB prevention care and control in the penitentiary system is included in the national strategy of NTP, and clearly highlighted in the national

strategic plan (2015–2020). TBCP and its partners (Caritas Luxembourg, AFEW, and KNCV) are involved in ensuring TB activities extend to the penitentiary system. PH's key role in training penitentiary system health staff and in providing technical assistance (TA) is well recognized by all partners and the Ministry of Justice (MOJ). As noted by one partner, "I like our collaboration with PH: they are always open for dialogue." Additionally, the medical department of the national penitentiary system volunteered that "it is highly satisfied with the interventions undertaken by TBCP to improve TB prevention care and control […]." Caritas has special approval to support healthcare, including TB services, in all penitentiary system facilities.

In addition, TBCP is closely supporting the continued management of prisoners released while they are still under TB treatment through their partnering NGOs. TBCP is reported to also support partners in the identification and treatment of TB patients in the penitentiary system through its active participation in the thematic working group. Via AFEW, TBCP also employs the START Plus Program framework for prisoners and released inmates.

ACCESS AMONG MIGRANTS

In Year 2, the total number of migrants in project areas identified who started TB treatment was 79 out of 11,961 migrants reached by project activities, or about 6.6/1,000.[14,15] Targeted case-finding among PLHIV and PWID has however not started due to the sub-contracting limitations of the contract.

The promotion of TB care services for migrants is part of the national strategy to control TB, and is included in the national strategic plan. The identification of TB among migrants is a key component of activities that CHCs carry out in communities. TBCP is supporting this intervention through partner NGOs. However, many Tajik migrants (the majority of whom are male) do not undergo government-supported migrant TB screening due to the cost, as well as because the Tajikistan pre-departure screening certificate is not accepted in the Russian Federation. Nonetheless, there are regional coordination efforts for cross-border collaboration through a Global Fund grant managed by PH in Kazakhstan, where although TBCP does not lead this process, they are engaged in it.

In addition to institutional barriers, gender differences also contribute to the health-seeking behavior of migrant workers. Male returning laborers are less likely to contact doctors; men tend to approach doctors only in life-threatening situations at end stages of disease progression. Thus, the fact that 91.1 percent of Tajikistan's itinerant and seasonal cross-border workers are male has significant implications for the types and availability of services available to migrant populations. Due to their roving lifestyle, migrant TB patients are more vulnerable to MDR-TB than the non-migrant population, and do not receive benefits in their country of origin due to their employment status.

ACCESS AMONG WOMEN

To target women, TBCP linked with the community to implement a number of education activities surrounding stigma and TB transmission. In Year 1, TBCP established CHCs at the *jamoat* level. Each CHC included the village head, a religious leader, nurses, Women's Committee members, and CSO members. These CHCs collaborated with TBCP to roll out outreach activities among their communities. Women's Days (Open-Door Days) in clinics were also established as a means of encouraging learning and use of available services. In Year 2, TBCP intensified these efforts, and the CHCs reached 143,633 people with information counseling and campaigns. TBCP referred 1,230 women with presumptive TB symptoms to TB testing on Open-Door Day. Of the 1,188 referred women who were tested, TBCP detected 26 new TB cases. In Year 3, TBCP planned to continue its work with CHCs and maximize outreach work by strengthening the capacity of national stakeholders to implement outreach activities. TBCP plans to

[14] USAID TB Control Program Year 2 Annual Report , Indicator 1.3.5
[15] USAID TB Control Program Year 2 Annual Report , Indicator 1.7.5

gradually hand over coordination of the CHCs to the Centre of Healthy Lifestyles and PHCs to ensure sustainability.

Figure 12. PITT indicators 1.2 and 1.4, Tajikistan

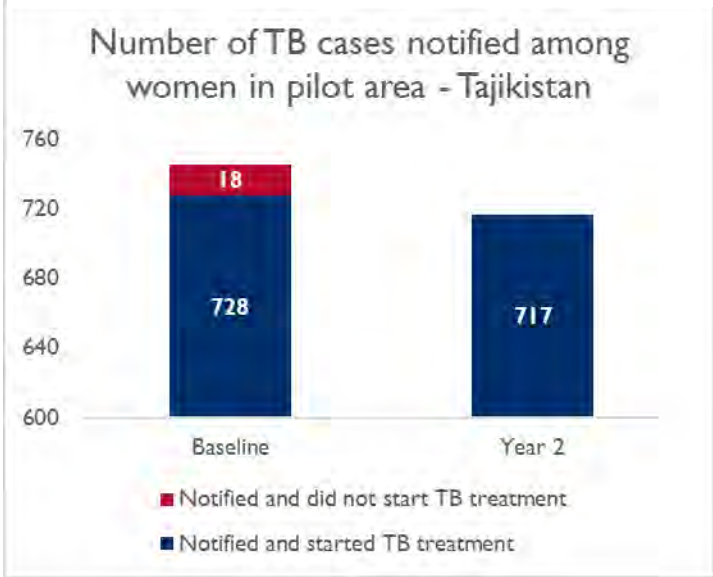
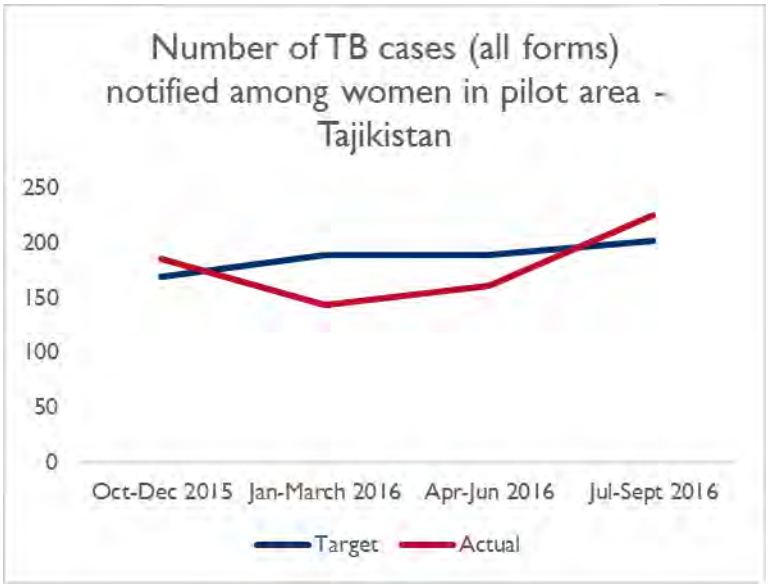


Figure 12 shows the proportion of TB cases notified among women to those who were notified and also started treatment at baseline and Year 2. Though TBCP fell slightly (4 percent) below its target for Year 2, the percentage of those notified who started treatment increased from 98 percent at baseline to 100 percent by the end of Year 2. As shown in Figure 13, achievement varied somewhat across quarters; the activity ended Quarter 1 above target, fell below target in Quarters 2 and 3, then finished above target again in Quarter 4. Analysis from TBCP attributes the slight underachievement in this indicator to challenges experienced in Tajikistan with sputum transportation, as well as stigma and cultural issues acting as barriers for women to accessing services. It should also be noted that TBCP Quarter 2 (January–March) includes the winter months, ending March 30. Although available data for other groups does not support this hypothesis, there may be a winter-related decrease in women's access to TB services, making this data unsuitable for an assessment of linear trends. However, it is not clear how many women were reached by project activities, and whether these women would have independently attended a clinic for presumed TB diagnosis.

Figure 13. PITT indicator 1.2, Tajikistan



STIGMA AMONG VULNERABLE POPULATIONS

CHCs and TBCP-initiated patient schools are making working effectively to fight stigma associated with TB. These groups meet monthly to offer social support, arrange transportation to clinics, encourage treatment adherence, and monitor for treatment side effects. As a confirmation of the effectiveness of patient schools, the ET's interviews with patients found them aware of issues related to stigma, and knowledgeable of how to address personal issues related to stigma. In addition, CHCs convey messages and information within communities on the stigma associated with TB. Further examples of CHC's stigma-reduction work and awareness raising include financial support and leadership in local events related to World TB Day and International Women's Day.

The ET team notes that TB centers are often located in remote locations (1-5 km from other health facilities). Several TB centers were built under an older separation model, which separates TB and HIV treatment centers from other health-related services.

During interviews and group discussions, the ET found that fear of TB stigma (90 percent, or 15 of 17) and the social and economic impact of stigma affects patients' willingness to seek medical care after the onset of symptoms associated with TB. GIs revealed that 80 percent women felt TB stigma more strongly than 30 percent men and were more likely to access health services. Women primarily face stigma in their communities and public places. A female patient responded that after being forcibly removed by a shop owner while shopping after the start of therapy, she was concerned about being identified as having TB and suffering the consequences of TB stigma and perceived treatment noncompliance. Some women responded that stigma occurs because of community norms about undesirable or disvalued behaviors or characteristics. The structure of a community's beliefs and norms about a disease and the resulting stigma substantially impact health. In rural areas of Tajikistan, women and men are often found conducting activities in groups, such as farming, home chores, washing home items, and herding livestock. Up to 20 percent men interviewed also face some stigma in public transportation and army services. However, they tend not to be as susceptible to long-term stigma, nor do they consider it as disruptive to their daily lives as women do. Interviews also revealed that children face stigma in schools, as some schools organize routine health screening for all classmates of a TB-infected child.

A family doctor confirmed that the socioeconomic consequences of TB stigma differ in men and women. In general, men are more concerned with the impact of TB stigma on their economic prospects, which include job loss and reduced income. While TB stigma also affects their financial status, women tend to be more concerned that TB stigma will adversely impact their marriage prospects, or that their families will ignore them. TB stigma also results in a sense of shame or guilt, leading to self-isolation, as TB patients internalize their community's negative judgments about the disease.

IMPORTANCE OF COMMUNITY NETWORKS

In Tajikistan TBCP has implemented a model that facilitated coordination meetings and trainings (specifically, ToTs) to support the work of Healthy Lifestyle Centers and NGOs. These groups are closely linked to CHCs, which, in turn, are closely linked to their communities. Each CHC includes representatives from the local authorities, opinion leaders, local imams, local health workers, and NGO members. A CHC's role is focused on identification and referral with no TB treatment services provided. CHCs' linkages with their community and local authorities gives them timely information on and access to returning migrants and other vulnerable groups.

The ET visited one or more health centers in each district sampled. Each of these health centers provides support to one or more health houses, which ensure basic health services within their communities, including services for TB patients. The evaluation team found rural health centers and houses were fully involved in the identification and referral of patients with symptoms compatible with TB and in the provision of TB treatment. With one rare exception—a newly employed family nurse—all district-level TB staff, family doctors, and family nurses reported participation in a range of PH-provided TB training. District TB authorities confirmed that this TB training was also provided to the health staff of rural health centers and health houses. Additionally, as reported by the NTP, TBCP was reported to closely collaborate on the development and training for guidelines on basic DOTS for nurses, especially those in rural areas.

TAJIKISTAN EQ 2: TO WHAT EXTENT IS THE PROJECT IMPROVING THE QUALITY OF PATIENT-CENTERED TB SERVICES?

ENABLING PARTNERSHIPS

TBCP has collaborated with its partners, including GF and KfW, to strengthen the laboratory network in Tajikistan, and TBCP has been fully involved in the development and implementation of a quality management system (QMS) of TB laboratories. This QMS has been implemented in 29 laboratories of Khatlon and Rasht provinces; according to the last evaluation, 21 laboratories have a satisfactory score.

RECOGNIZING PATIENT RIGHTS

TBCP in Tajikistan recognizes patient rights through providing TB prevention counseling and social support tailored to vulnerable populations, empowering patients and families to make decisions through the provision of educational materials and outreach work, and information, education, and communication (IEC) campaigns. In Year 2, TBCP developed a brochure and printed 5,000 copies for dissemination in prisons. At the end of Year 2, the brochure was disseminated to all prisoners who participated in TB training in two colonies of the Khatlon province. TBCP planned to distribute copies in Dushanbe and Sughd in Year 3.

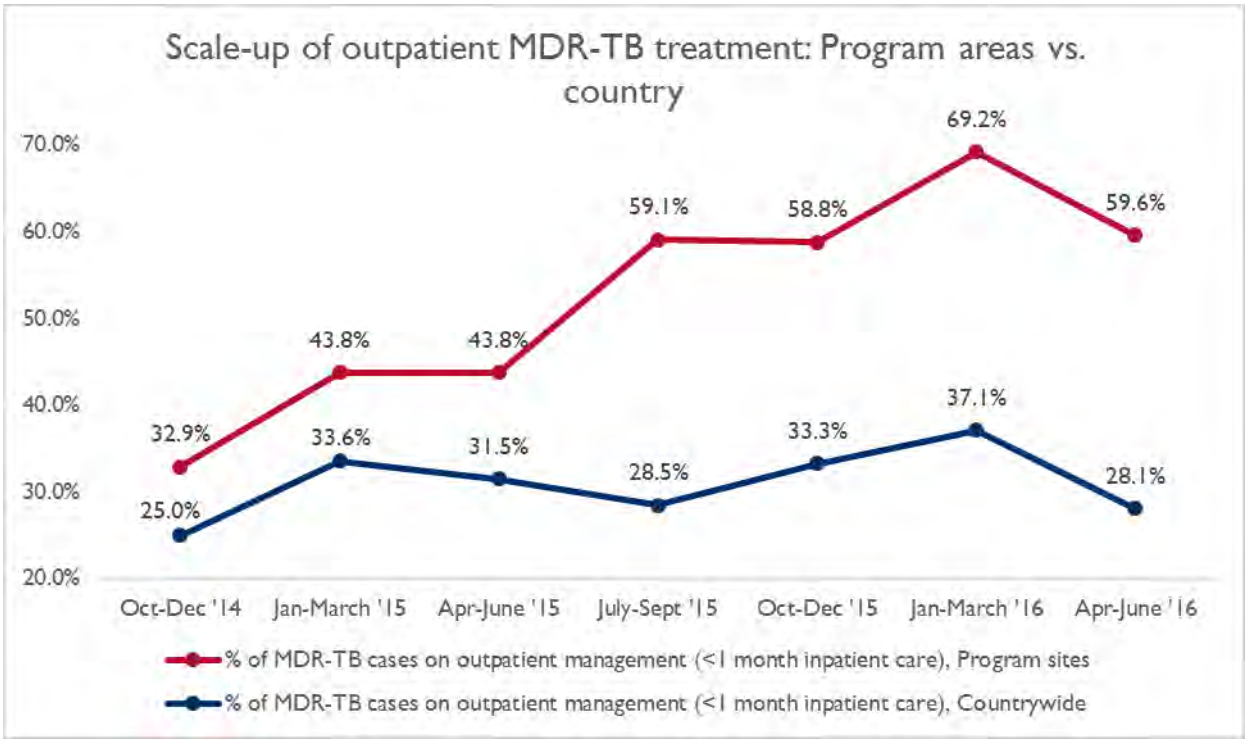
In the areas covered by TBCP, more than 12,500 health education messages on treatment adherence were conveyed to TB patients by the 143 CHCs, 30 PSGs, and 16 PSs in 2015–2016, with an additional 2,700 similar messages conveyed to the family members of patients. In some of the PHC centers visited by the ET, information and education material on TB was available for all patients seeking care for any reason. A video display on TB, provided by TBCP, was utilized in two visited health facilities.

TB patients are knowledgeable about their disease. All those who were interviewed had full knowledge of the duration of their treatment. Interviews with approximately 20 hospitalized TB patients (women and men) in the Regional TB Hospital of Sughd province and the inter-district TB dispensary in Panjakent found that most of them knew: 1) the name of their disease; 2) that their disease is transmissible; 3) the names of the TB drugs they were presently taking; 4) the full duration of their treatment; and 4) that full adherence to treatment is paramount for treatment success.

In addition, as one of the two principal recipients managing the ongoing GF grant, TBCP provides small grants of $24,000 each to NGOs as sub-recipients to strengthen TB treatment adherence, and cash incentives to TB patients, as follows: 236 somonis (roughly $27) per month for each drug-susceptible TB patient, and 441 somonis (roughly $50) per month for each MDR/XDR-TB patient.

Local NGOs and outreach workers have also been working to promote and strengthen ambulatory treatment and treatment adherence of TB patients through the involvement of *hukumats* at the community level. *Hukumats* support TB patients by providing social benefits, allowances, access to farming land, or ensuring the payment of electricity bills. Among the 27 TBCP districts, 25 have *hukumats* involved in the provision of support to TB patients. TBCP addresses outpatient management through their trainings of PHC family doctors, nurses, and health workers. Approximately 40 percent of susceptible TB cases and 50 percent of MDR-TB patients are treated on an outpatient basis. For drug-susceptible TB patients, the outpatient management (<1-month hospitalization) has increased from 36 percent in 2014 (Q4 data) to 47 percent in 2016 in the areas covered by TBCP. For MDR-TB cases, the proportion of patients managed in outpatient settings increased from 32.9 percent in Q4 2014 to 59.6 percent in Q2 2016 in TBCP areas. Conversely, this proportion hardly increased (from 25 percent to 28.1 percent) between these quarters in the areas not covered by TBCP (see Figure 14).

Figure 14. Scale-up of outpatient MDR-TB treatment



The ET observed that the treatment files of patients are correctly completed by the nurses. First and second-line TB drugs were available in pharmacies of the health facilities visited, and the ET observed that first-line TB drugs were available in the required fixed-dose combinations. The ET also observed that second-line TB drugs and TB medicines in pediatric formulation were available. TB drugs were within the expiry date limits, and there were no overstocks. According to the health staff, no shortage of first-line TB drugs has been experienced for at least the last 12 months in the health facilities visited by the ET.

EMPOWERING AND ACTIVATING PATIENTS AND COMMUNITIES

TBCP not only includes communities in outreach, but also in service quality; in Year 2, TBCP facilitated coordination meetings between the local government, PHC, Women's Committees, migration service, NGOs, and CHCs to improve collaboration between TB and PHC services and organize support for sputum transportation. Rasht allocated funds for sputum transportation as a direct result of this meeting.

The definition of "presumed TB case" is standardized, in line with WHO recommendations, and well used by all health workers that the ET met in the 15 health facilities sampled. All the medical officers met (over 25 family doctors, chest specialists, or PHC polyclinic managers) were asked by the ET to specify the definition they use in their daily practice to identify a patient with presumed TB. All provided the same definition, which includes a productive cough for more than two weeks as a key symptom, with or without other symptoms, such as hemoptysis, night sweats, or loss of weight. Only one family doctor specified a one-week duration for the productive cough. At the district level, there are many PHC facilities, and all can refer presumed TB patients to the TB center or dispensary of that district. However, the ET observed evidence that very few PHC patients are referred to the TB center and dispensaries visited (zero to four per day).

In most DOTS corners, TB centers, and dispensaries visited by the ET, there is an algorithm on the management of presumed-then-definite TB patients under treatment. However, the first consecutive steps to undertake the assessment of TB in patients with presumed TB are not well identified. No clear common

protocol was found, observed, or reported for when a smear examination, CXR, or Xpert testing needed to be carried out, and in which order.

Most of the districts visited by the ET do not have an Xpert machine; for example, in Rasht Region, which includes five health districts, there is only one Xpert machine at the regional level. The ET observed that the maintenance of Xpert equipment can be problematic in some areas outside Dushanbe. It is worthwhile to highlight that 5 of the 48 HIV/AIDS centers available in the country have Xpert machines, which are used for assessing viral load in registered PLHIV. Respondents reported that Xpert testing was routinely used to diagnose TB in PLHIV due to the absence of sufficient cartridges for MTB/RIF.

The national protocol for TB treatment is as follows:

- **Category I** treatment regimen: rifampicin+isoniazid+pyrazinamide + ethambutol for 2 months, then rifampicin+isoniazid for 4 months.
- **Category II** treatment regimen is still used for retreatment TB cases in some circumstances (e.g. if there is no drug resistance): streptomycin + rifampicin + isoniazid + pyrazinamide+ ethambutol for 2 months, rifampicin+isoniazid+pyrazinamide+ethambutol for one month, then rifampicin+ isoniazid + ethambutol for 5 months. According to the national policy, all retreatment TB cases must be evaluated for drug resistance using Xpert testing, and whenever needed, a full drug susceptibility testing.

Patients who are diagnosed are prescribed TB treatment by the district TB specialist. All the TB specialists interviewed by the ET prescribe appropriately and in line with the WHO recommendation, with category I treatment regimen for new TB cases (2RHZE/4RH, or rifampicin+isoniazid+pyrazinamide+ethambutol for 2 months, then rifampicin+ isoniazid for 4 months). However, family doctors may not be fully familiar with the prescription of TB treatment for new TB cases. One family doctor proposed to the ET the following prescription: 2SHRZ/5RH (streptomycin+isoniazid+rifampicin+pyrazinamide for 2 months, then rifampicin+ isoniazid for 5 months), which is not exactly aligned with NTP guidelines. Furthermore, the treatment of Extra-Pulmonary TB (EPTB) may be a source of confusion for some TB specialists. For example, one TB specialist interviewed by the ET highlighted that the continuation phase of the treatment of EPTB should be more than four months, but he could not clearly specify the exact duration. For this TB specialist, the whole treatment (intensive and continuation phases) should not exceed eight months, even in children. In short, the ET found some TB management practices did not match the WHO recommendations.[16] [17]

TB treatment management and monitoring vary among TB specialists. Some TB specialists report asking for a culture and not for Xpert testing at the beginning of treatment. All the TB specialists met by the ET extend the intensive phase of TB treatment in new TB cases if the smear examination is positive at the second month of treatment. Only one of the TB specialists interviewed suggested doing Xpert testing. Some of the TB specialists suggested doing a culture, while others proposed adding streptomycin and starting Category II treatment. Few TB specialists proposed carrying out Xpert testing if the patient is smear-positive at the fourth month or at the end of treatment. Some TB specialists suggested submitting the file of the patient to the regional commission or doing a culture and DST and waiting for the results. For a new TB patient who is treated and cured, all the TB specialists interviewed proposed following them after the treatment is over, with some proposing that CXR and sputum smear microscopy should be carried out once every year for three consecutive years, while some proposed every six months for three

[16] World Health Organization. Treatment of tuberculosis guidelines: Fourth edition. 2010.
[17] World Health Organization. Guidance for national tuberculosis programmes on the management of tuberculosis in children. 2014.

consecutive years, and others proposed once a year for five consecutive years. For the TB patients who relapse after cure, all the TB specialists proposed doing Xpert testing and DST, which is in line with WHO recommendations. The TB specialists who were interviewed use a standardized definition for "TB treatment success;" this definition aligned with the WHO recommendation.[18]

ENGAGING ALL STAKEHOLDERS

In many areas visited by the ET, up to 80 percent of health staff (and all but one health worker met by the ET) were trained on various aspects of TB prevention, care, and control through 4-10 training sessions with close involvement of TBCP. According to the deputy health director of Sughd province, in 2015 and 2016, TBCP organized 32 workshops to train 341 family doctors, 337 nurses, 77 TB specialists, and 24 laboratory technicians, totaling more than 500 health workers, among whom 40 were TB specialists. In Khatlon province, the regional health director reported that 100 percent of the medical officers, 90 percent of the nurses, and 100 percent of the TB laboratory staff in the region had been trained by TBCP, KNCV, or USAID. According to the Rasht zone PHC Polyclinic, 75 percent to 80 percent of the health workers in the district had been trained on TB either by TBCP or Aga Khan Foundation. It is not clear the extent to which these trainings covered the same information or focused on different topics.

The training program on TB developed by TBCP was adopted by training institutions for health workers. For instance, this program was included in the six-month course, which is organized by the training center of Panjakent District for family doctors and family nurses in the district. Prior to January 2017, 117 medical officers and 64 nurses had been trained in this training center. Similarly, TB is included in the curriculum of the family doctors' training center of Rasht province. In addition, the training material on collaborative TB/HIV activities developed by TBCP has been adopted and used by the Post Diploma Institute, notably in the advanced course, which is organized for family doctors every five years.

Efforts have been made to establish pools of trainers at the regional level. For instance, two master trainers, trained by TBCP, are delivering the training on TB for district health workers. Yet, some trained master trainers have not been involved in any training. In Khatlon province, ten trained master trainers have not yet been invited to train for any activity.

TBCP has also helped to build the expertise and capacity of Tajikistan's health professionals outside Tajikistan. For example, TBCP financially supported the training of two TB specialists on PMDT in the Russian Federation and the training of two NRL staff at the Supranational Reference Laboratory in Gauting, Germany.

MONITORING AND DOCUMENTING

One of TBCP's objectives is for TB service providers and managers to use electronic TB MIS and quality data for evidence-based decision making at all levels. TBCP reported 19 facilities using electronic MIS systems according to WHO standards in Year 2 (the target was 18). TBCP has also been involved in the development of a QMS for TB laboratories, as discussed in more detail below. Each family doctor has a specific register where s/he can specify by date, name, address, age, and sex of each presumed TB patient she/he identified. The site where and when each presumed TB case is referred can be found in specific columns of the register. A review of these registers found that most of the presumed TB patients are referred to the facility's DOTS corner or to the relevant TB center or TB dispensary, which are usually equipped with a TB laboratory.

In general, these registers were completed by the family doctors and contained all the required information on every presumed TB patient for whom an entry was created. However, the ET observed that not many presumed TB patients were listed in the registers. Observations by the ET found few

[18] World Health Organization. Definitions and reporting framework for tuberculosis – 2013 revision. 2014.

presumed TB patients identified by the family doctors during their daily practice (see Table 3). Most of the family doctors interviewed reported the usual frequency is to identify one presumed TB patient every two or three weeks.

Table 1. Results of the identification of presumed TB cases in Tajikistan

Family Doctor	Period	Total number of care seekers	Number of presumed TB patients identified	Proportion of presumed TB patients identified among care seekers	Average rate: number presumed TB case identified per unit of time
1	Jan. – Dec 2016	1,888	11	0.6%	< 1 / month
2	Jan. – Dec 2016	2,168	6	0.3%	1 / 2 months
3	Jan. – June 2017	500	5	1%	< 1 / month
4	Jan. – June 2017	723	4	0.6%	1 / 1.5 month
5	Jan. – June 2017	1,250	9	0.7%	< 1 / month

The ET could not find a clear common practice for the use of this register to track referred patients in the DOTS corner register of the PHC polyclinic and in the TB laboratory register. The presumed TB patients who are identified by the family doctors are usually referred to the DOTS corner of the PHC polyclinic center for a preliminary assessment. In each visited PHC center and polyclinic center of TBCP regions, a DOTS corner, staffed with one or two health workers (nurse, medical officer, or TB specialist) was observed and reported to have been established with TBCP funding. Sputa (usually three specimens) are collected from patients by the DOTS corner staff and conveyed to the TB microscopy laboratory, which is often located in the TB center or dispensary. CXR can be also requested by the DOTS corner staff. With or without sputa, the presumed TB patient might also be referred directly to the TB center or dispensary.

The field visits and discussions with the health workers found that some practices, such as the monitoring of treatment administration and follow-up of TB patients, were not standardized, nor were they entirely aligned with WHO recommendations. It is not clear why these insufficiencies have not been addressed in the numerous training workshops. The regional health director of Khalton province highlighted that there is no follow-up by the trainers of the health workers who were trained, and suggested that the quality of the training needs to be assessed.

Supervision visits are carried out in the health facilities located in the 27 TBCP districts by key stakeholders (PH, KNCV, NTP, USAID). A checklist is used during the supervision visits, and reports are supposed to be forwarded to health facilities visited and to the relevant NTP entities (region, central unit). However, the ET could not find any written report on the supervision visits made in the health facilities visited during this evaluation.

The ET were routinely advised that the files of all the TB patients who are diagnosed and prescribed TB treatment by the district TB specialist should be submitted to a regional commission of three TB specialists for endorsement and decision-making regarding the appropriate management procedures, even in the absence of drug resistance. In each of the TBCP regions visited by the ET, a regional commission in the TB regional hospital comprised of TB specialists is responsible for assessing the clinical situation of patients with MDR/XDR-TB or unusual forms of TB, and propose relevant procedures to manage the patients. The TB specialists of all the districts of the region have access to their regional commission, most often

through video conference. TBCP provided technical and financial support for the establishment of these regional commission video conferences. This regional commission regularly meets in regional TB hospitals.

TAJIKISTAN EQ 3: TO WHAT EXTENT IS THE PROJECT SUPPORTING THE DEVELOPMENT AND IMPLEMENTATION OF EVIDENCE-BASED LAWS, POLICIES, STRATEGIES, ETC. BASED ON IMPROVED DATA SYSTEMS AND QUALITY DATA?

POLICY, GUIDELINES, AND STANDARDS

TBCP has been fully involved in the national policy to control TB in Tajikistan. TBCP is participating or leading many working groups, committees, and coordination meetings. It has been involved, in close collaboration with NTP and partners, in development of all policies and guidelines regarding TB prevention, care, and control. TBCP fully participated in the development of the National Strategic Plan (NSP) 2015–2020. The NSP is in line with international recommendations from the National Health Strategy of the Republic of Tajikistan 2010–2020, as well as the requirements of WHO.[19] The NSP clearly indicates the strategic orientations for TB interventions and activities for the coming years, while taking into account the gaps and challenges of TB control in the country, especially those associated with PMDT. More recently, TBCP has collaborated with NTP, GF, USAID, and Caritas Luxembourg, in the elaboration of the monitoring and evaluation plan of TB activities in Tajikistan for the NSP 2015–2020.

TBCP has been fully involved in the adaptation, development, and revision of many guidelines covering TB prevention care and control in coordination with NTP. According to the NTP manager, among the 15 guidelines and strategic frameworks on TB, TBCP supported the development of 11 of them in collaboration with NTP, and the remaining four were revised by TBCP.

TBCP has developed or contributed to developing or revising guidelines or framework documents, namely on outpatient treatment of TB, QMS, Xpert testing, collaborative TB/HIV activities, infection control, patient-centered approaches, development of community-based mechanisms (PSs, PSGs, MDTs), human resources development, and social support for TB patients.[20] Some of these documents have been endorsed by the Ministry of Health; the others, such as those on ambulatory care, human resources development or collaborative TB/HIV activities, were in the process of endorsement at the time of the evaluation.

The ET found copies of some of these guidelines in most of the health facilities visited. The key NTP guideline document on TB treatment (basic DOTS), however, was not widely available in PHC facilities or in TB centers and TB dispensaries. The basic DOTS TB treatment guideline was found only in two health facilities out of the fifteen visited. According to the manager of a district PHC polyclinic, only one copy of these NTP guidelines was provided to the health facility where 25 family doctors are practicing.

PROGRAMMATIC MANAGEMENT

The NTP of Tajikistan has the structure needed for programmatic management of a TB program. It has a central unit at the national level, regional units, and district units. However, the regional and district units' staff are more oriented to clinical rather than managerial work, and were not found to routinely address managerial aspects of work.

TBCP closely collaborates with USAID in the Development Coordination Committee (DCC), which includes other donors operating in Tajikistan to increase bilateral and multilateral support for TB funding. The NTP has established a wide and successful network of international funding, technical and implementing partners, such as GF, WHO, FIND, USAID, PH, MSF, and others, which provide significant

[19] World Health Organization. Toolkit to develop a national strategic plan for TB prevention, care and control. 2015.
[20] Key informants mentioned 11 guidelines that had PH support, but the team was given only 8 titles of guidelines during fieldwork.

support for TB prevention, care, and control in Tajikistan. The funding of NTP activities still depends on external support, and the NTP does not have a clear strategy for mobilizing financial resources at the national and international levels.

RECORDING AND REPORTING SYSTEM AND USE

Most TB registrations do not allow for sex disaggregation of the data, so it is not possible to determine exact proportions of male and female patients at health centers. Healthcare workers estimate, however, that approximately 30 percent of hospitalized patients were women.

In most of the TB centers or dispensaries visited, the NTP information collection uses paper-based procedures. A TB case-based recording system called OpenMRS has been developed and tested in pilot sites in Dushanbe with the funding support of USAID. Its implementation and expansion were approved by the Ministry of Health and Social Protection. OpenMRS is presently implemented in 28 sites. TBCP collaborated with the NTP to ensure successful implementation by providing computers and other IT equipment. This new recording system is presently available in 20 of the 27 districts covered by TBCP. The NTP is planning to expand the OpenMRS implementation to the 66 districts of Tajikistan. The OpenMRS system reproduces on an individual basis the standardized NTP recording and treatment register used in all the districts of Tajikistan. It does not allow for convenient inclusion of additional information on registered TB cases. In addition, it does not include data fields for TB laboratory examination and results or fields to record possible adverse effects of TB medicines taken by the patients.

Data collected through OpenMRS and the paper-based information system are used to produce quarterly reports for the NTP Central Unit. However, the ET found no evidence that they are fully analyzed to improve management of the NTP even at the central level. The case-based recording system is presently used to produce the quarterly reports, which was previously generated with the paper-based system.

The capacity to undertake in-depth data analysis are limited within the NTP network, even at the Central Unit level. The ET was provided only with raw data at all the levels of the NTP. All the interviewed NTP staff interviewed are aware of their limitations performing adequate analysis of the data they routinely collect, and have asked for appropriate training.

TAJIKISTAN EQ 4: TO WHAT EXTENT WERE THE CLIENT NEEDS MET OR NOT MET, AND WHY?

FINDINGS RELATED TO PARTNERS

Partners reported positive findings on collaboration and coordination with PH's implementation.[21] For instance, one national partner used language such as "we are happy and the government is happy…. It makes us feels like we are a part of PH." Another international partner shared "we have excellent collaboration with PH," and applauded PH's model for supporting strong linkages between communities and vulnerable populations for TB case identification. PH's focus on migrants as a vulnerable population group is aligned with the RDCS that promotes testing, care and treatment of TB in key populations such as migrants.[22] A respondent at the regional level commented on PH's success in reaching vulnerable populations: "PH helped develop protocols for HIV/AIDS patients… and we have high (level) of collaboration with PH." In addition, partners discussed PH's collaboration and coordination at meetings and among technical working groups. An international

> *"[We have] excellent collaboration with PH and PH is always available for discussions and collaboration" – KII respondent*

[21] In multiple cases USAID and PH were discussed interchangebaly among partners and among health facility providers and patients.

[22] USAID Central Asia. Regional development cooperation strategy: 2015-2019. 2014.

organization reported that "PH participated in various working groups and that coordination for TB is very active with PH." Through discussions with organizations at the national level, it is evident that the activities developed by TBCP are closely coordinated to ensure cross linkages for planning and program management.

Another common theme discussed with partners was TBCP's support for the supervision of health facilities, including monitoring and evaluation of facilities, and its training and capacity building programs. Generally, partners spoke positively on PH's supervision and training. A respondent at the national level explained "we have joint training and joint monitoring visits." Through site visits, the ET also noted the effectiveness of training programs provided by TBCP, and how it contributes to ensuring that program knowledge and skills needed to implement NTP programs, are reaching and satisfying project beneficiaries/clients. Despite existing efforts on training, a respondent at the national level requested support for capacity building in data analysis, expressing that there is "low quality of data and data analytics capacity." The need for more support in data analytics came up several times in interviews with partners. In addition to more training on data analytics, partners also expressed a need for more training in ongoing research.

Regarding sustainability, it was noted through discussions with partners that TBCP participates in CCM meetings, has been actively involved in the development of the new concept note for future funding, and supported the development of the National Strategies Plan (2015-2020). Based upon reports from the NTP and Regional TB managers, Tajikistan is making a concerted effort to reduce the number of TB beds and shift resources to a lower-cost PHC-based ambulatory care approach (an international partner reported that each bed costs approximately $1,000 per year.) Given the high number of remaining TB hospital beds, Tajikistan can continue to lower the cost of its TB care and control programs.

Despite current efforts to improve sustainability, national and international partners are concerned with the sustainability of its TB programs, particularly with the anticipated reduction of GF funding from 2019 onwards.

FINDINGS RELATED TO HEALTH FACILITIES

The ET interviewed TB health care practitioners, managers, and patients during site visits to the TB Clinics to assess their satisfaction with the services provided by TBCP and whether their needs were met. The major themes raised by these groups were sputum transportation problems, equipment and guidelines, cost of TB services, and sustainability.

The ET carefully observed guidelines, protocols and reports that were made available at the TB Clinics, and found that all but one of PH-supported guidelines were commonly found at TB hospitals, clinics and PHC centers. However, and importantly, the basic DOTS guidelines were a rare find. The ET was not able to assess the usefulness of all guidelines reviewed, but did note that the algorithm for suspect patient management is in need of improvement. An example of a proposed and improved algorithm can be found in Annex H.

There were mixed views and observations regarding sustainability. Interviews with patients confirmed that PH's supported community-based and patient schools support systems contribute to stigma reduction, TB care seeking, compliance and overall program sustainability. Also, and as reported by all interviewed district TB clinics and TB hospital managers, TBCP is implementing a training infrastructure that empowers PHC based family doctors and nurses to serve as the primary points for presumed TB case identification. This effort is additionally reported to involve support to improve the questioned quality of local medical and nursing training institutions. However, district-level TB facilities in two regions reported high staff turnover resulting in a continuing need for training. Health workers tend to make low salaries (e.g. $50 per month for a newly graduated doctor) and are not highly motivated to stay in their positions. The two district level TB facilities visited in one region report low turnover of medical officers and a stable nursing

complement. Several of the visited TB clinics and TB hospitals appeared to be significantly overstaffed in relation to their existing patient load (e.g. six staff for three SS+ patients in the most recent month).

CONCLUSIONS - TAJIKISTAN

The conclusions for the four evaluation questions are discussed below per broadly identified sub-themes emerging from findings: vulnerable populations, patient support, health facilities, guidelines and application of guidelines, monitoring and reporting, collaboration with government and donors, and sustainability.

VULNERABLE POPULATIONS

TB prevention and control efforts are highly visible, particularly within the penitentiary system. At the operational level, the screening of PLHIV for TB and the screening for HIV in TB patients is well implemented. TBCP developed and organized training material on TB and HIV, which has been adopted by the NTP and health education systems. Additionally, there appears to be an appropriate coordination mechanism between NTP and HIV services at the district and regional levels. Coordination between TB and HIV programs could be improved at the national level, as the ET did not observe evidence of this occurring. Transnational coordination is also weak, and there is no clear linkage between the NTP of Tajikistan and those of Russia and Kazakhstan regarding the coordination of TB services for migrants. However, support for cross-border collaboration in migrants is being addressed through a regional Global Fund grant managed by PH based in Kazakhstan whereby TBCP is engaged in the process.

TBCP is using an appropriate system for presumed TB patient identification closely linked and integrated with communities, local government, and the primary healthcare system. The role of CHC is appropriate for its efforts to convey health education messages, including those for TB, to increase awareness of symptoms and reduce stigma. CHCs' TB-specific role is limited to presumed case identification and referral, and they do not participate in TB treatment.

Within hospitals and communities, TBCP is leading a significant effort to fight stigma associated with TB through its patient schools and CHCs. Despite these efforts, though, stigma within communities persists and is exacerbated by the placement of TB centers in isolation from other community healthcare centers.

As noted by USAID/Tajikistan country office, stigma is a continuing issue. TBCP activities related to stigma focus on providing IEC and awareness raising. Both male and female TB patients are subject to stigma, but experience it in different ways. Male patients are primarily concerned about the economic impacts, whereas female patients focus more on the social effects of stigma. Male migrants are at a particular disadvantage as they do not regularly access services due to the transient nature of their work.

PATIENT SUPPORT

The practice of referring all TB patients who are diagnosed and prescribed TB treatment to the regional commission may contribute to an unnecessary delay in initiating treatment, as well as unnecessarily maintain hospitalization as one of the management procedures. Furthermore, though outpatient management has improved in TBCP districts, there are still a significant number of patients across the country who remain in the hospital longer than a month. This shows that TBCP has contributed to shifting treatment towards outpatient management, but these practices have not yet spilled over into other districts in a uniform manner.

The PS and PSGs have contributed to providing patients with key information about TB, and have increased patient understanding of how TB can be transmitted and the steps they need to take for successful treatment. This increased knowledge is a critical component of empowering patients and communities. The country has also seen significant progress in the outpatient management of TB cases.

HEALTH FACILITIES

Under the leadership of TBCP, great efforts have been made to train health workers on TB prevention, care, and control; up to 80 percent of PHC staff have been trained to date. The integration of training material into health worker training institution curricula is also promising for the sustainability of these efforts. Despite this training, though, the ET observed inconsistencies in service delivery, and supervision activities do not appear well-organized.

The health facilities visited have NTP guidelines available for TB prevention, care, and control; however, key documents related to TB treatment are not available in all health facilities. Health service providers use a standardized process of identification and management of presumed TB patients. Furthermore, the algorithm used to assess presumed TB patients does not include clear consecutive steps or fully prioritize Xpert testing to identify potential MDR-TB cases. This may be the result of the insufficient number of Xpert machines, as only five are available in the TBCP districts and 15 available in the country overall (which is well below the target of 57). The increased availability of Xpert testing is a priority for the NTP, though, and is expected to improve in the coming years.

The increase in bacteriological confirmation rate suggests that the quality of the diagnosis of TB has improved in Tajikistan. However strongly implied, it is not clear to what extent the activities undertaken by TBCP have contributed to these results. Women with children have increased access to health services, as they receive free healthcare for children under three years of age. It is not clear, though, whether women are taking greater advantage of health services, as health centers do not keep sex-disaggregated records.

GUIDELINES AND APPLICATION OF GUIDELINES

TBCP has been fully involved in the development of the national policy and strategic planning for TB prevention, care, and control in Tajikistan, and acts as a full partner to the GoT in the development and revision of the NTP guidelines, as well as implementation of TB prevention, care, and control in the country. The political commitment of the government to fight TB in Tajikistan is well identified in the national health policy. Though the guidelines cover most aspects of TB identification and care, there are some key guidelines that have not yet been developed (specifically, related to contact investigation).

The ET observed that most guidelines were in place, but they did not see the basic DOTS guideline. Additionally, they noted issues with the algorithm for suspect patient management. Despite the availability of guidelines, application and implementation of the guidelines is generally inconsistent across the districts visited, especially related to screening, treatment, and contact investigation.

MONITORING AND REPORTING

The procedures used to follow and monitor TB patients who are under treatment are not fully standardized, and many of them are not aligned with WHO recommendations. There is a treatment waiting list for MDR-TB cases who are diagnosed; however, the majority of pre-MDR and MDR-TB patients do not receive any treatment with bedaquiline and delamanid. These treatments are recently being introduced for MDR-TB treatments under Challenge TB.

The NTP has successfully implemented a functional paper-based information system to monitor and evaluate TB activities in Tajikistan. Furthermore, OpenMRS has been established in 28 sites in 20 TBCP districts, and is in the process of expansion. However, the capacities to undertake appropriate data analysis and generate hypothesis for operational research remain limited at all the levels of the NTP.

COLLABORATION WITH GOVERNMENT AND PARTNERS

USAID and TBCP are well respected and appreciated by national and international partners for their work to support, improve and enhance TB care and control in Tajikistan. Partners are especially pleased with the high level of collaboration and coordination with TBCP, and its focus on creating linkages and support

for inclusion of vulnerable populations. Partners also expressed their satisfaction with PH's ongoing training and capacity building programs, but noted a need for more support in data analytics and ongoing research.

SUSTAINABILITY

In respect to sustainability of the program, partners noted PH's participation in CCM meetings and its involvement in the development of the new concept note for future funding and supported the development of the National Strategic Plan (2015-2020). Through NTP reports and discussions with TB mangers, it is evident that TBCP is making a concerted effort to reduce the number of TB beds and shift resources to a lower cost PHC based ambulatory care approach. There is satisfaction with the training programs for nurses and family doctors, but concerns remain over high staff turnover in TB facilities at the district level.

RECOMMENDATIONS - TAJIKISTAN

RECOMMENDATIONS FOR USAID TB CONTROL PROGRAM IN TAJIKISTAN

SHORT TERM

1. TBCP should continue to collaborate with partner NGOs (specifically Caritas Luxembourg) to have more leverage into the penitentiary system in line with the MOJ. A visible supportive partnership with the MOJ's long standing health and TB supporting partner may increase PH's ability to increase the scope of its training activities in MOJ facilities.
2. In the remaining years of the project, TBCP should focus on strengthening the following policies and guidelines with NTP:
    a. The existing treatment guidelines in line with the new WHO recommendations that were issued in April 2017. This revised version should be posted on the web site of the MOHSP, printed and widely made available for all the staff.
    b. Establishing a clear diagnosis and treatment algorithm to manage presumed and definite TB patients with clear steps for decision making. This algorithm should clearly prioritize Xpert testing in the process of TB detection, given that Tajikistan is a high MDR-TB country (see Annex H for an example of a proposed algorithm).
    c. Establish procedures to monitor and evaluate the process of identification and management of patients with presumed TB using the register of presumed TB cases, DOTS corner register, CXR register and TB laboratory register.
    d. Creating a national guideline on conducting supervision activities at the Regional, District and facility levels in Tajikistan.
3. TBCP should develop and provide training courses on data analysis for regional teams and the relevant staff of the NTP Central Unit.
    a. TBCP should also explore the inclusion of additional individual factors related to socio-economic status, environment, residence, health characteristics, and behavior in the new TB case-based electronic recording system. This will help promote and provide relevant data to raise hypotheses and undertake operational research on TB control in Tajikistan
    b. The presumed TB register should include individual information on gender in order to monitor the process of identification of presumed TB patients, especially among women.

LONG TERM

1. TBCP should routinely evaluate and readjust training activities to address the periodic inconsistences inherent to the health staff practices.
2. TBCP should provide capacity building to the NTP on applying for and securing funding to the NTP, specifically:
    a. As a systemic concern, TBCP should help NTP to develop and implement strategies to mobilize funds from other sources at national and international levels and to additionally widen its collaboration with potential donors and partners.
    b. TBCP should provide proposal development and program planning training to help the NTP prepare proposals to build its funding base with in-country donors, the diplomatic community, and bilateral donors

ANNEXES

ANNEX A: EVALUATION STATEMENT OF WORK

ORIGINAL CONTRACT STATEMENT OF WORK

C.1 TITLE

USAID TB Control Program Midterm Evaluation.

C.2 PURPOSE

USAID/Central Asia Mission will evaluate progress of the TB Control Program against program objectives set in the contract to confirm what has been accomplished. The evaluation will help USAID/Central Asia better understand its investment in the TB Control Program in terms of progress towards results and contributions of the project in Tajikistan and Uzbekistan. It will also confirm if the project is on track or will recommend shifts in approaches to achieve the intended results, if applicable.

C.3 BACKGROUND

This external mid-term performance evaluation of the TB Control Program comes after two years of activity implementation. The evaluation will provide findings, statistics, and recommendations will assist Project HOPE, its sub-contractors (AFEW, KNCV and IOM), and USAID/CA to confirm what has been accomplished; to help determine what components and project aspects worked well, which did not and why; and to will help to make informed decisions how the performance of the project implementation will be strengthened and improved.

C.4 PROBLEM/OPPORTUNITY ADDRESSED

Over the past decade that USAID has supported Tuberculosis (TB) Control efforts in Central Asia (CA), TB morbidity and mortality indicators have significantly improved, with fewer TB cases and fewer deaths, compared to a decade ago. Yet TB remains a high priority public health threat in all five CA countries. WHO data confirm an alarming increase over the past decade in rates of multi- drug resistance TB (MDR-TB) in Central Asia (CA), which continues to present significant challenges for TB prevention and control and poses a threat to the economic development in the region. Four of the five CA countries (not including Turkmenistan) are included on the WHO list of the 30 highest MDR-TB burden countries in the world. High rates of migration, particularly from Tajikistan, Uzbekistan and the Kyrgyz Republic, have the potential to further increase the spread of TB in the region.

Across the region, Government commitment for TB prevention and control is strong as TB continues to be recognized as a public health priority. Policies and guidelines that support and promote international standards are at least partially in place or being developed. However, implementation of the WHO-recommended End TB Strategy is inconsistent across and within the five countries of the CA. Overall, CA countries still implement a hybrid approach to TB prevention and control with elements of internationally accepted standards of care and treatment that are intertwined or run in parallel with elements of the outdated Soviet-era model of TB control. This highly medicalized approach leads to a strong focus on clinical management of TB and MDR-TB, overuse of hospitalization during treatment, and an underdeveloped public health approach to TB and MDR-TB prevention and control. In recent years, individual countries have increased resources for National TB Programs (NTP) and have begun to develop national TB policies and strategies to move TB and MDR-TB care and treatment in line with

international standards, toward a more patient-centered, outpatient approach and away from a heavy reliance on costlier and less efficient inpatient treatment. There is increasing commitment toward prevention and education efforts to reduce the transmission of TB and MDR-TB.

C.5 PROJECT INTENT

The USAID/Central Asia Tuberculosis (TB) Regional Program (the "TB Control Program" or TBCP) aims to incorporate international TB standards in Uzbekistan and Tajikistan and strengthen linkages between the primary health care (PHC) and TB sectors. This award aims to strengthen National Tuberculosis Program (NTP) systems so they can provide more effective and accessible TB diagnosis and treatment, with a particular focus on vulnerable populations in Tajikistan and Uzbekistan.

The goal of the USAID TB Control Program is to ensure more effective and more accessible TB diagnosis and treatment for all, including vulnerable populations, so as to reduce the burden of TB and the development of drug-resistant TB in CA. This goal will be achieved through the following objectives: 1) More equitable access to comprehensive and appropriate TB diagnostic and treatment services for vulnerable populations; 2) Laboratory services provide more timely, quality TB and MDR-TB diagnosis; 3) Patient-centered system for TB and MDR-TB implemented widely across the region; 4) Enhanced enabling environment promoting TB services that meet international standards; 5) Strengthened human and institutional capacity of the health system to manage TB and MDR-TB services; 6) Improved coordination and linkage of TB with other health sectors and civil society organizations (CSO); 7) TB service providers and managers using electronic TB Management Information Systems (MIS) and using quality data for evidence-based decision making at all levels.

The geographical focus of the project is primarily Tajikistan (Sughd province: 18 districts, Rasht zone: 5 districts, Khatlon province: 4 districts) and Uzbekistan (Bukhara region, Navoi region, Khorezm region, Kashkadarya region). The project also includes specific activities geared toward supporting a broader regional response for improved TB-related outcomes in CA These activities are coordinated closely with TB control activities managed by USAID/Kyrgyz Republic. Regional activities include workshops and study tours to highlight successful models or activities within the CA region that focus on GeneXpert implementation and roll-out in the countries; best models on outpatient treatment; scaling up Programmatic Management of Drug-resistant Tuberculosis (PMDT) in prisons; successful referral systems that better link TB and PHC services, HIV and or CSOs for improved patient care and support; TB bed optimization schemes that have resulted in budget savings that were used for increased outpatient treatment and support; involvement of CSOs for improved outreach to vulnerable populations and community linkages, and TB in migrants.

The TBCP is implemented by Project HOPE (prime) and the Consortium of Sub-contractors that includes KNCV, The Netherland Royal TB Foundation; AFEW, AIDS Foundation East-West; and IOM, International Organization for Migration. The Sub-contractors operate only in Tajikistan.

The TB Control Program is managed by the Chief of Party (COP) based in Tashkent. In both countries, the project team worked closely with the Ministry of Health, National TB Programs, as well as several other donors and partners who are supporting TB control efforts in the CA region, most significantly, the Global Fund to Fight AIDS, TB and Malaria (GF), Médecins Sans Frontières (MSF), German KfW Entwicklungsbank (KfW), International Committee of the Red Cross (ICRC), UNITAID and Caritas, Luxemburg.

The seven focal objectives related to work in Tajikistan and Uzbekistan, including the following:

Objective 1: More equitable access to comprehensive and appropriate TB diagnostic and treatment services for vulnerable populations.

Vulnerable and high risk groups such as prisoners, migrants, people living with HIV (PLHIV), including those co-infected with HIV and TB, and socially disadvantaged persons continue to be underserved, often face stigma and discrimination at access points, further reducing their chances of receiving timely diagnosis, treatment and support and thus are more vulnerable to TB and MDR- TB. Reducing barriers to access for these vulnerable groups is key to improving equitable access and reducing the burden of TB and MDR-TB, as well as slowing the further development of drug resistant TB in the region. Thus, vulnerable and socially disadvantaged groups require special outreach efforts to support and link them with established TB diagnosis and treatment services within the health system, as well as to provide access to an additional range of psychological and social support including counseling, nutritional supplements, etc.

For instance, to improve TB/MDR-TB diagnosis and treatment in and out of prisons, the Contractor supports planning, coordination and monitoring visits of a Prison Thematic Working Group within prisons, improvement of the post-release referral system for TB treatment and other services, capacity building and technical assistance for CSOs in Tajikistan and Makhalla Committees in Uzbekistan on Behavior Change Communication, Community Outreach, and Community and psycho-socio-economic (PSE) Support. The TBCP also provides training on timely diagnosis, proper treatment, management of side effects, and infection control for TB and MDR-TB including PDMT for medical and non-medical workers in prisons.

Migrants pose a formidable challenge to TB control. The TBCP provides migrant's families with information regarding TB prevention and treatment. In Tajikistan, the Contractor works through IOM to provide cross-border linkages to referral centers and services. PLHIV face enormous stigma and discrimination from both the community and service providers. Furthermore, PLHIV are particularly vulnerable to TB, and TB is the leading cause of death among PLHIV. Late diagnosis of TB is a major contributor to increased risk of death. Throughout the service networks in both countries – TB clinics, PHC system, and CSOs – all PLHIV are screened for the main TB symptoms: cough, fever, and night sweats. Patients who report at least one of these symptoms is tested for TB disease and provided or referred for appropriate treatment.

Objective 2 – Laboratory services provide more timely, quality TB and MDR-TB diagnosis.

The TBCP supports NTPs in both countries to scale-up the implementation of GeneXpert for rapid diagnosis of drug-resistant TB. Technical assistance within this area helps NTPs to better plan and manage laboratory diagnostic resources more effectively and efficiently. At the national and oblast level, the TBCP supports the development of fully functional TB laboratory systems to enhance internal and external quality assurance. The TBCP also supports the establishment of sputum sample transportation systems that deliver these samples to the laboratories in time and ensure quality assured smear microscopy, culture and drug susceptibility testing (DST) services. Trainings and refresher trainings in laboratory diagnosis are provided to maintain the higher quality of laboratory services provided.

The project supports new technologies for smear microscopy (LED); liquid culture (MGIT) and molecular biology (LPA; GeneXpert). Strengthening capacity for HR management for TB laboratory services at all levels is a priority for both NTPs. Addressing high turnover and low motivation requires a comprehensive approach. Thus, the TBCP works with the national partners and stakeholders as well as local laboratory staff to define staff positions for all levels of laboratories, develop workload standards

for each position, and develop a reliable motivation system and assist the NTPs to implement those. The TBCP provides TA on certification of national laboratory engineers for repair and timely calibration of lab equipment. As an initial step in this activity, standards and technical specifications for essential laboratory equipment developed. This will help the program avoid purchasing substandard equipment, which has happened before due to the lack of knowledge of the specific requirements for each diagnostic level.

Objective 3: – Patient centered system for TB and MDR-TB.

All CA countries still maintain an outdated model of care based on the long term in-patient hospital admission of TB and MDR-TB patients, largely due to the high levels of drug resistance and the difficulty in differentiating between drug susceptible TB (which reacts well to first line treatment) and MDR-TB (which requires second line treatment). By keeping patients in hospital settings, direct transmission can be contained, assuming effective infection control (IC) measures are properly administered; however, hospitalization increases opportunities for transmission of MDR- TB, especially of undiagnosed MDR-TB, to other patients in TB Wards and in the health facilities. With the introduction of rapid diagnostic technologies such as GeneXpert, the diagnosis of MDR- TB can be reliably made within a few hours, allowing immediate initiation of anti-TB therapy to rapidly stop transmission of the disease. The TBCP assists governments in the development of strategic and/or operational plans, consistent with international standards that promote different modalities of outpatient care for patients with MDR-TB or recurrent TB as well as for patients with drug-susceptible TB. These strategic plans support the piloting of country-specific outpatient care models for TB case management. The framework covers all age groups, including children, people co-infected with TB/HIV, ex-prisoners, migrants, etc. PHC services, CSOs and other social organizations are part of the care and support structure, all using the same protocols and strategies.

Infection control measures are also included in the framework to prevent and contain the transmission of TB and MDR-TB, and to ensure the protection of patients as well as health care providers involved in outpatient care. At the community level, the Project focuses on decreasing stigma and providing support to TB patients and their families. The TBCP works through local NGOs/CSOs to ensure regular follow up and track people who have stopped treatment early (previously known as "defaulters") in the community to ensure adherence to treatment regimen. The Project also works with NTPs, Oblast- and Rayon-level health facilities and CSOs to roll out advocacy, communication and social mobilization (ACSM) to support outpatient and case management models.

Objective 4: Enhanced enabling environment promoting TB services that meet international standards.

CA countries are implementing TB control policies and guidelines that rely on outdated practices such as prolonged institutional treatment, inappropriate mass x-ray screening, weak infection control practices, inconsistent TB drug management and/or less effective diagnostic systems. Thus, the TBCP works at the policy level to promote policies, legislation and guidelines that are consistent with international standards and WHO recommendations for MDR-TB control. These policies, regulations and guidelines will strengthen the enabling environment for the piloting, implementation and institutionalization of internationally accepted practices for MDR-TB control and support universal access to TB diagnosis and treatment. The TBCP also works with TB Global Fund (GF) to support improved governance across the Country Coordinating Mechanism (CCM) that oversees GF support to major TB program implementation, including procurement of TB drugs.

Objective 5: Human and institutional capacity of health systems to manage TB and MDR-TB services strengthened.

Health systems in CA are largely comprised of highly specialized, disease-specific vertical programs. The TBCP promotes the greater coordination of currently disparate systems, improves the capacity of health providers to provide quality services and ensures linkages between existing systems so that they function in a way that improves continuity of care, facilitates improved access to services and strengthens adherence to treatment.

Key interventions under the contract include assisting governments and CSOs to effectively plan and manage their human resources for health in order to provide more effective services, as well as improving supervision approaches and strengthening the capacity of health care workers to manage TB patients on outpatient treatment settings. The project also focuses on strengthening local capacity to update curricula and manage training programs to support sustainable training and follow-up mentoring, in-service training for laboratory technicians, prison and civilian PHC workers, primary health care services and CSOs. The TBCP provides TA to strengthen nationwide drug management systems which will be able to successfully select, forecast, procure, assess quality, distribute and monitor anti-TB drugs to ensure adequate uninterrupted TB drugs supply and rational use.

Objective 6: Coordination and linkage of TB with other health sectors and CSOs increased

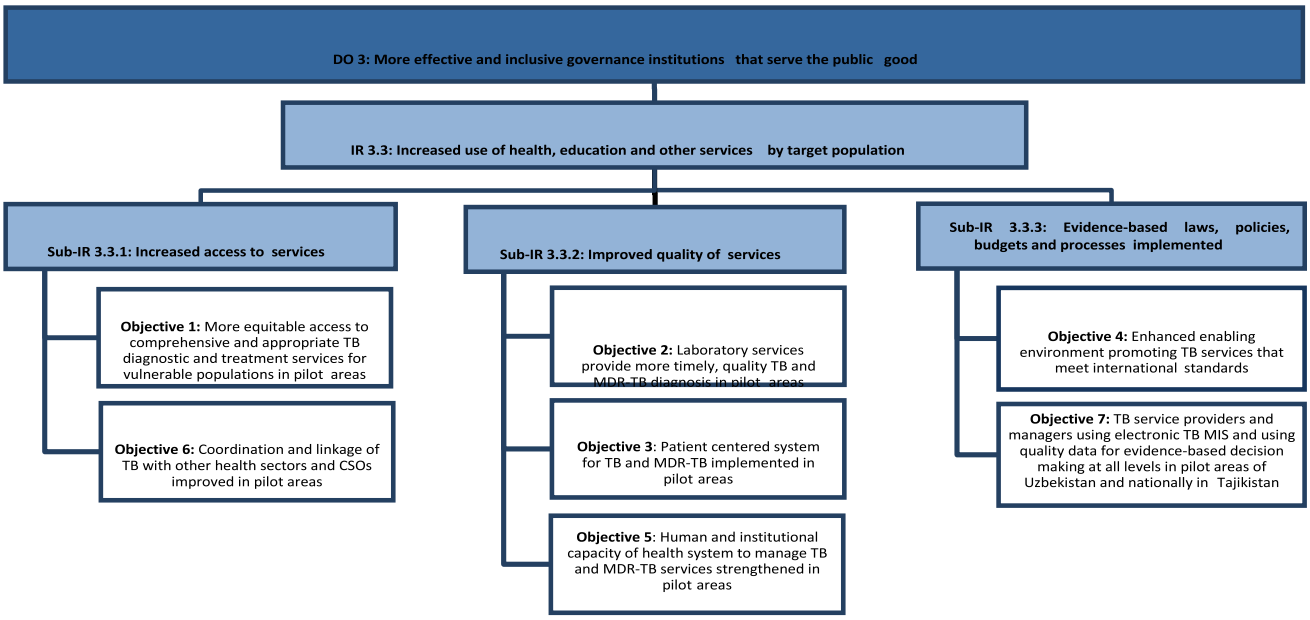
The Ministries of Health (MOH) in the region are still very much organized in a vertical, single disease-based fashion. While each country's MOH is organized slightly differently, TB and HIV remain as separate vertical entities without apparent linkage other than through over-arching top management. In order to maximize coordination among these programs where services should overlap and work together for the good of the patient, linkages must be identified and forged. The TBCP supports strengthening coordination between services to ensure timely and quality diagnosis, treatment and care of patients in the public health and prison systems, increasing collaboration and strengthening referrals between TB, PHC and HIV/AIDS systems to ensure more timely TB diagnosis, treatment and follow-up.

Objective 7: TB service providers and managers using electronic TB MIS and using quality data for evidence-based decision making at all levels.

A strong monitoring and evaluating system is a core function of any national TB program. Quality data needs to be available for analysis and use at all levels, particularly at the facility level where they are collected. The TBCP supports sharing of key data among the different parts of the TB programs and supports strengthened data quality assurance (DQA) as well as building human and system capacity to systematically analyze and utilize TB program data for planning, advocacy and policy making. The Contractor also works with NTPs to unify any duplication within TB reporting systems.

The logical framework for TB Control Program is pictured below, further detailing the intermediate and sub-intermediate results.

TB Control Program Results Framework



C.6 EVALUATION RATIONALE

This external evaluation is a mid-term performance evaluation and the purpose of this evaluation is to test primary objectives set in the TBCP contract. The evaluation will provide findings, statistics, and judgments that assist Project HOPE and its sub-contractor (AFEW, KNCV and IOM) and USAID to learn what has been accomplished; to help determine what components and project aspects worked well, which did not and why; and to help make informed decisions how the performance of the project implementation will be strengthened and improved. In summary, the evaluation will help USAID better understand its investment in TB Control Program results and contributions of the project in Tajikistan and Uzbekistan and help focus and strengthen the TB Control Program in both countries.

C.7 EVALUATION QUESTIONS

The evaluation will be designed and implemented to address the following key questions:

Question Category	Question or Issue to be Addressed
Progress toward achieving project goals	1) To what extent did the project make progress toward achieving its sub-IRs? (Includes a comparison of baseline and midpoint indicators and looking at the overall progress toward the 7 objectives, in line with the three priority areas below.) a. To what extent did the project increase access to services? To what extent did the project achieve more equitable access to comprehensive and appropriate TB diagnostic and treatment services for vulnerable populations in selected pilot areas? b. Did the project improve the coordination and linkage of TB with other health sectors and CSOs in selected pilot areas? How and to what extent the improved coordination and linkage of TB with other health sectors contribute to such changes? c. To what extent did the project improve the quality of services? Did the project achieve that laboratory services provide more timely, quality TB and MDR-TB diagnosis in selected pilot areas? To what extent did the project implement the patient centered system for TB and MDR-TB treatment in selected pilot areas? To what extent the human and institutional capacity of health system to manage TB and MDR-TB services was strengthened in selected pilot areas? d. To what extent did the project implement evidence-based internationally recommended World Health Organization (WHO) policies and standards? To what extent did the project achieved that the enhanced enabling environment promoting TB services meet international standards? To what extent did the TB service providers and managers are using electronic TB MIS and are using quality data for evidence-based decision making at all levels in selected pilot areas?

Client Satisfaction	2) To what extent were the customer needs (MOHs of Tajikistan and Uzbekistan, the National TB Programs, and Oblast Health and TB authorities) met? a. What identified needs were not met and why? b. To what extent was the client satisfied with the products/deliverables developed or produced by the project?

C.8 DATA COLLECTION METHODS

This evaluation will be qualitative in nature; with some secondary, quantitative data analysis. The evaluation team shall start its work with a literature review of all the documents cited above in the 1.A.II Existing Information section. Then the evaluation team will:

- Undertake field visits to Tajikistan and Uzbekistan, and also meet with USAID/CA staff in Almaty, to review activities and meet with stakeholders including partner country officials, health care managers, providers, and program recipients. In each country, meet with USAID management and technical staff, USG partners, Ministry of Health officials, donors, and other stakeholders, as appropriate.
- Review USAID strategies, country strategies, project reports, and any relevant assessments.
- Review current interventions and estimate expected results of the USAID/CA TB programs against the USG TB Strategy and WHO End TB Strategy.
- Validate or propose modifications to the planned activities under the TB Control Program.
- Identify potential areas for regional (oblast level) interventions and cross-sectoral programming.
- The methodology will be comprised of a mix of tools appropriate to the evaluation's research questions. These tools may include a combination of, but are not limited to, the following:
- Protocol(s) for individual or group interviews with representatives of project partners and additional stakeholders;
- Protocol(s) for interviews and/or focus groups with project beneficiaries;
- Protocol(s) for interviews/meetings with representatives of USAID/Central Asia, Tajikistan and Uzbekistan Country Offices;
- Protocol(s) for interviews/meetings with national and local government officials, as appropriate;
- Protocol(s), such as an observation guide, for site visits to project pilot areas.

C.8.1 DATA ANALYSIS METHODS

Prior to the start of data collection, as parts of the evaluation work plan, the evaluation team will develop and present, for USAID review and approval, all protocols for data collection; what procedures will be used to analyze qualitative data; and how the evaluation will weigh and integrate qualitative data from these sources with quantitative data from project performance monitoring records to reach conclusions about the effectiveness and efficiency of the TB Control Program implementation in Tajikistan and Uzbekistan.

C.8.2 EXISTING INFORMATION

The evaluation team shall consult a broad range of background documents in addition to project documents provided by USAID/Central Asia. Baseline data and interim data will be obtained from USAID TB Control Program reports listed below. USAID and the TB Control Program will provide the evaluation team with a package of briefing materials, including:

- USAID Central Asia Regional Development Cooperation Strategy (2015-2019)
- USG TB Strategy 2015-2019
- The National Action Plan for Combating Multidrug-Resistant Tuberculosis
- Tajikistan and Uzbekistan National TB Strategies
- TB Partnership Project, Final Program Report
- TB CARE I project, Final Report
- Other TB Projects reports funded by USAID
- USAID TB Control Program (TBCP) Contract
- Strategy for USAID TB Control Program 2015-2019
- TBCP Activity Monitoring and Evaluation Plan
- TBCP Year 1, 2 and 3 Work Plans
- TBCP Annual Reports, 2014 and 2015
- TBCP Quarterly Reports, 2014-Present
- A selection of relevant guidelines, manuals and other materials developed by TBCP
- Additional resources will be made available by the Project Team and USAID upon award and request.

MODIFIED STATEMENT OF WORK

I) Page 12, SECTION C.7 -EVALUATION QUESTIONS:

DELETE in its entirety and REPLACE with following:

Evaluation questions must be answered in the context of the seven objectives within the three Sub-IRs found in the TB Control Program Results Framework on page 11.

Question Category	Evaluation Questions to be Addressed
Progress toward achieving objectives	1) To what extent is the program increasing access to TB services, especially for vulnerable populations?
	2) To what extent is the project improving the quality of patient- centered TB services?
	3) To what extent is the project supporting developing and implementing evidence-based laws, policies, strategies, etc. based on improved data systems and quality data?

Client satisfaction (Ministries of Health, National TB Programs, Oblast Health and TB authorities)	4) To what extent were the client needs met or not met, and why?

ANNEX B: COUNTRY CONTEXT

UZBEKISTAN CONTEXT

HEALTH SYSTEMS

Uzbekistan became an independent country in 1991, and inherited the Soviet healthcare system and methods for TB control. The Soviet system relied heavily on active case finding and case management by specialists from inpatient facilities. Long hospital stays were common, and the system was expensive and difficult to maintain.[23] Primary care was largely neglected and did not fulfill the role of gatekeeper for more specialized levels of care.[24] Once independent of the Soviet Union, Uzbekistan enacted policy changes to begin to limit the number of hospital beds, yet they are still focused on inpatient treatment. Uzbekistan closed more than 46 percent of all hospital beds between 1991 and 1997, and the hospital admission rate fell from 24.4 per 100 population per year in 1991 to 16.3 in 1997.[25] In 1985, Uzbekistan had 19 percent more hospital beds per 1,000 than the Europe and Central Asia average; by 2010, Uzbekistan had 12 percent less than the Europe and Central Asia average.[26]

The current health system in Uzbekistan consists of three levels: national (republican) level, regional level, and district or city level. The national level is responsible for developing health policies and ensuring implementation, financing the health sector, managing the public health sector, ensuring a unified system of reporting, and defining and defending the state-guaranteed medical package (especially for vulnerable groups).[33] The regional and district/city levels are responsible for ensuring a consistent supply of pharmaceuticals and medical equipment, providing sanitary epidemiological and ambulance services, ensuring the healthcare rights of individuals are met, providing access to PHC and social care, and controlling quality, among other responsibilities.[33] Uzbekistan's government is the principal provider and purchaser of health services, and TB diagnosis and treatment are provided free of charge in accordance with the Stop TB Strategy; however, the private sector is highly involved in the pharmaceutical industry, and TB drugs are available on the open market.[27]

Disparities in available facilities exist between the urban (36%) and rural (64%) populations.[28] In urban areas, primary and selected secondary care services are provided by polyclinics that serve 10,000-80,000 people, and regional and city hospitals deliver inpatient care.[29] Though polyclinics now provide access to integrated care (previously there were separate facilities for adults', children's, and women's health services), these family polyclinics are not yet available in rural areas. Currently district hospitals are the first point of contact for patients seeking secondary care outside of urban settings. In both urban and

Box 2: TB Detection Terminology

Case Detection Rate: Number of reported cases per 100,000 persons per year divided by estimated incidence rate per 100,000 per year

Confirmed Case: Biological specimen is positive by smear microscopy, culture or WHO-approved rapid diagnostics (such as Xpert MTB/RIF)

Notified Case: TB is diagnosed in a patient and is reported within the national surveillance system, and then to the WHO

[23] Hasker, Khodjikhanov, Usarova, Asamidinov, Yuldashova, van der Werf, Uzakova and Veen. Default from tuberculosis treatment in Tashkent, Uzbekistan: Who are these defaulters and why do they default? 2008.
[24] World Health Organization. Uzbekistan: Health system review. 2014.
[25] Original Russian. Highlights on health in Uzbekistan. 199.
[26] DataBank. The World Bank. 2017.
[27] Gadoev, Asadov, Tillashaykhov, Tayler-Smith, Isaakidis, Dadu, de Colombani, Hinderaker, Pparpieva, Ulmasova, Jalolov, Hamraev, et al. Factors associated with unfavorable treatment outcomes in new and previously treated TB patients in Uzbekistan: A five year countrywide study. 2015.
[28] Central Intelligence Agency. The World Factbook. 2017.
[29] World Health Organization. Uzbekistan: Health system review. 2014.

rural settings, patients are still often treated in separate hospitals for different diseases and population groups – there are children's hospitals, tuberculosis hospitals, hospitals treating sexually transmitted diseases, cardiology and emergency hospitals, and others.[30]

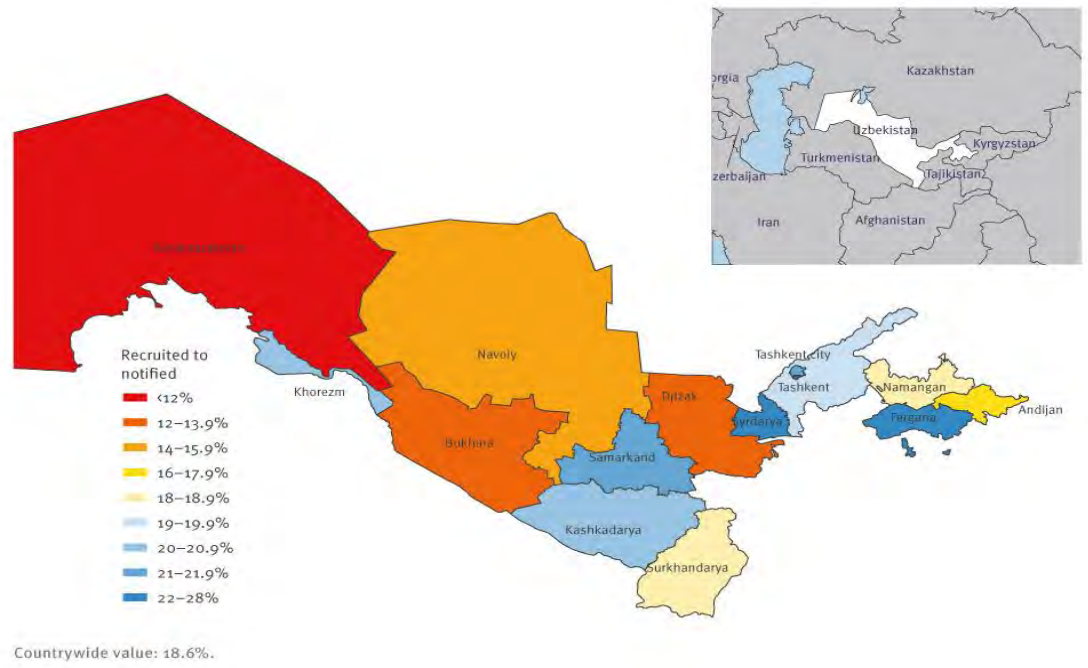
Though the breakup of the Soviet Union allowed Uzbekistan to reform the health system, it was accompanied by a decline in the availability of public social services that disproportionately affected already vulnerable populations. Additionally, high out-of-pocket payments and the practice of informal payments continue to create problems for health equity and access.

TB BURDEN

Uzbekistan is among the WHO European Region's 18 high-priority countries for TB control, with 24,000 new cases in 2015, or 79 cases per 100,000 population; however, according to World Bank estimates, only 69 percent of incident TB cases were detected that year.[31] This estimate puts Uzbekistan just below the WHO-recommended target case detection rate (CDR) of 70 percent for TB. It is also among the world's 30 high MDR-TB burden countries[32], with 10,000 incident cases in 2015.[33] The 2015 prevalence of MDR-TB or rifampicin-resistant TB was estimated at 24 percent among new TB cases and at 63 percent among previously treated TB patients.[34] The high burden of MDR-TB suggests a need for improved diagnosis of TB, better patient and drug management, and infection control in line with international standards.[35] In addition, WHO estimated that 5,800 patients with MDR/rifampicin-resistant TB were present among the 19,055 TB cases who were notified in 2015 in Uzbekistan (or 30.4%).[36] The case detection rate (CDR) among MDR-TB is much lower still than the CDR for TB; among these estimated 5,800 cases, only 2,296 were identified (39.6%).[37] Figure 15 below displays the percentage of cases notified among sputum-smear positive cases by region in 2011.[38]

[30] Ibid.
[31] DataBank. The World Bank. 2017.
[32] World Health Organization. Use of high burden country lists for TB by WHO in post-2015 era. 2015.
[33] World Health Organization. Annual TB Report. 2015.
[34] Uzbekistan: Tuberculosis Profile. 2016 WHO Global Tuberculosis Report.
[35] World Health Organization. Tuberculosis country work summary: Uzbekistan. 2011.
[36] See Box 2 for definition.
[37] Data provided by a key informant at the Ministry of Justice
[38] Ulmasova, Uzakova, Tillyashayhov, Turaev, van Gemert, et al. Multidrug-resistant tuberculosis in Uzbekistan: Results of a nationwide survey, 2010 to 2011. 2013.

Figure 15: Ratio of new sputum-smear positive TB cases to those notified in 2011



Note: these numbers represent estimates obtained from a nationwide study (n=782)

TAJIKISTAN CONTEXT

HEALTH SYSTEMS

As with Uzbekistan, Tajikistan became an independent country in 1991, and inherited much of the Soviet healthcare system and methods for TB control. Though Tajikistan was always one of the poorest countries in the Soviet Union, the country suffered particularly severe challenges to the economy and social infrastructure as a result of the civil war that followed the collapse of the Soviet Union. As with Uzbekistan, Tajikistan experienced a sharp decline in social services that disproportionately impacted vulnerable populations.[39] Since Tajikistan's independence, the Tajik government has worked to improve health systems, but lags behind other Central Asian countries in terms of health care reform.

The health system that was inherited focused largely on curative and inpatient care, while primary care was neglected. This reliance on hospital care and specialists proved to be an expensive and unsustainable system. As a result of the shift in focus from inpatient to ambulatory care following Tajikistan's independence, hospital beds per 1,000 people declined dramatically from 10.6 in1985 to 5.5 in 2011.[40] To further advance the shift to ambulatory care and emphasize primary care, the Conception on Health Reform laid out a new structure for PHC in 2002, changing the multi-layered system in rural areas to a two-tiered system. Health houses were established as the first point of contact for services in rural areas, followed by rural health centers as the second tier. In urban areas, polyclinics were planned as the first point of contact. The country also planned to increase budget allocation to the primary care sector.

Through Tajikistan has made efforts to improve its health system since 1991, there are still many elements of the Soviet system that remain. The Ministry of Health and Social Protection (MOHSP) is responsible

[39] USAID Central Asia. Regional Development Cooperation Strategy 2015-2019. 2014.
[40] DataBank. World Bank. 2017.

for health policy at the national level, but the Ministry of Finance determines the budget for the health sector. Budgetary funds are disbursed to *oblast* administrations and are managed by *oblast* and *rayon* finance departments. The MOHSP directly manages a variety of specialized and tertiary facilities, though *oblast* health departments have direct managerial responsibility for some specialized and tertiary facilities as well. Head physicians at *rayon* hospitals act as heads of the city health departments, and are assisted by deputies responsible for rural clinics, polyclinics, and other forms of primary care. In addition to MOHSP associated facilities, there are health facilities run by other ministries or state agencies as well. The MOHSP aligns the activities of these parallel services with national activities, but implementation is often delayed due to differing governance structures.

TB BURDEN

Tajikistan is among the WHO European Region's 18 high-priority countries for TB control. In Tajikistan, there were 7,400 new cases of TB in 2015, or 87 per 100,000 population.[41] Tajikistan's CDR has improved dramatically in recent years – it grew from 21% in 2000 to 80% in 2015.[42] As of 2015, the CDR is above the WHO-recommended target of 70%. Tajikistan has one of the highest MDR-TB burdens in the world;[43] the prevalence of MDR-TB or rifampicin-resistant TB is estimated, for the year 2015, at 14% among new TB cases and at 77% among previously treated TB patients.[44] In addition, WHO estimated that there were 1,300 patients with MDR/rifampicin-resistant TB among the 5,894 TB cases who were notified in 2015 in the country (22.1%). Among these estimated 1,300 MDR/rifampicin-resistant TB cases, only 729 were identified (56.1%).[45]

GOVERNMENT RESPONSE

TB prevention, care, and control are among the top priorities on the national health agenda of the Ministry of Health and Population Protection. It is included in the National Health Strategy of Republic of Tajikistan 2010–2020. The National Coordination Council on Health and Social Protection of Population was established by the Government of Tajikistan (Resolution No. 834 as of 31 December 2014) to address important issues related to the population's health. This council includes leading ministries, agencies, and representatives of civil society. The Government has established a specific national health program to tackle the issue of TB in Tajikistan. This program, which is the NTP, is represented at all the levels of the Ministry of Health and Population Protection: central, region, and district. Specific hospitals have been devoted to TB care for many years and funded through the government budget. Specific staff, whose salaries are covered by the Government, are practicing in these hospitals. In addition, TB services are being integrated in PHC with the support of the government.

The Government is committing more funds for TB and has committed to provide additional funds to cover all the costs for first-line TB drugs and to provide 10 percent of the funding for second-line drugs from 2019 onwards. In addition, the Ministry of Health and Population Protection is initiating the provision of additional food packages to hospitalized TB patients to enhance their nutritional status. TBCP is actively collaborating with senior government officials, policy makers, and health leaders to increase awareness about TB control in Tajikistan, thereby contributing to strengthening the political commitment of the government.

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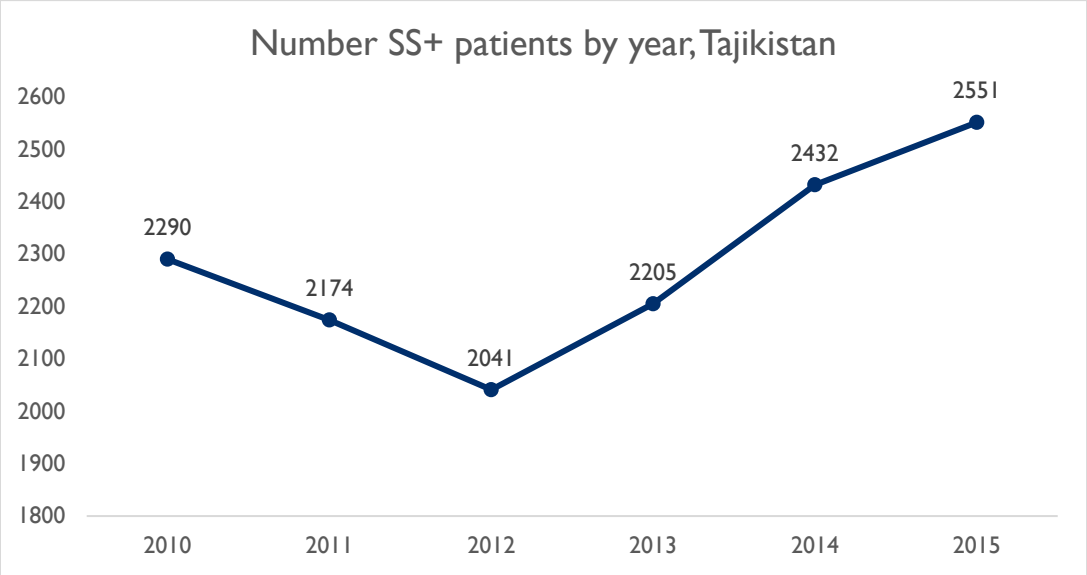
[41] World Health Organization. Tajikistan tuberculosis profile. 2017.
[42] DataBank. World Bank. 2017.
[43] World Health Organization. Use of high burden country lists for TB by WHO in the post-2015 era. 2015.
[44] World Health Organization. Tajikistan tuberculosis profile. 2017.
[45] Ibid.

The NTP data for 2010–2015 give strong evidence of a failing TB program up until 2013–2014.[50] The available data for sputum smear-positive (SS+) patients is presented in **Error! Reference source not found.**Although not project- or vulnerable group–specific, there has been strong growth in the number of SS+ patients since 2013. TBCP can be viewed as a partner in supporting this rebound. TBCP is not directly involved in clinical supervision of TB detection or treatment management but addresses these issues through its trainings, supervision, and monitoring activities.

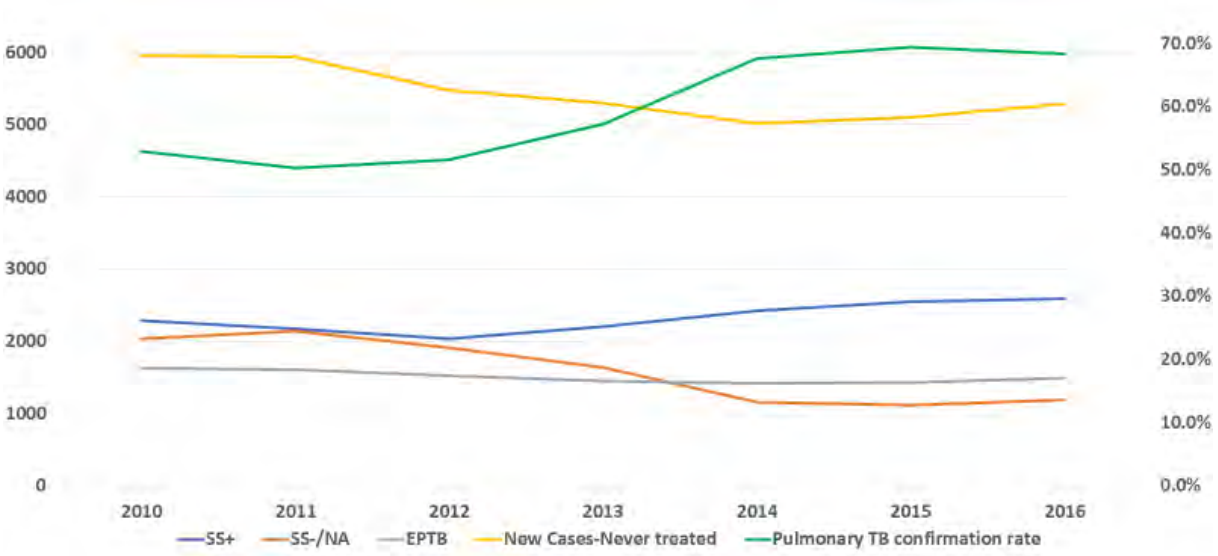
Figure 16: Number sputum smear-positive patients by year, Tajikistan[46]



The data collected by the NTP across the national territory from 2010 to 2016 show that the number of notified new TB cases (TB relapses not included) has somewhat decreased. This decrease was made mainly at the expense of the number of notified smear-negative/smear-not-done TB cases; the number of notified new smear-positive TB cases increased from 2,290 in 2010 to 2,593 in 2016 (see Figure 17). This resulted in an increase in the bacteriological confirmation rate of notified new pulmonary TB from 53 percent in 2010 to 68 percent from 2014 onwards.

[46] National and program area data obtained during fieldwork

Figure 17: Number of new TB cases by form and year, Tajikistan, 2010–2016



Note: TB relapses not included

According to WHO, 80 percent of the estimated incident TB cases were detected through NTP activities in Tajikistan in 2015. This percentage is more than the 70 percent minimum required by WHO.

It is important to highlight that the existing algorithm and procedures used do not clearly prioritize, through the utilization of Xpert testing.

ANNEX C: ADDITIONAL OBSERVATIONS AND OPPORTUNITIES

UZBEKISTAN

Additional opportunities for expanding access among vulnerable populations

Children

The WHO and other international organizations recommend that all countries prioritize and address the issue of childhood TB as a part of their national program.47,48,49 The NTP of Uzbekistan developed, with the support of WHO and USAID, the first guidelines on childhood TB in 2013, on which approximatively 300 pediatric care providers were trained. Among 6,000 children who were assessed for TB within two years, 35 were diagnosed with TB.50

Though childhood TB is included in the NTP strategy, the TBCP does not include children as a vulnerable population or support specific interventions addressing childhood TB. The TBCP should consider expanding its currently defined vulnerable populations to include children to better align with international standards for vulnerable TB populations.

Commercial Sex Workers

Though USAID identifies the main barriers to TB care for commercial sex workers (CSWs) to be stigma and discrimination, CSWs face other challenges to TB care as well. Some of these additional challenges include high cost of medical services and low TB awareness. TBCP activities in three of the four provinces, excluding Navoi, reached 240 female CSWs in Year 2. However, TBCP no longer targets CSWs specifically due to very low detection rates. Should TBCP decide to resume targeting this vulnerable group, TBCP should further explore methods to disaggregate indicator data by vulnerable population, in a way that is sensitive to protecting identifiable information from CSWs, in order to expand opportunities for targeted programming to CSWs, and thereby better identify and further investigate the barriers to access among this population.

Contact Investigation

Contact investigation provides the opportunity to extend treatment and other services to the networks of TB patients, and may be especially critical to reaching vulnerable populations who may not otherwise seek out diagnostics and treatment. Though contact investigation is a critical component of WHO's guidelines and Uzbekistan's NTP policy, TBCP supports contact investigation activities through its involvement in training health professionals and monitoring service delivery. The ET was however unable to assess whether contact investigation activities were taking place in the provinces, as data collection was restricted to Tashkent; however, TBCP should further investigate the quality of contact investigation activities in the four provinces and consider including best practices for contact investigation in trainings of facility staff. TBCP may also consider working with the NTP to update contact investigation guidelines to align with WHO standards.

47 World Health Organization. Guidance for national tuberculosis programmes on the management of tuberculosis in children: Second edition. 2014.
48 World Health Organization. Childhood TB training toolkit. 2014.
49 International Union Against Tuberculosis and Lung Disease. Childhood TB for healthcare workers. 2017.
50 USAID. Success Story: Uzbekistan's Healthcare Providers Gain Critical Skills to Detect and Treat TB in Children.

TAJIKISTAN

ADDITIONAL OBSERVATIONS REGARDING VULNERABLE POPULATIONS

People living with HIV

TB screening in PLHIV is included in the national strategy to control HIV/AIDS in Tajikistan. All newly registered PLHIV are screened for TB using chest x-ray in TB dispensaries. In addition, all PLHIV who are already registered and followed in the HIV/AIDS site are verbally screened during each contact with the health staff through the identification of one of the following four symptoms: any cough, loss of weight, night sweat, and any fever. The existence of one these symptoms results in further assessment, including for TB. All registered PLHIV are screened by CXR and clinically assessed by a TB specialist once a year. If a PLHIV is diagnosed with TB she/he is registered in the NTP and treated in line with the NTP guidelines. PLHIV in whom no active TB was identified receive IPT for six months every three years. IPT is implemented by HIV/AIDS sites using DOTS and isoniazid supplied by the TB facilities.

Prisoners

Prisoners released who are on TB treatment receive social support from local authorities under the implementation of the "startup program." These released prisoners receive assistance to ensure the continuation of their treatment and successful social integration. The released prisoners who register for employment are eligible to receive social welfare for three months (approximately $40 month), and cash incentives (236 somonis, or $26 per month for each drug-susceptible TB patient and 441 somonis or $50 per month for each MDR/XDR-TB patient).

Nearly 30 percent of TB patients diagnosed in the prison system in 2016 have MDR/XDR-TB.[51] These imprisoned MDR/XDR-TB patients are usually transferred to the Central TB Hospital for Prisoners, where a unit has been created for MDR/XDR-TB cases. TBCP, through PH, has provided UV lamps, masks for prison staff and patients, and respirators to improve and strengthen TB infection control in prisons.

ADDITIONAL OBSERVATIONS REGARDING PATIENT EXPERIENCE

Health Facilities

Within the health facilities visited, there were no available toilets or washing sinks inside the facility for patients, and very few seats and breastfeeding rooms for mothers and young girls. Health providers have no telephone and no curtain in the examination rooms to protect the privacy of women and young girls. Inpatient women interviewed by the ET reported that the hospital does not provide hygienic items for female patients and the bed items are old. However, the hospital organized rooms and spaces outside for patients to meet their family members and friends. The ET recommends that the MOHSP improve the female-friendly environment at the health facilities by providing indoor restrooms with locks, breastfeeding rooms, more seats in the waiting area, and improved water and sanitation conditions.

The team observed distinct gender imbalances among healthcare facility staff. All directors and senior managers in the visited health facilities were male (100%). However, female healthcare workers held 70 percent of all mid-level positions of the visited health facilities. Women held 30 percent of medical doctor positions, though the rates varied by health facility. In one TB hospital, only 16% of MDs were women, while in another hospital the rate was as high as 50%.

Albeit a priority for the Global Fund grants, rather than TBCP, respondents provided mixed responses on the availability of equipment for diagnostic, treatment, care and control of TB among health care practitioners. For instance, TB managers highlighted the value and need for mobile X-ray machines to serve remote populations. Additionally, respondents shared that some areas have an urgent need for Xpert machines. However, two remote district level TB managers reported that mobile X-ray units

[51] Data provided by a key informant at the Ministry of Justice

generated high levels of interest in TB screening during public events, and that such units were an efficient mechanism for providing screening services to logistically constrained populations.

Ambulatory Treatment

Many TB hospitals visited have reduced the number of beds reserved for TB patients and also have low occupancy rates, which can be partially attributed to the increased emphasis on outpatient management of TB cases. However, though outpatient management of TB has progressed in TBCP areas, there is still a significant proportion of TB patients who are hospitalized for over a month in non-program areas.

For cases managed on an ambulatory basis, TB medicines are provided to the patient in PHC settings. The treatment is directly observed by a family nurse who provides daily TB medicines at the patient's home, in rural health centers or in health houses.

Cost Burden

Though TB drugs and sputum smear microscopy are provided to all patients (even those with MDR-TB) free of charge, TB patients still report high expenditures related to TB. Out of pocket expenditures by interviewed patients from the start of their illness until their diagnosis were often reported to be in excess of a laborer's wage for one month. Though this does not constitute a "catastrophic expenditure" (>40% of annual income) for most, it is considered by many patients to be a significant cost. One patient who underwent TB-related surgery reported personal cost at three years of a laborer's average salary.

ADDITIONAL OBSERVATIONS REGARDING STAFF EXPERIENCE

Infection control

TBCP contributed to the development of the guidelines on TB infection control in health facilities, and put in place initiatives to evaluate the effects of TB infection control measures that were implemented in regional TB hospitals. For example, in the Regional TB Hospital of Sughd, a surveillance system on TB nosocomial infection has been put in place to monitor occurrence in 70 hospitals' health workers, who are systematically screened for TB twice a year. This surveillance system reported that two hospital staff were affected with TB in 2014 (1,176/100,000), one in 2015 (588/100,000), and none in 2016.

Sputum transportation

Reports from all district level TB service staff confirmed periodic and often frequent disruptions in the sputum transport system. Health facility staff indicated that "sputum transport is a big problem in the countryside. Scale up is limited by sample transport problems…we need a vehicle for sputum transport." These disruptions can result in delayed treatment decisions and unnecessary hospital stays, both of which increase the cost of TB care and treatment, especially for rural and remote populations.) There was only one plan to address this issue discussed with the ET: an initiative to integrate specimen transportation with services for more remote patients in Panjakent.

ADDITIONAL OPPORTUNITIES FOR EXPANDING ACCESS AMONG VULNERABLE POPULATIONS

Children

Childhood TB is included in the national strategy of NTP and is included in the national strategic plan for 2015–2020. However, PH's existing scope of work for vulnerable populations does not include children. Family doctors and medical staff in three district-level TB facilities independently noted difficulties in sputum collection from children, with one specifically requesting training and equipment for sputum induction. TBCP should consider expanding its currently defined vulnerable populations to include children to better align with international standards and target the needs expressed by health facility staff.

Contact investigation

WHO strongly recommends that all countries practice systematic screening of TB contacts exposed to index TB cases, especially PLHIV, miners who are exposed to silica dusts, and populations with a TB prevalence greater than one percent. In Tajikistan, contact investigation activities are undertaken by the staff of all primary healthcare sites visited; however, TBCP does not include support to this key intervention strategy.

There is some guidance for contact investigation in the NTP treatment guidelines, but the guidance available is not aligned with WHO recommendations or standardized across health facilities.[52] For example, NTP guidelines do not provide a definition of the index TB case around whom TB screening and evaluation need to be performed.

TB managers interviewed by the ET recommended that TBCP should support contact investigation per PH's draft pediatric TB guidelines, placing greater emphasis on contact investigation including sputum collection from children. Currently IPT is provided to children with no active TB who were exposed to an index TB case, but the age group for targeted IPT was inconsistently reported by health workers sampled for this evaluation. In addition, there are no indicators clearly defined to monitor the implementation of TB contact investigation activities and to evaluate their outcome.

TBCP should develop specific guidelines to implement appropriate contact investigation activities in line with the WHO recommendations. These guidelines must define clearly the index TB cases, the contacts who need to be screened and assessed for TB, the SOPs including a clear algorithm, and functional indicators to monitor the implementation of contact investigation activities and evaluate their outcomes. TBCP may also consider expanding current training curriculum to include instruction on these guidelines.

ADDITIONAL OPPORTUNITIES IN COLLABORATION WITH THE NTP

Information systems

The NTP has implemented an information system in line with WHO recommendations that generates the required data on TB notification and treatment outcomes. The system is designed to include information on case notification, laboratory and treatment outcomes, presumed TB patients and referrals, index cases and family members of TB patients, and the management of MDR-TB among other data points and outcomes.

In most of the TB centers or dispensaries visited, data is collected via paper-based procedures. Quarterly reports are established in the district TB center or dispensary, then forwarded to the health district director, who reports to the health director of the region. In the regional health directorate, staff collect and compile reports forwarded by all the districts. Compiled reports are then forwarded to the regional TB hospital, which is also in charge of the managerial aspects of NTP at the regional level, the Ministry of Health, the Republican Center for Tuberculosis, and the relevant partners, including TBCP.

The ET found that case definitions for TB notification and treatment outcomes are used consistently, and the laboratory and treatment registers are generally completed in full by health workers. Quarterly reports on notification and treatment outcomes are completed in all district TB dispensaries visited – only one TB dispensary did not routinely generate a quarterly report on treatment outcomes.

While the data collection and aggregation process is well-established, the ET did not find evidence that the TB register is being used as intended to monitor the identification and management of family members of presumed TB patients, nor patients with presumed TB. This component is intended to track patients referred for further evaluation and to monitor family members of the patient who are seeking care for any reason in PHC settings.

[52] World Health Organization. Recommendations for investigating contacts of persons with infectious tuberculosis in low- and middle-income countries. 2012.

Recording and reporting is a full component of the training promoted by TBCP. The training process developed by TBCP contributes to implementing the required information system within the NTP network, and should continue to be improved for the information system to reach its full potential.

ANNEX D: EVALUATION DESIGN AND METHODOLOGY

EVALUATION DESIGN MATRIX

The evaluation matrix below was designed for the work plan prior to fieldwork and to develop the data collection tools. It is divided by the four evaluation questions and includes research questions and indicators used by the ET to answer the evaluation questions; the source; method; and measure. This matrix was also used to corroborate findings for developing this report.

1. To what extent is the program increasing access to TB services, especially for vulnerable populations[53]?

Question/Indicator:	Source	Method	Measure
Change in the number of patients assessed for TB in those Project health facilities in low income districts versus high income districts (using World Bank, FEWS and possibly other data to dichotomize districts.	Data request from TB laboratory registers by patient's district	Data review	% change in number of patients living in districts categorized by the WB or FEWS as below the mean who are assessed for TB compared to above the mean districts.
Change in the number of TB cases (all forms) notified among vulnerable populations (PLHIV), PWID, prisoners/ex-prisoners, migrant) in pilot area through program referral.	PITT question 1.1	Document review and data request	% increase or decrease from first to last report, Trend assessment.
Change in the number of TB cases (all forms) notified among women in the pilot area.	PITT question 1.2	Document review and data request	% increase or decrease from baseline or first to last report. Trend assessment.
Change in the number of TB cases (all forms) notified among vulnerable populations (PLHIV), PWID,	PITT question 1.3	Document review and data request	% increase or decrease from baseline or first to last report. Trend assessment.

53 Vulnerable groups include those with both higher susceptibility to TB or MDR-TB and with constrained access to TB services generally including prisoners, ex-prisoners, PWID, PLHIV, CSWs, migrants, the homeless, and nutritionally challenged groups.

prisoners/ex-prisoners, migrants) in pilot area through program referral who started treatment.			
Change in the number of TB cases (all forms) notified among women in the pilot area who started TB treatment.	PITT question 1.4	Document review	% increase or decrease from baseline or first to last report
Change in the percentage of released prisoners in pilot areas continuing treatment in civil sector	PITT question 1.5	Document review and data request	Trend assessment
Change in the percentage of referred vulnerable population that were tested for TB	PITT question 1.6	Document review and data request	Trend assessment
Change in the number of vulnerable population reached by all types of project activities.	PITT question 1.7	Document review and data request	Trend assessment
Change in percent of index TB cases for whom contact investigation was undertaken (overall, Rural and Urban)	Data request (Project information system)	Data request	% increase or decrease in contact investigation number per index TB cases' number (overall and R/U)
Change of contacts aged < 5 years with no active TB who have received isoniazid preventive therapy	Data request (Project information system)	Data request	Increase or decrease in contacts < 5 years of age with no active TB who received isoniazid preventive therapy.
To assess awareness of clinic hours, "Do TB clinics have extended hours of operation at least once a week?"	Project Reports, information from NTP and National reference laboratories	Document review, GI and KII	Yes/ No Qualitative information
Can the NTP generate a histogram of patient attendance by time of the day for each Oblast?	Data request and KII	Data request and KII	Yes indicates the availability of information to optimize staffing

			levels for reduced patient waiting times.
How do the presumed TB patients identified in project health facilities, with no TB laboratories, have access to TB diagnosis services?	Project reports, supervision reports	Documents' review, KII and GIs	Qualitative information
Are rural populations and clinics served by a specimen transport system? How is this transport system working? How sustainable is it?	Project Reports, information from NTP and National reference laboratories; supervision reports	Document review, GIs and KII	Yes/ No and qualitative information
Do clinic staff feel they are appropriately trained: "Are basic health units' staff trained in identifying presumed TB patients and providing TB treatment" Are the correct staff of basic health units trained? What is the proportion of basic health units' staff who are trained?	Project reports, reports on the training sessions held, assessment reports	Documents' review, KII and GI. Data request for the number of different training sessions attended by urban versus rural staff sessions attended.	Qualitative information and quantitative
Is TB treatment provided to patients through the basic health units' network in the areas covered by the project? (rural/urban)? What is the proportion of TB patients who are provided TB treatment in the basic health units' network?	Project reports, supervision reports, assessment reports	Documents' review, KII and GI	Qualitative information and quantitative data
Were the staff involved in MCH and reproductive health services' provision trained in TB prevention, care and control in the areas covered by the project?	Project reports and assessment reports	Documents' review, KII and GI	Qualitative information

How are CSWs, migrants and PWIDs supported for increased access? Are there any linkages between the NGO/CSOs supporting CSWs, migrants, ex-prisoners, HIV/AIDs patients or PWIDs and the Project in general and the health facilities covered by the Project in particular?	Project reports and reports on TB activities of NGOs. KII and GIs with CSOs actively providing support.	Documents' review and KII and GI with CSOs actively supporting CSWs, PWIDs, etc.	Qualitative information

2. To what extent is the project improving the quality of patient centered TB services?

Question/Indicator:	Source	Method	Measure
What has been the change in the proportion of presumed TB patients assessed for TB who were referred by the other health care providers outside the NTP network?	Project reports, data request, data collection during the field work or interviews with health workers during the field visits	Document review and data request	Percentage change and qualitative assessment
Increase in the percentage of TB patients who had an HIV test result recorded in their TB treatment register	PITT 6.1	Document review and data request	% Increase
Increase in the percentage of HIV-positive patients who were screened for TB in HIV care or treatment settings? And in the prison system?	PITT 6.2	Document review and data request	% Increase in project setting and prisons linked to the project
Change in the proportion of people living with HIV newly enrolled in HIV care started on isoniazid preventive therapy.	WHO A5 Project documents, data from HIV sites and KII	Document review, KII and data request.	Change in percentage

What has been the increase in the proportion of registered co-infected TB/HIV patients who receive treatments with ARV medicines and cotrimoxazole? What about in prisons?	WHO C.9, WHO C.14, Project Documents, KII or data request	Document review, KII and data request.	Change in percentage
Change in the percent of patients successfully treated in out-patient clinics for drug-susceptible TB in pilot areas.	Quarterly/Annual reports on cohort analysis, Project reports	Reports' review	Change in treatment success rate in project areas among patients treated on an outpatient basis.
Is any support provided to TB patients? Under which circumstances? What types of support? Who provides this support? What is the outcomes of this support?	Project reports and documents, supervision reports, assessment reports, site visits	Documents' review, KII and GIs	Qualitative information
Change in the percentage of patients successfully treated in out-patient treatment for drug-susceptible TB in pilot areas.	PITT 3.1	Data request	Positive or negative trend
Change in the percentage of patients successfully treated in out-patient treatment for MDR-TB in pilot areas.	PITT 3.2	Data request	Positive or negative trend
Change in the percentage of MDR-TB cases managed in outpatient settings.	PITT 3.3	Data request	Positive or negative trend
Change in the percentage of drug-susceptible TB cases managed in outpatient settings.	PITT 3.4	Data request	Positive or negative trend
Change in the percent of retreatment TB cases who are assessed for TB drug resistance in the project areas.	Project reports, assessment reports	Documents' review and Data request	Change in percentage

Change in the number of drug-resistant TB patients identified in the project areas.	Projects reports, assessment reports	Documents' review and Data request	Increase or decrease in the number of identified drug-resistant TB patients
Change in the number of drug-resistant TB patients put on treatment regimen with 2nd line TB drugs	Projects reports, assessment reports	Documents' review and Data request	Increase or decrease in the number of drug-resistant TB patients put on treatment with 2nd line TB drugs
Change in the percent of patients successfully treated in out-patient centers for MDR-TB in pilot areas.	Projects reports and annual reports on cohort analysis outcomes of drug-resistant TB patients	Documents' review	Change in treatment success rate in treated drug-resistant TB patients on an outpatient basis
Are the project staff organizing or attending a regular coordination meeting with the representatives of care providers practicing outside the NTP network?	Project reports, meetings' reports	Reports' review, KII and GI	Yes / irregular /No
Are the project staff organizing or attending a regular coordination meeting with the health workers involved in HIV care services' provision? Are the project staff involved in any coordination mechanism for collaborative TB/HIV activities? At national level? At regional level? At oblast level?	Project reports, meetings' reports	Reports' review, KII and GI	Yes / irregular /No

3. To what extent is the project supporting developing and implementing evidence-based laws, policies, strategies, etc. based on improved data systems and quality data?

Question/Indicator:	Source	Method	Measure
Does TBCP establish an operational plan every year to develop and implement its interventions and activities	Reports on Project Hope activities, external assessment report, available operational plans and KII	Reviews of the reports and available operational plan and KIIs	Qualitative information
Change in the percentage of laboratories in pilot areas which are linked to an external quality control system	PITT 2.1	Document review and data request	Positive or negative trend
Did the Ministry of Health and partners develop a framework document to tackle the issues of TB and human rights?	KII	KII	Yes/No
Has the country passed any new or revised laws related to access to TB Care as a result of program support.	Document review and KII	Document review and KII	
Did the NTP develop strategic approaches for TB prevention, care and control adapted to hot spot areas, socially disadvantaged groups or vulnerable populations	Document review, KIIs, field visits	Document review and KIIs	Qualitative information
Has the Ministry of Health passed any new guidelines to increase access to TB Care for disadvantaged populations as a result of program support.	Document review and KII	Document review and KII	
Does the NTP have staff trained and experienced in managing and developing queries for the TB-MIS system.	Document review and KII.	Document review and KII.	Yes/No

Can NTP staff install and configure TB-MIS software at new facilities	Document review and KII	Document review and KII	Yes/No
Have oblast staff been trained to develop TB data base queries.	Document reviews and KII	Document reviews and KII	Yes/No
Are the TB laboratories of the pilot areas supervised? Who supervise them? How is this supervision organized?	Document review, supervision agenda, supervision reports	Review of documents and reports and KIIs/GIs	Qualitative information
Change in the number of microscopy laboratories in pilot areas with acceptable performance in external quality control.	PITT 2.2	Document review and data request	Positive or negative trend
Number of developed and revised program policies and guidelines that are officially approved/endorsed by the government	PITT 4.1	Data request	
Number of National TB regulations (i.e. Prikaz), policies revised to comprehensively adhere to international standards for outpatient treatment of TB and MDR-TB	PITT 4.2	Data request	
Number of policies and guidelines revised to comprehensively adhere to international standards for the diagnosis and case management of TB and MDR-TB	PITT 4.3	Data request	
Are guidelines, algorithms and SOPs available in the Project health facilities? Who developed them? Are they used by the health staff of these health facilities?	Project reports, assessment reports and sites' visits; KIIs	Reports' review, KIIs and GIs	Qualitative information

Are these guidelines, algorithms and SOPs covering all the strategic interventions that need to be implemented by the Project? Are these guidelines, algorithms and SOPs in line with NTP policy of country?	Sites' visits, available guidelines, algorithms and SOPs	Review of the available guidelines, algorithms and SOPs, KIIs and GIs	Qualitative information
Are these guidelines in line with the international/WHO recommendations?	Available guidelines, algorithms and SOPs	Comparison of the available guidelines, algorithms and SOPs with the WHO's recommendations	Qualitative information
Are there any work areas which are not covered by any guidelines and well identified by the Project?	Reports on the scope of the Project work and available guidelines used in the Project settings	Comparison of the scope of the Project work and the available guidelines	Qualitative information
How many times in the last 6 months have PH staff made visits to assess program activities in this clinic/lab? How may supervisory visits have been made by NTP staff in the last six months?	Project reports and supervision reports	Documents' review, KII and GI	Yes / No

4. To what extent were the client needs met or not met, and why?

Question:	Source	Method	Measure
Are the required reports issued by the Project and forwarded to the NTP?	Project reports and assessment reports; KIIs	Reports' review and KIIs	Qualitative information
Are the Project-run health facilities included in the supervision visits' system of the NTP?	Project reports, NTP supervision reports, KIIs	Reports' review and KIIs and GIs	Qualitative information
Did the project participate in an annual meeting to disseminate and discuss the monitoring and evaluation report among policy makers, planners and program managers at national and sub-national levels?	WHO Data dissemination and use of results. Project Documents and KII	Document review and KII	Yes/ No.
Did the project participate in planning meetings to address the financial sustainability of TB care	Document review and KII	Document review and KII	Yes/ No.
Does the project support a working centralized database of all TB and HIV-related data, including ongoing research?	WHO Data dissemination and use of results. Project Documents and KII	Document review and KII	Yes/ No
Is the NTP data base routinely accessible to clinic and patient managers, and to decision makers?	KII	KII	Yes/ No

Question to WHO/MOH/NTP manager: Are you happy with the progress of the USAID supported TB project? Can you elaborate?	KII	KII	Yes/Somewhat/No
Which important component of TB control in your area of work is in most need of support?	National TB decision makers and both clinic and laboratory managers	KII and GIs	Number of triangulated and heavily supported missing elements that are included in the work plans deliverables.
Was the project successful in improving the TB program in your area of work? In which TB work areas, was the Project more successful? In which TB work areas, were the Project outcomes less than expected?	National decision makers and clinic /laboratory managers	KII and GIs	Triangulated and most supported Yes/ No; qualitative information.
Are the activities developed through the project appropriately integrated to your TB control program?	NTP, Oblast, local health director, NRL	KII and GIs	Yes / No
Are the activities developed by the project included in the operational plan of your TB control program?	NTP, Oblast, local health director, NRL	KII and GIs	Yes / No
What would help you the most to increase the effectiveness of your work?	National decision makers and clinic /laboratory managers	KII and GIs	Triangulated and most supported items.
What improvements would you like to see in future support to TB programs?	KII and GIs with government officials AND with TB patients	KII, GIs	Low levels of requested improvements can imply satisfaction with existing programs.

What is the proportion of basic health units' staff who are trained?	Project documents		If available, percent trained by demographics of clinic.
On a scale of 1 to 10, how satisfied are you with the ongoing project.	KII and GIs with government officials and patients	KII and GIs	Average rating from one to ten.
Do you find the guidelines, protocols and reports developed by the project to be useful?	KII and GIs with government officials	KII and GIs	Yes /No.
Please name one document produced by the project that you find most useful.	KII and GIs with government officials	KII and GIs	Percent who can promptly name one report, guideline or standard.
Do you think the project is successfully helping the country to control TB?	KII and GIs with government officials	KII and GIs	Yes/ No

ANNEX E: DATA COLLECTION INSTRUMENTS

KEY INFORMANT INTERIVEW PROTOCOL

Aside from the collection of information for the Evidence Matrix, participants will be invited to address priority issues of individual concern.

ET members will record their notes on each discussion by hand followed by a consolidation and coding of team member notes each evening. Daily consolidation and coding will be limited to Evaluation Matrix questions. Issues raised during open discussion will be cataloged and indexed for analysis during preparation of the draft final report.

All FGDs and KIIs will include an introduction, a request for their participation and discussion on the confidential nature of discussions. The following template will be utilized for all FGDs and KIIs:

Hello, my name is _____ and I am with my colleagues _____ and _____.

We have been requested by USAID to undertake an evaluation the progress of the TB Control Program towards its objectives and intended results.

The evaluation has a focus on 2 countries: the Uzbekistan and Tajikistan. We are planning to interview individuals such as yourself who are either patients, community members, health care providers, or decision makers and directly involved in the provision of health care in the country. Interviews are planned at the national level, oblast, district and local clinic level.

We will be taking notes during the interview, but your responses will remain anonymous and will not be directly attributable to you in our presentation of the data. The requirements of our work include the necessity of maintaining the confidentiality of any statements you may make. We encourage you to speak openly and freely and give the best information that can help to evaluate the success and failure of this program and for use to make needed improvements.

The interview will take approximately 30 minutes. Do you have any questions?

Could you please confirm your willingness to take part? YES / NO

Date:	Uzbekistan/ Tajikistan	Organization/Facility
Patient/ Manager/ Staff/ Policy Manager/ Decision Maker	Individuals Name:	Level: National/ Oblast/ Local/ Clinic/ Partner/ PLHIV/PWID/CSW/migrant/ prisoner/_____
Male/ Female	Years in TB Work:	Gov. Official Present: no/yes

SEMI-STRUCTURED INTERVIEW GUIDE FOR KEY INFORMANTS

(For Government officials, Health Officials, Partner Organizations)

1. Can you tell us a little bit about your work and how long you have been helping to control TB in this country?

2. Is TB control included in your health strategy?
3. Is control included in your strategic plan? (either multi-year or annual)?
4. Do you mobilize additional funding for TB control? If yes, how do you proceed? From whom do you succeed to mobilize additional funding for TB control?
5. Do you include the issue of TB control in the agenda of the meetings you have with the policy makers? If yes, how many times within the last 4 years?
6. Do you lead the development of proposals for funding from national or international entities for TB control?
7. Do you meet media representatives (journals, radio, TV) to talk about the issue of TB control in order to sensitize population, opinion leaders, policy makers and others?
8. Do you participate in the commemoration of World TB Day (24 March)? If yes, what do you do?
9. In the framework of your work, do you meet NGOs and CSOs? If yes, do you promote the inclusion of TB control in their work agenda?
10. Do you meet the representatives of NGOs and CSOs which are involved in TB control?
11. Do you participate in meetings to coordinate TB activities undertaken by partners? Who usually, organize these meetings? Who is usually the chairperson?
12. Do you follow the supervision activities carried out for TB activities? If yes, how?
13. Have you ever participated in supervision visits in health facilities to monitor and assess TB activities which are carried out?
14. Do you receive (or monitor) the reports on TB activities made routine basis (quarterly, annually)? If yes, which one(s)? Which indicators do you monitor on regular basis?
15. Do you ask sometimes for additional data on TB activities? If yes, for what for example?
16. Do you use the data generated on TB activities for your own work? If yes, for what?
17. Do you think that the existing information system on TB activities is satisfactory? Does it provide you all the data you need?
18. Do you think that the existing information system on TB activities needs further improvement? If yes; which improvement is needed?
19. Do all TB clinics have the same operating hours? Yes/ No / DNK. Do you know if any clinics stay open longer some days to make it easier for patients to attend? Yes/ No. How would you make it easier for all patients to attend TB clinics—especially females, the poor and remote rural patients?
20. Are you aware of any specimen transport systems to make it easier for remote patients to receive diagnostic support? Yes/ No/ DNK
21. Do you think it is difficult for a patient to transfer from one TB doctor or clinic to another one? (Yes/ No/ DNK) What would you suggest to make it easier for patients to transfer to a doctor or clinic near to their home?
22. Did you attend any symposium conference or training on TB? Yes/ No. If yes, was this/these symposium organized by Project Hope? If no; who organize it? Which organization do you think is most active in supporting the Ministry of Health for TB control?
23. Can you name some organizations in this country that are active in supporting TB control?
24. Do you have any suggestions on how the quality of TB services can be improved?

25. Are you aware of any efforts to coordinate agencies and Ministry efforts to improved TB Care? (Yes/ No)
26. Are you aware of an annual meeting to discuss TB program evaluation reports and adjust plans and programs for needed improvements? (Yes/No) Did you ever attend these meetings? Yes/ No.
27. Which component of TB control in your area of work is in most need of additional support?
28. For which areas of TB work, does Project Hope provide support? Could you provide specific details?
29. Would you say the project has helped you to work better to control TB in the country? (Yes/ No) Notes:
30. Which parts of the national TB control effort do you think need more support?
31. Are there any barriers to providing more support to these parts of the TB program?
32. What would help you the most to increase the effectiveness of your work?
33. What improvements would you like to see in future support to TB control programs?
34. On a scale of 1 to 10, how satisfied are you with the support Project Hope to TB control?
35. Do you find the guidelines, protocols and reports developed by the project to be useful for your work? Yes/ No
36. Which document produced by the project do you think is most helpful to you and your work?
37. Do you think the project is successfully helping the country to control TB? Yes/ No. Any comments?
38. Which important areas of TB work is not covered by the activities of Project Hope or needs to be significantly strengthened?
39. We would like to hear any suggestions or comments you may have on how TB control programs can be improved:
40. How do you use projects equipment and guidelines?
41. Do you know any details on how TB patient records are managed? (Yes/No)
42. Have you ever requested an analysis or tabulation of TB patient records (Yes/No)? If Yes, did you receive the needed tabulations or data in a timely manner? Yes/No. What is the usefulness of these data for you? Do you have any comments on this?

SEMI-STRUCTURED INTERVIEW GUIDE FOR TB/DR-TB PATIENTS

1. How long were you sick before starting treatment?
2. Are you a member of a patient support group or patient school?
3. How many care providers did you see before having diagnosis or starting treatment?
4. How much money did you spend because of your disease before starting treatment?
5. Do you know the name of your disease for which you are treated?
6. Has a physician provided you with details on the reasons for your healthcare?
7. How many days of work (school days) did you miss because of your disease?
8. How long have you been treated so far?
9. What is the total duration of your treatment?
10. Who provide you the pills to treat your disease?
11. How many times are you taking your pills per week?
12. How many pills are taking each time during the current week?
13. Are you taking you your pills once all together or separately each time?
14. Do you receive any support during your treatment? If yes, what kind of support do you receive? Who provides it to you?
15. Did the health workers provide you health education or information regarding your disease? If yes; what are the messages and information did you receive from them?
16. Have you missed any appointments at the clinic or lab? Yes/No
17. How much does it cost you to come to your appointment at the clinic or laboratory?
18. Is it easier now than it was in the past for you to reach the clinic and lab and not miss appointments? (Yes/No) Do you have any suggestions on how your access to TB services can be made more convenient?
19. When do you have the next appointment for control?
20. Were your family members requested to be checked for the disease you have? If yes; how many of the family members were checked? Who checked them? How were they checked? After checking, is anyone of your family members was provided drugs because of your disease? Please, explain.
21. What can the Ministry and the project do to make it easier for you to make your appointments?
22. If you need to, do you know how to transfer to another clinic or laboratory? Yes/No.
23. What would you suggest to improve the quality of TB services for you?
24. What would you suggest to make it easier for you to receive TB Care?
25. Are you satisfied with the TB care you receive? (Yes/No)
26. What do you think needs to be improved?
27. Do you have any suggestions?

ANNEX F: INTERVIEWS CONDUCTED

RESPONDENTS BY CATEGORY, GENDER AND DATA COLLECTION TYPE FOR UZBEKISTAN

The ET conducted 14 interviews with a total number of 29 respondents, of which 16 were female and 13 male. The categories of stakeholder group included international organizations, public officials, implementing partners, NGOs, and health professionals. As discussed in this report interviews were limited to Tashkent only.

Stakeholder Group	Location	Approach	Sex-disaggregated		Total
			Female	Male	
International organizations	Tashkent	KII	3	5	8
Public officials	Tashkent	KII	1	1	2
Implementing partners	Tashkent	KII, GI	10	2	12
NGOs	Tashkent	KII	0	2	2
Health professionals	Tashkent	KII	2	3	5
TOTAL		KII & GI	16 (57%)	13 (43%)	29 persons 14 interviews

RESPONDENTS BY CATEGORY, GENDER AND DATA COLLECTION TYPE FOR TAJIKISTAN

The ET conducted 34 interviews with 144 respondents, of which 37 were female and 77 were male. The categories of stakeholder group included international organizations, public officials, implementing partners, CSOs, sub-grantees and health professionals. As discussed in this report, interviews (KIIs and GIs) were conducted in Dushanbe, Sughd, Khatlon province and Rasht zone.

Stakeholder Group	Location	Approach	Sex-disaggregated		TOTAL
			Female	Male	
International Organizations	Dushanbe	GI	2	1	3
Public officials	Dushanbe	KII	2	4	6
Implementing partners	Dushanbe	KII, GI	5	5	10
Sub-grantees	Dushanbe	KII	3	6	9
CSOs	Dushanbe	KII	2	3	5
Health professionals	Dushanbe/Sugd/Khatlon/Rasht Regions (regional, districts and cities health facilities)	KII, GI	18	46	64
Patients	Khujand regional TB center and Panjakent city health center	GI	5	12	17
TOTAL		KII & GI	37 (32%)	77 (68%)	114 persons 34 interviews

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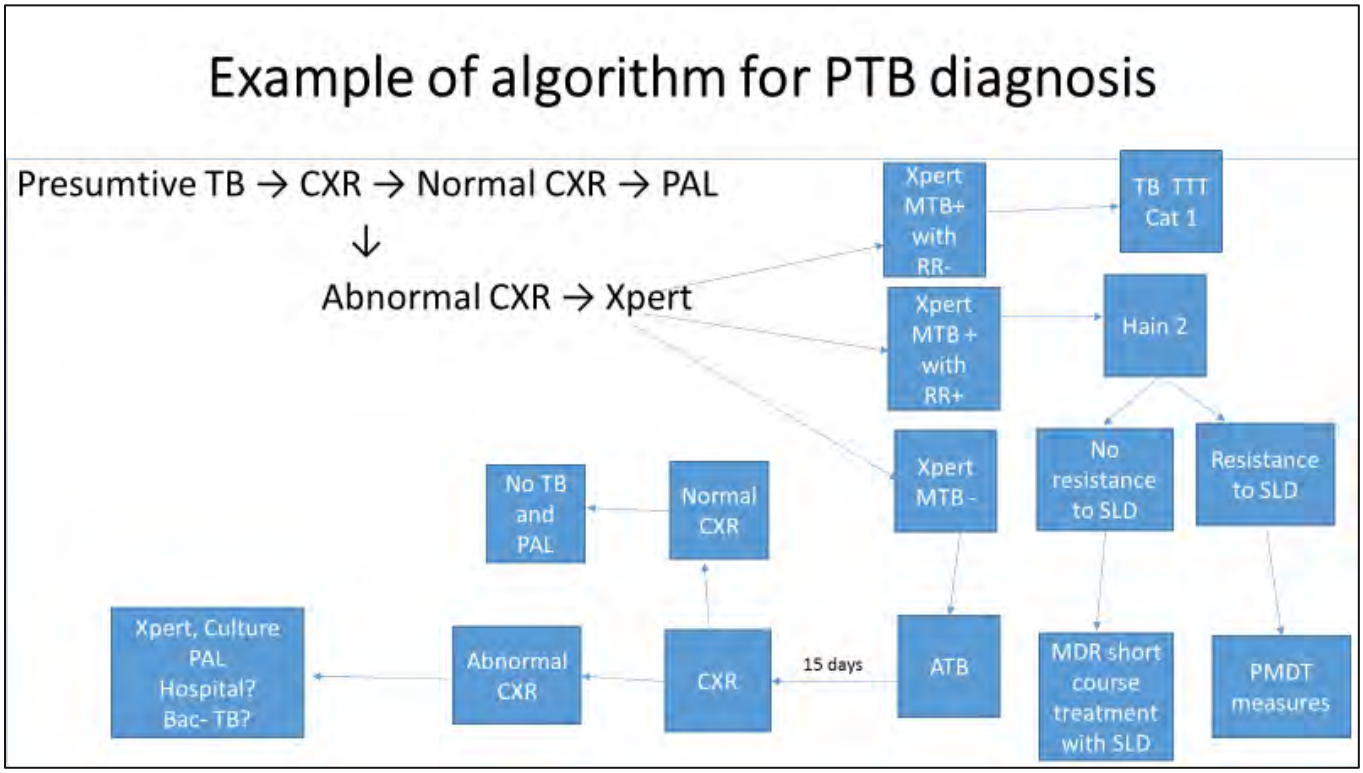
ANNEX H: PROPOSED ALGORITHM

The below diagram represents the improved algorithm the ET recommends for presumptive TB diagnosis. The ultimate success of the algorithm will depend on successful policy governance and uptake of behaviors learned in trainings.



ANNEX I: DISCLOSURE OF CONFLICT OF INTEREST

Disclosure of Conflict of Interest for USAID Evaluation Team Members

Name Robert	Robert J. KAGAN
Title	TEAM LEADER
Organization	Social Impact, Inc.
Evaluation Position?	TEAM LEADER
Evaluation Award Number *(contract or other instrument)*	Contract # AID-486-I-14-00001 Task Order # AID 176 TO 16 00007
USAID Project(s) Evaluated *(Include project name(s), implementer name(s) and award number(s), if applicable)*	TB CARE in AFGHANISTAN MDR-TB PROJECT IN AFGHANISTAN ACED PROJECT IN AFGHANISTAN
I have real or potential conflicts of interest to disclose.	☐ Yes ☒ No
If yes answered above, I disclose the following facts: *Real or potential conflicts of interest may include, but are not limited to:* *1. Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated.* *2. Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation.* *3. Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project.* *4. Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated.* *5. Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated.* *6. Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.*	

I certify (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.

Signature	
Date	26 MARCH 2016

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Disclosure of Conflict of Interest for USAID Evaluation Team Members

Name	**Salah-Eddine OTTMANI**
Title	**Doctor**
Organization	**Social Impact, Inc.**
Evaluation Position?	
Evaluation Award Number *(contract or other instrument)*	Contract # AID-486-I-14-00001 Task Order # AID-176 TO 16 00007
USAID Project(s) Evaluated *(include project name(s), implementer name(s) and award number(s), if applicable)*	USAID TB Control Program Midterm Evaluation
I have real or potential conflicts of interest to disclose.	☐ **No**
If yes answered above, I disclose the following facts: *Real or potential conflicts of interest may include, but are not limited to:* *1. Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated.* *2. Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation.* *3. Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project.* *4. Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated.* *5. Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated.* *6. Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.*	

I certify (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.

Signature	
Date	31 March 2017

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Disclosure of Conflict of Interest for USAID Evaluation Team Members

Name	Targalmaa Radnaabazar
Title	M&E TB/Health financing Specialist
Organization	Social Impact, Inc.
Evaluation Position?	Health financing Specialist
Evaluation Award Number *(contract or other instrument)*	Contract # AID-486-I-14-00002 Task Order # AID-176-TO-15-00007
USAID Project(s) Evaluated *(include project name(s), implementer name(s), and award number(s), if applicable)*	
I have real or potential conflicts of interest to disclose.	☐ Yes ☑ No
If you answered above, I disclose the following facts: *Real or potential conflicts of interest may include, but are not limited to:* 1. Close family member who is an employee of the USAID operating unit (mission or office) or any implementing organization(s) whose project(s) are being evaluated. 2. Financial or employment interest or spousal employment in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation. 3. Current or previous direct or significant personal or business relationships with the project(s) being evaluated, including involvement in the project design or previous implementation of the project. 4. Current or previous work experience or seeking employment with the USAID operating unit (mission or office) or the implementing organization(s) whose projects are being evaluated. 5. Current or previous work experience with an organization that may be seen as competing with the implementing organization(s) whose project(s) are being evaluated. 6. Personal relationships with individuals, groups, organizations, or objectives of the particular project and organizations being evaluated that could bias the evaluation.	

I certify: (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.

Signature	Targalmaa Radnaabazar
Date	15 May, 2017

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