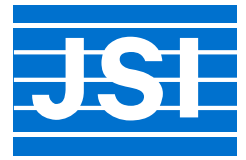




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# **USAID Cure Tuberculosis Project**

**Year I Annual Report**

**October 1, 2019 – September 30, 2020**

## **Annual Report November 16, 2020**

Cooperative Agreement No. 72011519CA00001

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## Table of Contents

Table of Contents.....	3
Acronym List .....	5
Annual Summary .....	7
About the Cure Tuberculosis Project .....	13
Sub-Purpose I: Increased DR-TB case detection.....	14
SSP I.1: Strengthened laboratory services and diagnostic networks.....	14
SSP I.2: PHC and community-based detection and contact tracing expanded.....	22
Sub-Purpose 2: More patients cured of DR-TB.....	27
SSP 2.1: All patients treated with appropriate treatment regimens of quality-assured drugs.....	28
SSP 2.2: Treatment completion rate increased.....	34
Sub-Purpose 3: Prevention of DR-TB Infections .....	39
SSP 3.1: Improved infection control in health facilities and laboratories.....	39
SSP 3.2: Provider, patient, and at-risk populations behaviors changed for TB prevention, detection, and treatment .....	43
Sub-Purpose 4: Improved enabling environment.....	48
SSP 4.1: Improved financing for TB services.....	49
SSP 4.2: Improved data for decision-making.....	52
SSP 4.3: Improved policies .....	56
SSP 4.4: Reduced stigma and discrimination.....	57
Cross-Cutting Issues.....	63
Gender equality and female empowerment .....	63
Sustainability mechanisms.....	67
COVID-19 epidemic.....	68
Monitoring and Evaluation .....	75
Challenges and proposed solutions .....	78
Priority Activities for Next Quarter .....	82
Administrative and Financial Progress.....	84
Administration .....	84
Human Resources.....	84
Finance.....	85
Deliverables.....	86
Annex 1: PITT Progress .....	87
Annex 2: Success Story: USAID Strengthens Chui Oblast DR-TB Concilium .....	87
Annex 3: Implementation of LDMIS and EMR in health care facilities.....	88

Annex 4. Regulatory documents developed and adopted in Year I .....	90
Annex 5: Background on COVID-19 epidemic .....	94
Annex 6: Calendar of Events.....	99
Annex 7: Media Clippings .....	101

## Acronym List

ACSM	Advocacy, Communication & Social Mobilization
AE	Adverse Events
AIDS	Acquired Immunodeficiency Syndrome
AOR	Agreement Officer Representative
AVHC	Association of Village Health Committees
CDP&SSES	Center for Disease Prevention & State Sanitary Epidemiological Surveillance
COP	Chief of Party
COVID-19	Coronavirus Disease 2019
CSO	Civil Society Organization
DDP&SSES	Department of Disease Prevention & State Sanitary Epidemiological Surveillance
DDS&ME	Department of Drug Supplies & Medical Equipment
DOT	Directly-Observed Treatment
DR	Drug-Resistant
DST	Drug Susceptibility Testing
EMR	Electronic Medical Record
EQA	External Quality Assurance
FAST	Find Actively, Separate, Treat
FDG	Family Doctor Group
FMC	Family Medicine Center
F&A	Finance and Administration
GOKR	Government of the Kyrgyz Republic
GPC	General Practice Center
HAKR	Hospital Association of the Kyrgyz Republic
HCW	Health Care Worker
HIV	Human Immunodeficiency Virus
HO	Health Organization
HPU	Health Promotion Unit
HSS	Health System Strengthening
IRB	Institutional Review Board
IT	Information Technology
JSI	JSI Research & Training Institute, Inc.
KAP	Knowledge, Attitudes and Practices
KR	Kyrgyz Republic
KSMIRFT	Kyrgyz State Medical Institute for Retraining and Further Training
LDMIS	Laboratory Data Management Information System
LMIS	Logistics Management Information System
LPA	Line Probe Assay
LTFU	Lost to Follow-Up
MDR	Multi-Drug Resistant
M&E	Monitoring and Evaluation
MELP	Monitoring, Evaluation and Learning Plan
MHIF	Mandatory Health Insurance Fund
MIS	Medical Information System
MOH	Ministry of Health
MTB	Mycobacterium Tuberculosis
NRCS	National Red Crescent Society
NRL	National Reference Laboratory
NTC	National Tuberculosis Center (National Center for Phthisiatry)

NTP	National Tuberculosis Program
OTC	Oblast Tuberculosis Center
PITT	Performance Indicator Tracking Table
PHC	Primary Health Care
PY	Project Year
QMS	Quality Management System
RCQESDI	Republican Center for Quarantine and Especially Dangerous Infections
RHPC	Republican Health Promotion Center
RIF	Resistance to Rifampicin
SBC	Social and Behavior Change
SES	Sanitary Epidemiological Service
SOP	Standard Operating Procedure
TB	Tuberculosis
TB DIAH	Tuberculosis Data, Impact Assessment, and Communications Hub
TOR	Terms of Reference
URC	University Research Co., LLC
U.S.	United States
USA	United States of America
USAID	United States Agency for International Development
USG	United States Government
VHC	Village Health Committee
XDR	Extensively Drug-Resistant



# USAID Cure Tuberculosis Project

## Year I Annual Results

October 1, 2019 – September 30, 2020

The Cure Tuberculosis project is a five-year activity (2019-2024) implemented by JSI Research & Training Institute, Inc. (JSI) in partnership with University Research Co., LLC (URC) which aims to strengthen the Kyrgyz government's ability to diagnose, treat, and cure people with drug-resistant tuberculosis (DR-TB).

Cure Tuberculosis works through four sub-grantee organizations, and in close collaboration with the Kyrgyz Republic's National Tuberculosis Program (NTP) under the Ministry of Health (MOH) and national partners.

### SUB-PURPOSE

**1**

Increased DR-TB case detection

### SUB-PURPOSE

**2**

More patients cured of DR-TB

### SUB-PURPOSE

**3**

Prevention of DR-TB Infections

### SUB-PURPOSE

**4**

Improved enabling environment

## KEY FIGURES

(2019 DATA)

**TB notification rate:**  
79 per 100,000

**TB mortality rate:**  
3.9 per 100,000

## SUB-GRANTEE ORGANIZATIONS

- National Red Crescent Society
- Association of Village Health Committees
- TB People
- Hospital Association of the Kyrgyz Republic

## YEAR I OBLASTS



## MONITORING AND EVALUATION (M&E)

- Conducted **baseline assessments** in all project functional areas in all pilot oblasts
- Established **project M&E system**, database and indicators
- Strengthened **M&E capacity** of project sub-grantees
- Revised and printed NTP **recording and reporting forms**
- Designed facility-based survey using international [Quality of TB Services Assessment](#) (QTSA) methodology; adapted tools to Kyrgyz context
- In Year 2, will continue strengthening **national M&E systems** by revising M&E guidelines and tools

## GENDER

- In Year 1, **10,437** people participated in project trainings and workshops from health facilities, civil society and communities; **11 times more women than men**
- **Gender-disaggregated indicators** collected and analyzed
- **Gender-based approach** in social and behavior change and targeted case-finding strategies

## SUSTAINABILITY

- All project activities geared towards **national self-reliance**
- New TB financing methods developed in Year 1 **institutionalized**
- Sputum transportation system transferred to the **state budget**
- Medical information systems (MIS) rolled out in Year 1 critical for **evidence-based use of data**
- Restructuring of Oblast TB Centers and DR-TB Concilia will improve **effectiveness of TB services** and case management
- **Capacity-building** of TB specialists at all levels of the system; training curricula institutionalized through post-graduate institute
- Strong partnerships with **civil society and communities** ensure patient-centered support

## CHALLENGES AND SOLUTIONS

- The **COVID-19 epidemic** in Kyrgyzstan emerged in late March and affected all aspects of the project, TB services and the health system
- The project implemented a number of activities to mitigate the impacts of COVID-19 and **preserve essential TB functions**:
  - policy reform
  - treatment monitoring
  - awareness-raising
  - infection control
  - patient support
  - information systems
- Leadership and structural changes in key partner organizations required **relationship-building efforts**

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## USAID Cure Tuberculosis Project

JSI Research & Training Institute, Inc. (JSI)

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[Cure Tuberculosis Project Page \(JSI\)](#)

[Cure Tuberculosis Fact Sheet \(USAID\)](#)



## KEY FIGURES (2019 data)



RR/MDR-TB cases notified  
**1,359**

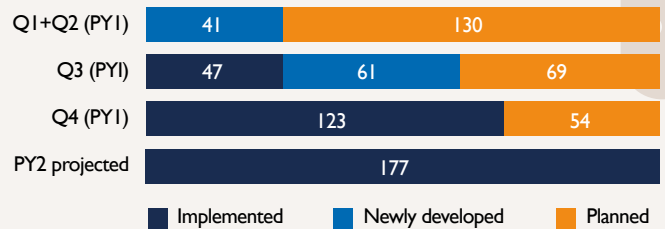
**63%** Bacteriological diagnosis coverage

**77%** GeneXpert coverage

## LABORATORIES AND DIAGNOSTIC NETWORKS:

- Implemented the **optimization of the laboratory network** in Chui Oblast with revised diagnostic algorithms
- Implemented the **Quality Management System (QMS)**:
  - Developed and adapted **123 standard operating procedures (SOPs)** (70%) of the 177 required for peripheral laboratories conducting microscopy and GeneXpert testing (Figure 1)
- Updated the **QMS Manual** for the NRL, developed corresponding SOPs and trained 12 NRL specialists
- Developed **SOPs for sputum collection** at PHC level; trained nurse focal points from 9 facilities in Chui Oblast to train lower-level facilities on sputum collection

Figure 1. Development and implementation of SOPs at PHC laboratories in Chui Oblast, 2020.



- Developed standard reporting forms on **turn-around time** for molecular genetic tests, culture and DST and other lab indicators, and trained staff

## MEDICAL INFORMATION SYSTEMS:

- Installed the **Laboratory Data Management Information System (LDMIS)** in 48 facilities nationwide
  - In Year 1, **202 health workers** are using LDMIS, with **72,000 TB test results** in the system
- Created a **GeneXpert personification module** in LDMIS to automate input and link test results to individual patients



## COMMUNITY-BASED CASE DETECTION:

- Trained **6,911 community leaders** countrywide on disseminating TB information and reducing stigma
- Trained **93 religious leaders** on TB to spread awareness, identify presumptive cases and reduce stigma
- 333,789 people** were reached with TB information through information sessions, WhatsApp groups and public awareness campaigns
- 19 people** with presumptive TB were referred for testing

## CONTACT INVESTIGATION:

- Conducted a **baseline assessment** of contact investigation in health facilities in Chui Oblast
- Implemented **expanded contact investigation** guidelines in 2 pilot rayons of Chui Oblast, including extended timeframe and processes for identifying and monitoring contacts
- Trained **206 specialists** from PHC and SES on updated guidelines

## COVID-19:

- Helped NRL split diagnostic testing for TB and COVID-19 between **day and night shifts** with appropriate infection control measures
- Trained **10 NRL specialists** on precautions during COVID-19 testing



## WANT TO KNOW MORE?

- [Animated infographics video on LDMIS \(in Russian\)](#)



- [Video on the role of religious leaders in fighting TB \(in Russian\)](#)







## KEY FIGURES

**86%** RR/MDR-TB cases enrolled on treatment

**79%** DS-TB

**55%** RR/MDR

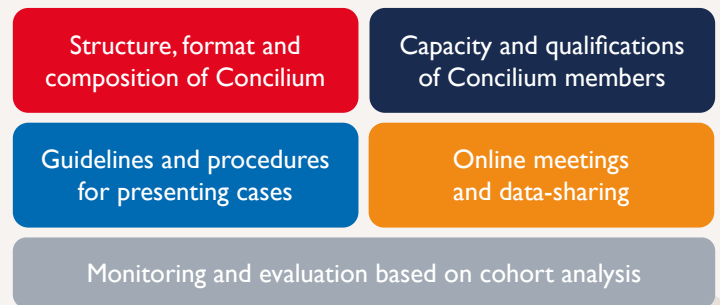
**58%** XDR-TB

## Treatment success rates:

## DR-TB CLINICAL MANAGEMENT:

- Revised the **clinical guidelines** on DR-TB management; approved by the MOH and trained 52 TB doctors and nurses
- Conducted a **baseline assessment** of Concilium functions:
  - Results show low effectiveness and capacity, unclear responsibilities and procedures → treatment delays and prescription of ineffective regimens
- Started the **reform of DR-TB Concilia** with a pilot in Chui Oblast, through changes in:
  - Structure (restructuring, capacity-building)
  - Procedures (guidelines for presenting cases, videoconferencing)
  - Methodology (cohort analysis) (Figure 2)

Figure 2. Elements of DR-TB Concilium reform.



- Developed an **advanced DR-TB training curriculum** for Concilium members; adopted by the post-graduate institute
- Implemented the **Electronic Medical Record** in **14 TB hospitals**; **620 users** and data on **7,259 patients**

## COMMUNITY-BASED TREATMENT SUPPORT:

- Developed an algorithm and tools for the coordination of civil social organizations with the health care system for TB patient **case management**
- Returned **25 patients** to treatment who were lost to follow-up or refused treatment
- Provided social support to **161 TB patients** at risk of treatment interruption:
  - Provided support to **41 patients** transitioning from the penitentiary system
  - 198 patients in need** received food and hygienic packages worth 879,990 soms
  - Mobilized **361,060 soms** of financial assistance for **251 vulnerable TB patients** through community advocacy

### Priority groups:

- migrants
- former prisoners
- homeless people
- people living with HIV
- disadvantaged groups



### Social support includes:

- food and hygiene packages
- patient support groups
- training on infection control measures
- Directly-Observed Treatment (DOT)
- individual counseling



## DRUG MANAGEMENT:

- Conducted a **baseline assessment** of drug and adverse events management and adverse events management
- Developed **drug management and active drug safety monitoring (aDSM) tools**
- Revised **drug management SOP**

## COVID-19:

- Developed a regulation on **video-controlled treatment (video DOT)** to ensure TB treatment adherence under COVID-19 restrictions
- Created virtual **WhatsApp patient support groups** with the consent of TB patients and disseminated information online

## WANT TO KNOW MORE?

- [Success story on Strengthening Oblast Concilium for Better Tuberculosis Treatment Monitoring](#)
- [Story on psychological support to TB patients](#)
- [Success story on Uninterrupted Treatment for Tuberculosis Patients amid COVID-19 crisis](#)
- [Video on community-based treatment support \(in Russian\)](#)



## KEY FIGURES

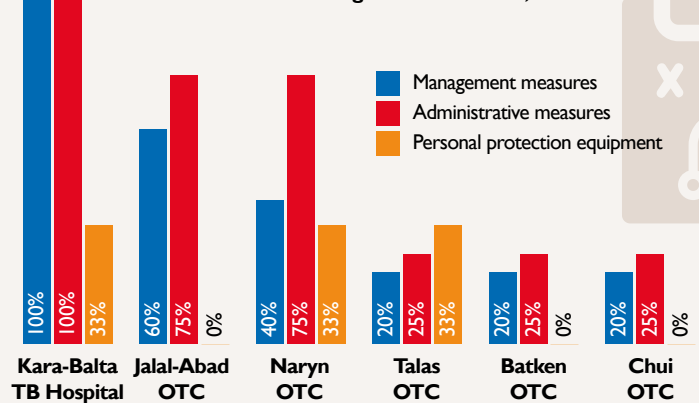
TB incidence rate among health care workers (2019 data)

**96 per 100,000**

## INFECTION CONTROL

- Conducted **6 baseline assessments** of infection control (IC) in Chui, Talas, Jalal-Abad, Naryn and Batken Oblast TB Centers and Kara-Balta TB Hospital
- Results showed **poor IC measures** overall, with slightly better administrative and management measures and very poor environmental control measures and PPE (Figure 3)
- Developed **4 IC Plans** based on the baseline assessment results for the Chui, Talas, Naryn and Jalal-Abad OTCs for 2020-2021
- Assessed IC measures in **18 PHC organizations** in Naryn, Batken, and Jalal-Abad Oblasts
  - Results showed a similar picture at PHC facilities as for OTCs

Figure 3. Baseline assessment results of infection control measures in regional TB centers, 2020.



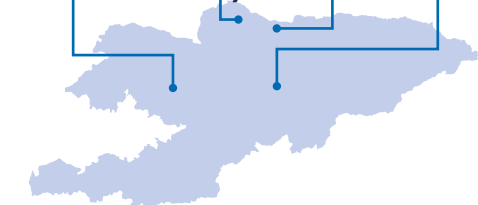
\* Environmental control measures are 0% across OTCs

\*\* Aggregate scores of 18 IC indicators

## SOCIAL AND BEHAVIOR CHANGE RESEARCH

Conducted **qualitative formative research** on behaviors related to TB diagnosis and treatment among target groups in **4 areas**

Jalal-Abad Obl. Bishkek City Chui Obl. Naryn Obl.



- Enrolled **547** participants
- migrants and their families
  - former prisoners
  - people who misuse substances
  - people living with HIV
  - homeless people
  - general population
  - health care workers and NGO staff

## RESULTS

- many **barriers** to getting tested and completing treatment
- many **misconceptions** about TB
- widespread **stigma** against TB patients

## STRATEGY

Designed a project **SBC strategy** to address barriers and misinformation with targeted approaches, messages and communication channels to:

- encourage testing
- support completing treatment
- improve infection control
- decrease stigma and discrimination

Started developing the **national SBC strategy**

**7** videos prepared showing

- patient treatment adherence
- psychosocial support
- role of religious leaders in fighting TB
- nutrition for TB patients
- infection control

## COVID-19:

- Provided technical assistance to **strengthen IC guidelines** at the NTP MDR-TB ward re-purposed to treat patients with COVID-19, dividing the ward into three zones depending on potential level of contamination
- Provided IC trainings to **49 NTP** staff on management of patients with COVID-19, personnel and process management, and medical waste management and disinfection measures
- Set up a system of **medical brigades** who work in the COVID-19 zone for 14 days followed by 14 days of self-isolation; Cure Tuberculosis staff pooled their own funds to buy surgical scrubs for the COVID brigades (video)

## WANT TO KNOW MORE?

- [Evaluation of factors affecting the behavior of target groups in health care-seeking and tuberculosis treatment](#)
- [“Honeymoon in the Red Zone:” video on humanitarian donation to the NTP COVID brigades and infection control](#)
- [Video on psychosocial support to TB patients \(in Russian\)](#)
- [Animated video on nutrition for TB patients \(in Russian\)](#)
- [Animated video on ventilation and infection control \(in Russian\)](#)





## KEY FIGURES

**Financing resources committed to TB services at PHC level (2019 data):**



**1,001 Individuals trained in components of the WHO End TB Strategy**

## FINANCING FOR TB SERVICES

- Developed a **financing standard for the transportation system** (~ **1 million soms** for Chui and Talas Oblasts) and transferred to Mandatory Health Insurance Fund (MHIF) budget

- January – September 2020



transported through the transportation system in Chui and Talas

- MHIF paid **350,200 soms** out of their budget for these services

- Developed a novel **per capita financing standard** for Oblast TB Centers – estimated at **1.6 soms** per population – to cover additional OTC coordination functions

- Institutionalization:** these financing standards were incorporated into the MHIF 2020 budget and 2021-2022 forecast and signed by the President into the **MHIF Budget Law**

- The **incentive payment system** for successfully-treated TB cases at PHC level is functioning in Chui and Talas Oblasts and some rayons of Jalal-Abad and Osh oblast

- MHIF allocated **34.2 million soms** for 2020
- Revised the **Financing of Treated Cases at PHC** software to enable analysis of treatment data

## DATA FOR DECISION-MAKING

- Completed the reengineering of the **TB Surveillance Information System (ES/TB)** clinical module
- Achieved **99.6% accessibility** of MIS systems in Year 1 through maintenance support to the NTP
- Developed **50 manuals and 50 training videos** to educate health care workers on LDMIS

**822 health care workers** use TB MIS routinely

## POLICIES

- Conducted a **situation analysis** in each of the 4 Oblast TB Centers in Chui, Talas, Jalal-Abad and Naryn
  - Results show unclear responsibilities, unnecessary hospitalization, weak M&E
- Developed 3-year **master plans** for each of the 4 OTCs to reform M&E departments and improve coordination functions

**Developed and adopted 12 governance documents**

## STIGMA AND DISCRIMINATION

- Developed a **stigma strategy** through mass media, social media, and interpersonal communication
- Distributed **TB information** through 369 TV, radio, online and print materials
- Developed the **NTP website**
- Increased reach through social media pages of NTP, MOH, and sub-grantees: **1,711 posts** by these organizations on:



## COVID-19

- Developed **COVID-19 module for LDMIS** and installed in **all 12 labs nationwide** performing testing for COVID-19
  - Developed **SMS notification system** to inform patients of test results without having to travel to avoid infection.
  - So far, **238,000 test results** for COVID-19 have been entered in the system

- Developed an MOH order on provision of **TB services under emergency conditions** due to COVID-19:
  - 14-day drug supply** for TB patients
  - Remote DOT options** (video DOT, online and community-based treatment support)
  - Shifting **Concilium meetings online**

- Disseminated important **TB/COVID-19** information through social media
- Seconded two project SBC staff to the MOH** to help with the COVID-19 response; helped produce **120 communications materials**
- Developed **COVID-19 module in QTSA** to measure impact of COVID on TB services

## WANT TO KNOW MORE?

- [Success story on Sustainability of Transportation System and Financing Methods for Tuberculosis](#)
- [Success story on Kyrgyz Republic Response to Tuberculosis under COVID-19 Emergency](#)



# COVID-19 and Tuberculosis



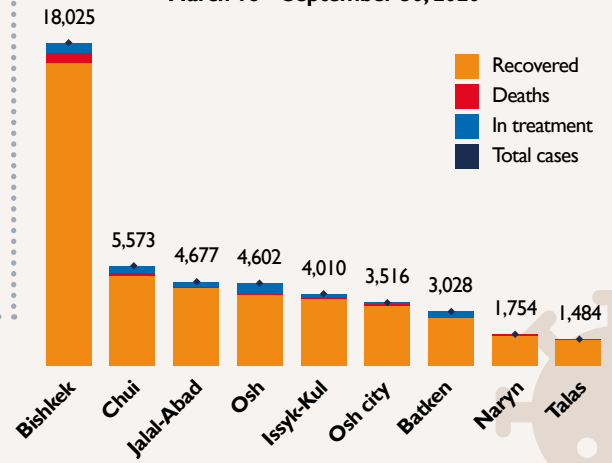
## COVID-19 EPIDEMIC IN KYRGYZSTAN

- March 18, 2020: **first 3 cases** of COVID-19 detected
- March 22: **emergency situation** declared (still in effect)
- **Restrictions on movement** → difficult for patients and health workers to visit health facilities
- TB patients at **high risk** of COVID-19 and TB treatment interruption
- NTP MDR-TB ward **re-purposed** for treatment of COVID-19 patients
- NRL tasked with **testing for COVID-19**

### COVID-19 cases (as of September 30, 2020):

- 46,669 total cases
- 3,255 cases among health care workers
- 42,879 people recovered
- 1,064 deaths

Figure 4. Total COVID-19 cases reported by Oblast, March 18 – September 30, 2020

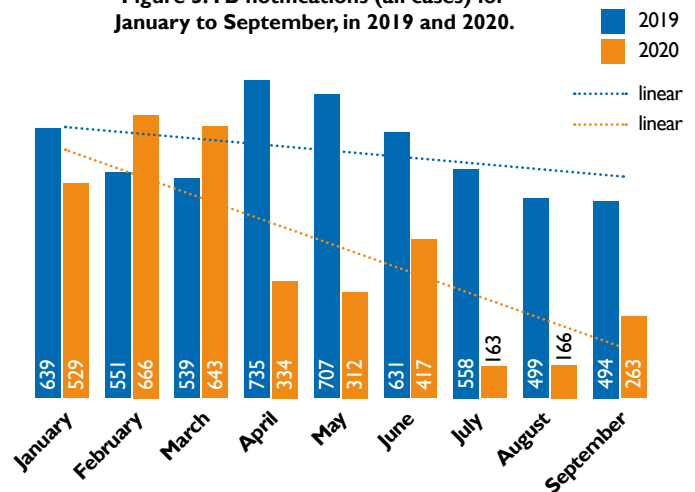


## IMPACT OF COVID-19 ON TB SERVICES

### TB DIAGNOSIS AND CASE DETECTION

- Number of diagnostic **microscopy tests** conducted at PHC level in all oblasts countrywide has decreased from Q1 through Q3 of 2020
  - May indicate **decrease in presumptive** cases presenting to PHC facilities
- Volume of **sputum samples** sent through the transportation system to the NRL from all oblasts decreased from Q1 to Q3 2020
  - Decreased by 23% overall compared to the same period in 2019
- **TB notifications have steadily decreased** Q1 to Q3 2020, and compared to the same period in 2019 (Figure 5)
- Difficulties sustaining **contact investigations** for TB

Figure 5. TB notifications (all cases) for January to September, in 2019 and 2020.



### TB TREATMENT AND CASE MANAGEMENT

- **Volume of DR-TB cases** discussed at Concilia has decreased from Q1 to Q3 2020 in Chui, Naryn, Talas and Batken Oblasts
- MHIF **interrupted incentive payments** for successfully-treated TB cases from July to September
  - May affect the **quality of case management**
- **DR-TB patients on treatment** in the MDR-TB ward of the NTP transferred to outpatient treatment and/or to new regimens
- Difficulties **monitoring treatment** and providing DOT

### HEALTH SYSTEM EFFECTS

- Many **health workers** infected
- **Reallocation of resources** towards COVID-19:
  - Funding
  - Health worker personnel
  - Beds, diagnostics, medical equipment, drugs, PPE
- Severe **infection control** challenges throughout the health system

### Monitoring the impact:

- ↳ Cure Tuberculosis developed a **COVID-19 module** as part of the QTSA survey to measure the effects on TB services:
  - TB diagnosis and case detection
  - Treatment, case management and treatment support
  - Patient health-seeking behavior
  - Infection control
  - Drug management
  - Resource allocation
- ↳ Implementation begins in Quarter 1 of Year 2.

## About the Cure Tuberculosis Project

Designed under the framework of the United States Agency for International Development's (USAID) Global Tuberculosis Accelerator initiative, the five-year USAID Cure Tuberculosis Project (Cooperative Agreement No. 72011519CA00001) is implemented by JSI Research & Training Institute, Inc. (JSI). JSI collaborates with University Research Co., LLC (URC) as an implementing partner, U.S. Pharmacopeial Convention as a technical assistance partner, and four local sub-grantees (Association of Village Health Committees, Hospital Association of the Kyrgyz Republic, National Red Crescent Society of the Kyrgyz Republic, and TB People in Kyrgyzstan).

The Project's goal is to strengthen the Kyrgyz government's ability to diagnose, treat, and cure people with drug-resistant tuberculosis (DR-TB).

The Project has four sub-purposes:

### **Sub Purpose 1: Increased DR-TB case detection**

SSP 1.1: Strengthened laboratory services and diagnostic networks

SSP 1.2: PHC and community-based detection and contact tracing expanded

### **Sub Purpose 2: More patients cured of DR-TB**

SSP 2.1: All patients treated with appropriate treatment regimens of quality-assured drugs

SSP 2.2: Treatment completion rate increased

### **Sub Purpose 3: Prevention of DR-TB Infections**

SSP 3.1: Improved infection control in health facilities and laboratories

SSP 3.2: Provider, patient, and at-risk populations behaviors changed for TB prevention, detection, and treatment

### **Sub Purpose 4: Improved enabling environment**

SSP 4.1: Improved financing for TB services

SSP 4.2: Improved data for decision-making

SSP 4.3: Improved policies

SSP 4.4: Reduced stigma and discrimination

The USAID Cure Tuberculosis Project focuses on strengthening capacities, systems, tools, and resources and addressing gaps to reflect the global evidence base and improve the function of the Government of the Kyrgyz Republic's (GOKR) TB program. The Project will contribute directly to USAID's vision for the GOKR to achieve a greater ability to lead, design, manage, and monitor a system of high-quality, integrated TB services; and of a civil society that works hand-in-hand with the government to support these efforts and fill gaps.

The Project will work with the GOKR to ensure people-centered TB diagnosis, treatment, and prevention services are supported by an enabling environment and are delivered at the macro (policy and structural), meso (interlinking health and social services), and micro (individual) levels.

## Sub-Purpose I: Increased DR-TB case detection

### Sub-Purpose I Key Achievements:

#### SSPI.1: Strengthened laboratory services and diagnostic networks:

1. Facilitated a political consensus on the **optimization of the TB laboratory network** in Chui Oblast and implemented the revised diagnostic algorithm.
2. Developed and adapted **123 standard operating procedures (SOPs)** (70%) of the 177 required for peripheral laboratories conducting microscopy and GeneXpert testing. Implemented all 123 in the TB laboratories of the 9 Family Medicine Centers (FMCs) of Chui Oblast and developed 2 related guidelines on safety and equipment.
3. Implemented the **Quality Management System (QMS)** at PHC facilities and at the National Reference Laboratory (NRL); revised the QMS Manual for the NRL, developed SOPs and trained 12 NRL specialists.
4. Developed **SOPs for sputum collection** at PHC level; trained nurse focal points from 9 facilities in Chui Oblast to train lower-level facilities on sputum collection techniques.
5. Developed a standard reporting form on **turnaround time (TAT)** for molecular genetic test methods, culture, and DST, and trained laboratory coordinators in all regions on the reporting forms.
6. Installed the **Laboratory Data Management Information System (LDMIS)** software in 48 facilities nationwide: 27 TB laboratories, 14 hospitals, nine PHC facilities, and 12 Sanitary and Epidemiological Service (SES) laboratories (COVID-19 module for LDMIS). In Year 1, **202 health workers** are using LDMIS and **72,000 TB test results** are in the system.
7. Created a **GeneXpert personification module** in LDMIS to automate the input of test results, ensure data quality, and link test results to individual patients.
8. Initiated the development of a **Transportation of Biomaterial software** to optimize the logistics and routing of biological samples sent through the transportation system.

#### SSP I.2: PHC and community-based detection and contact tracing expanded:

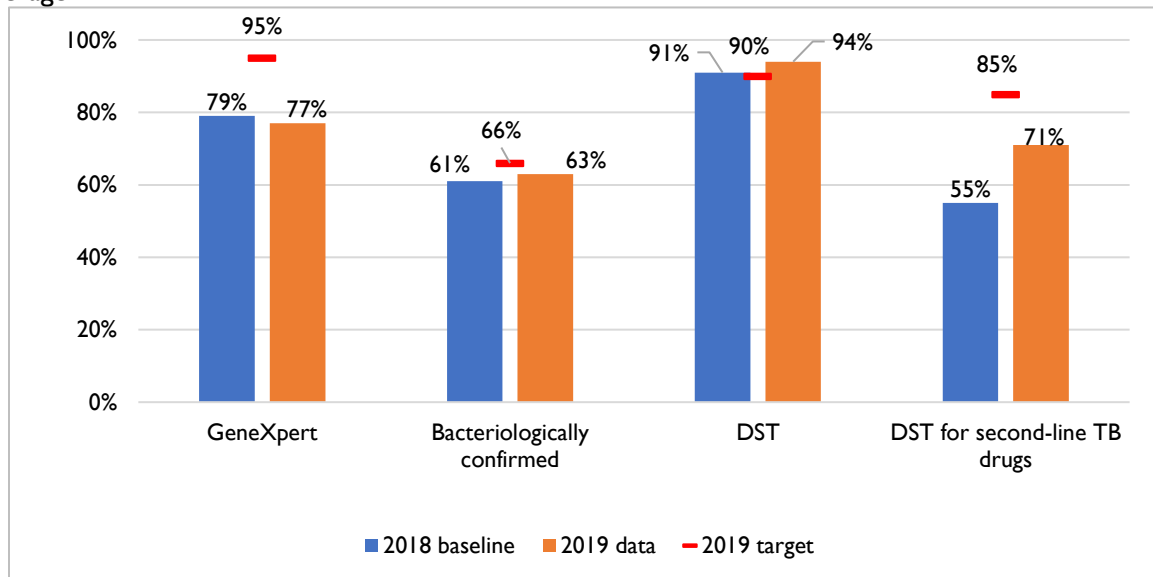
9. Introduced an **expanded approach to contact investigation** in Sokuluk and Kemin rayons of Chui Oblast. Trained 206 specialists from PHC and SES in the two pilot rayons on the updated algorithms and instructions.
10. Trained 10 representatives from sub-grantees and 12 regional Health Promotion Unit (HPU) specialists on informing the public on TB, who then trained 72 rayon HPU specialists, who, in turn, **trained 6,911 community leaders** nationwide.
11. Trained **93 religious leaders** on TB to spread awareness, identify presumptive cases and reduce stigma and discrimination.
12. In Year 1, **337,789 people** were reached with TB information through information sessions, WhatsApp groups and public awareness campaigns.
13. **19 people** with presumptive TB were referred for testing.

### SSPI.1: Strengthened laboratory services and diagnostic networks

Currently, there are 107 TB laboratories in the country at the PHC level (which conduct microscopy and GeneXpert testing), six regional culture laboratories (culture on Löwenstein–Jensen medium for diagnostics and treatment monitoring) and the National Reference Laboratory (line probe assay (LPA) for first and second-line TB drugs, Mycobacteria Growth Indicator Tube (MGIT) culture for diagnosis, phenotypic Drug Susceptibility Testing (DST)). Despite the equipment of TB laboratories with modern

diagnostic methods and the development of a well-functioning transportation system with technical support from USAID in 2017, the percentage of bacteriologically-confirmed cases and DST coverage are still low. According to 2019 NTP data, the coverage with GeneXpert testing is 77%, the share of bacteriologically-confirmed cases is 63%, DST coverage is 94%, and coverage with DST for second-line drugs is 71%. Most figures have increased since 2018 levels, but most still fall short of the targets set for these national indicators for 2019 (Figure 1). This level of diagnostic access and quality is a significant barrier to reducing the TB epidemic in the country.

Figure 1. Key 2019 indicator results compared to 2019 targets and 2018 baselines for GeneXpert coverage, Proportion bacteriologically-confirmed, DST coverage, and DST for second-line drugs coverage



In the first year of implementation, the Cure Tuberculosis Project focused on strengthening laboratory diagnostics at the National Reference Laboratory (NRL) and TB laboratories at regional and rayon levels, including improving the quality of laboratory tests and adherence to the diagnostic algorithm. The improvement of the transportation system, the introduction of a laboratory data management information system (LDMIS) in health care organizations, and the implementation of the quality management system (QMS) in primary health care laboratories were also identified as priority tasks for Year I of the Project.

#### Quality Management System (QMS)

Since 2012, with the technical support of USAID, QMS has been implemented at the NRL and seven regional-level laboratories. At primary-level TB laboratories, the Project introduced certain elements of QMS, mainly related to microscopy quality control, including external quality assurance (EQA). Currently, TB laboratories at PHC level play an important role in TB services and first-line case detection, which affects the overall quality of TB diagnostics and early detection of TB cases.

QMS is a key element in ensuring the quality of laboratory testing. The 12 building blocks of QMS, or quality system essentials (QSEs), allow a complete overview of the processes on which the quality of laboratory tests depends, covering all stages from the collection of sputum samples to the receipt and interpretation of test results by a clinician (Figure 2). The absence of QMS can lead to laboratory errors, hyper diagnosis or hypo diagnosis, interruptions in work, and delays in provision of test results. When

implementing QMS, the Project used the WHO laboratory quality stepwise implementation (LQSI) tool as guidance to ensure correct implementation of the procedures of the QSEs (WHO)<sup>1</sup>. LQSI describes the logical stages of QMS implementation in accordance with ISO 15189. The implementation of QMS is divided into four phases which combine several of the above processes into a single whole, starting from basic structural elements including infrastructure and equipment, all the way to safety and quality improvement processes.

The Project linked the implementation of QMS with the TB laboratory optimization plan, according to which microscopy and GeneXpert testing at the PHC level will be carried out nationally on the basis of 54 primary-level TB laboratories (of which 21 labs have GeneXpert). In 2017, a National TB Roadmap was developed that aimed to rationalize the TB control system through optimization of the TB hospital network, PHC facilities and the laboratory network. The TB laboratory system optimization plan is not aimed at a reduction in the number of TB laboratories, but at the establishment of a system of referring patient samples for diagnostics from the PHC level for GeneXpert, LPA testing, culture and phenotypic DST according to the diagnostic algorithm and providing and receiving feedback and test results by clinicians for decision making.

According to this plan, for Chui Oblast it was decided that TB laboratory testing would be performed only in the four Family Medicine Center (FMCs) which host Xpert MTB/RIF platforms, Jaiyl, Sokuluk, Yssyk-Ata rayons and Tokmok, instead of all nine. Other rayons will use the transportation system in place to send sputum samples to these laboratories for diagnosis and for the monitoring of the effectiveness of treatment. According to the national diagnostic algorithm, all sputum samples are first sent for microscopy and GeneXpert for first-line testing. For all samples with positive results, or negative results with clinical signs of TB, further samples are then sent to the National Reference Laboratory for culture and DST (Figure 3). However, prior to the Project, there was no concrete system, guidelines or tools in place for operationalizing this plan.

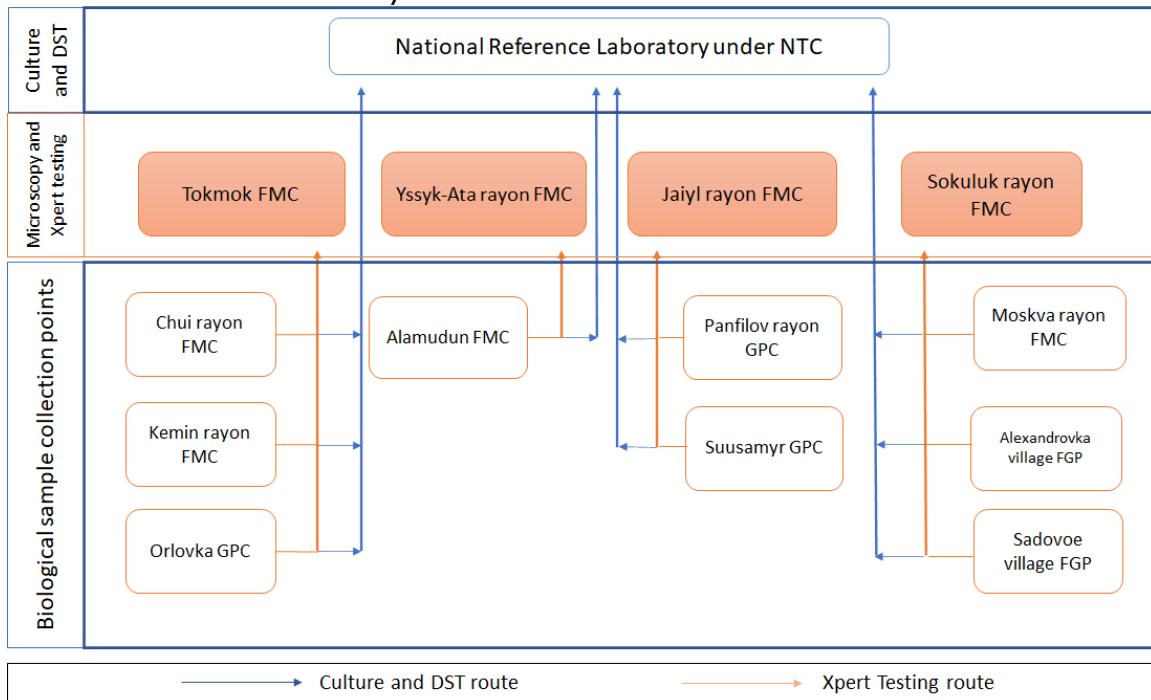
Figure 2. Twelve building blocks of the Quality Management System for TB laboratories in accordance with ISO 15189. WHO



<sup>1</sup> WHO. Laboratory Stepwise Implementation Tool. <https://extranet.who.int/lqsi/content/quality-management>



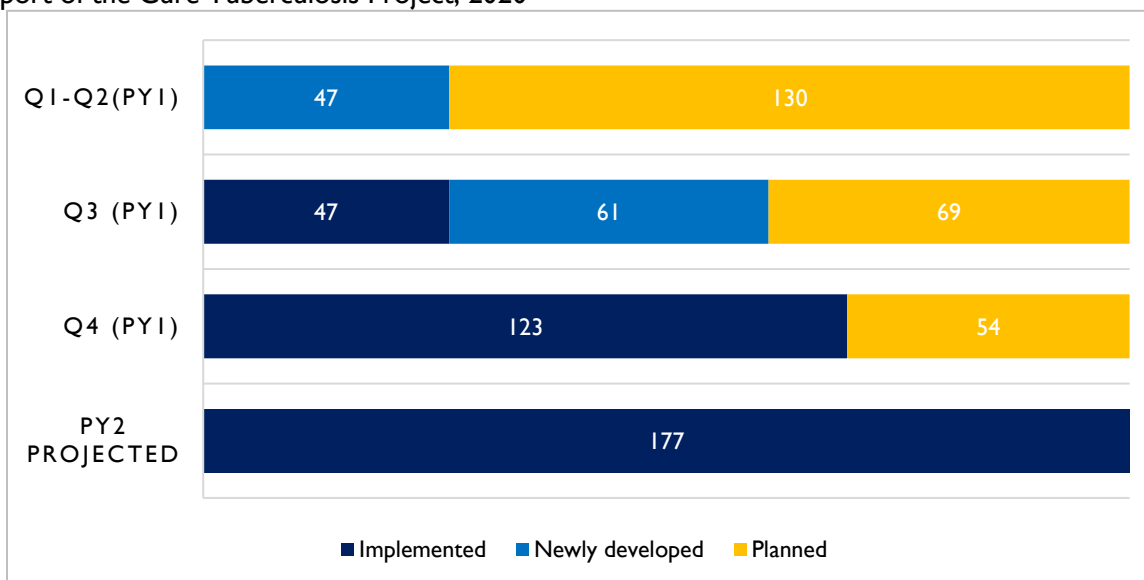
Figure 3. Movement of TB laboratory tests from/to FMC/FGP of Chui Oblast



In Year 1, the Cure Tuberculosis Project actively facilitated a political dialogue and consensus on optimizing laboratory services for the diagnosis and treatment of TB patients in Chui Oblast, and devised and implemented all of the required steps to operationalize the optimization plan. In Quarter 2, the Cure Tuberculosis Project carried out an audit of the laboratories of four FMCs in Chui Oblast against the 12 elements of QMS. The audit included an analysis of the workload level, an assessment of internal processes, compliance with the diagnostic algorithm, equipment of laboratories, and the availability of trained personnel. Based on the analysis and evaluation, the Project developed an operational plan aligned with QMS criteria to optimize and improve the quality of laboratory tests in the TB laboratories. In February, this plan was approved by the PHC organizations of Chui Oblast and accepted for execution. The Project also installed the LDMIS in five FMCs of Chui Oblast as an important pre-requisite for optimization of the laboratory network and plans to install it in the remaining four FMCs in Quarter 1 of Year 2.

In Quarters 3 to 4, Cure Tuberculosis provided technical assistance in the implementation of this plan and the introduction of QMS in TB laboratories of primary health care organization in Chui Oblast. The Project revised the current QMS guidelines for TB laboratories at the rayon level and adapted standard operating procedures (SOPs). According to ISO-15189 QMS requirements, all first-level PHC laboratories performing microscopy and GeneXpert testing much develop and implement 177 SOPs for microscopy and GeneXpert and four related guidelines. In Year 1, Cure Tuberculosis helped develop 123 out of the required 177 SOPs and provided technical assistance to laboratory specialists in Chui Oblast to adapt the SOPs to the structure and context of each individual laboratory to prepare them for implementation. These 123 SOPs were fully implemented, and two safety and equipment guidelines were developed (Figure 4). Thus, with the technical support of the Cure Tuberculosis Project, three out of four phases of QMS were implemented in the TB laboratories of all nine FMCs of Chui Oblast.

Figure 4. Development and implementation of SOPs at PHC laboratories in Chui Oblast with the support of the Cure Tuberculosis Project, 2020



The implementation of the fourth phase of QMS in the PHC laboratories of Chui Oblast will be completed in Quarter 1 of the second year of project implementation. Additionally, in Quarter 1 of Year 2, following the successes in Chui Oblast, the Project will carry out an assessment and audit of primary-level TB laboratories in Naryn, Talas, and Batken Oblasts to develop plans for the optimization and implementation of QMS and will begin the adaptation and implementation of the SOPs in those laboratories.

In order to ensure the sustainability of QMS, in Year 2 the Project will continue to work on financing reforms which include calculating the real cost of laboratory tests as well as external processes such as QMS, in order to develop a laboratory payment system that rationalizes costs and safeguards critical laboratory services.

In Year 1, in addition to primary-level TB laboratories, Cure Tuberculosis implemented activities to strengthen the National Reference Laboratory. The NRL plays a key role in ensuring quality laboratory tests for TB throughout the country, offers essential TB diagnostic tests, such as MGIT, DST for first-line drugs (FLD) and second-line drugs (SLD), and provides external quality assurance (EQA) of laboratories at primary and regional levels. At the beginning of the Project, 50% of the NRL staff were new hires, the QMS manual did not include new systems developed over the past few years in the country, such as LDMIS and the transportation system, and did not take into account new approaches and regimens in treatment of TB patients. The Cure Tuberculosis Project provided technical assistance on the revision of the NRL QMS manual and the current SOPs in Year 1: in Quarters 1 and 2, two cascade three-day training sessions on QMS were conducted for a total of 12 NRL specialists, and in Quarter 3 and 4, NRL specialists began to adapt internal SOPs and quality improvement processes for detected problems. The end result of this process will be the updating of all processes within the NRL, taking into account current systems and the updated diagnostic algorithm.

#### *Sputum collection*

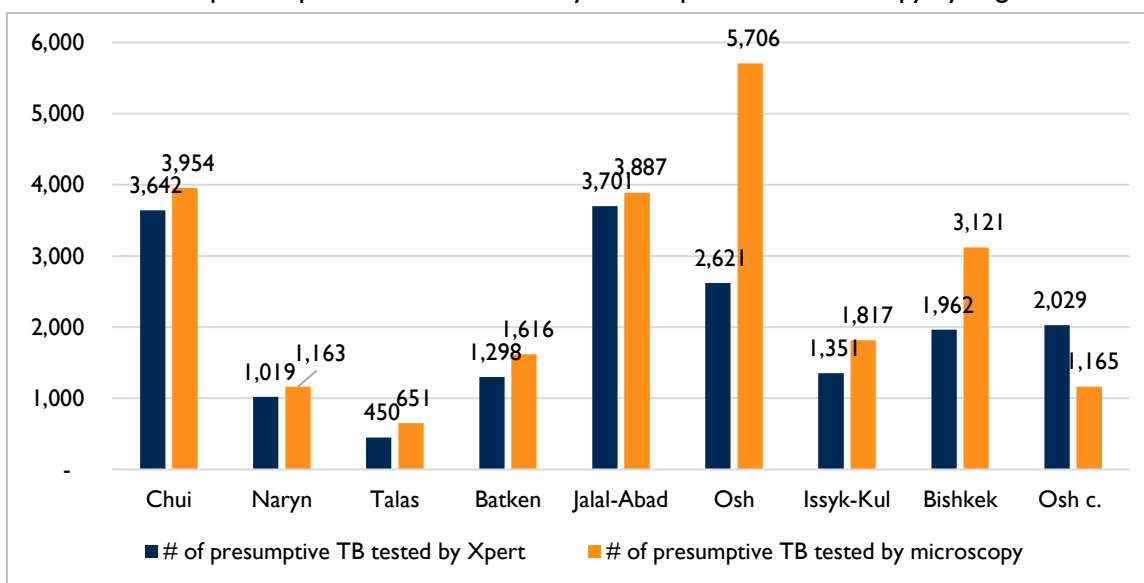
In the first year of implementation, Cure Tuberculosis initiated a number of activities to improve the quality of sputum samples at the PHC level. In Quarters 1 to 2, the Project helped to develop SOPs for

sputum collection at PHC. In Quarter 3, Project specialists selected TB nurses of nine FMCs in Chui Oblast to be focal points for the quality of sputum samples at the PHC level and trained them on the sputum collection technique. From Quarter 4, the trained nurses (focal points) began instruction on the quality of sputum collection for the Family Group Practice (FGP) and Feldsher-Accoucheur Point (FAP) nurses responsible for sputum collection. The Project will roll out this approach in other pilot oblasts starting from Quarter 1 of Year 2 and facilitate the monitoring of sputum sample quality by laboratory coordinators on a quarterly basis and discussed at regional meetings.

#### Diagnostic algorithm and laboratory indicators

Although TB protocols and diagnostic algorithms have been developed and approved at the national level, including GeneXpert MTB/RIF, the SOPs for the TB diagnostic algorithm in TB laboratories at the PHC level have not been revised. Prior to the Project, laboratory specialists performed GeneXpert testing only at the request of clinicians, although all diagnostic sputum samples are supposed to be tested by GeneXpert. In Quarter 2, the Cure Tuberculosis Project revised the SOP on the TB diagnostic algorithm for PHC laboratories, and trained laboratory specialists from nine FMCs in Chui Oblast. Starting from the first quarter of the second year, the training on the updated SOP will be conducted for PHC laboratories in other pilot regions and its implementation will begin. Figure 5 shows that testing with GeneXpert still lags behind microscopy in nearly all regions,<sup>2</sup> even though samples should be tested on both according to the diagnostic algorithm. Despite its lag in use relative to microscopy, national GeneXpert coverage has been steadily increasing since 2018, thanks to large investments in this area in training and introduction of the transportation system (Figure 6).

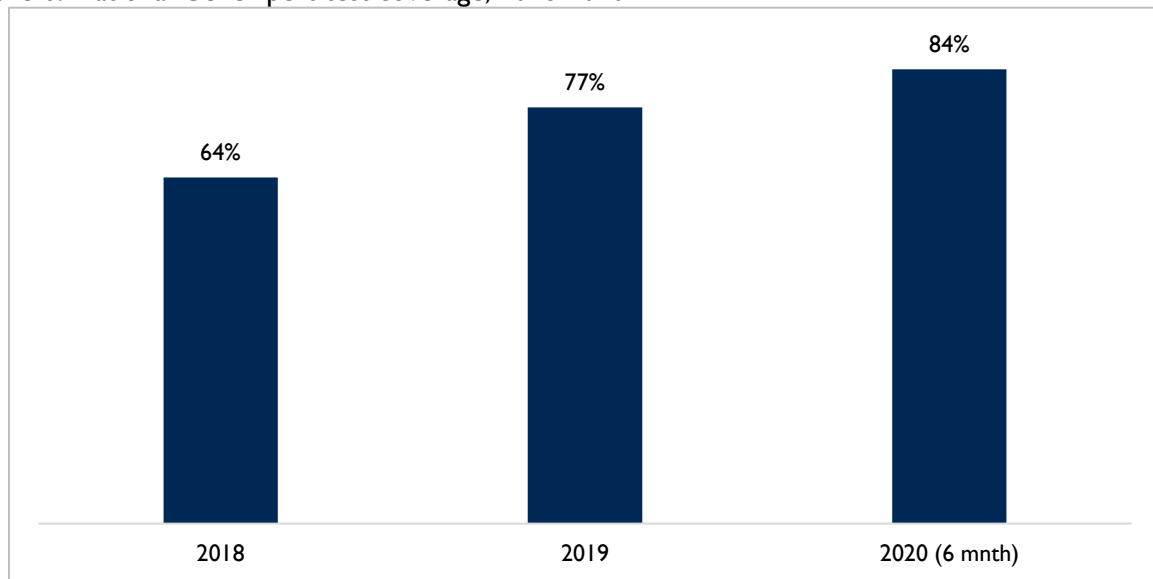
Figure 5. Number of presumptive TB cases tested by GeneXpert and microscopy by region, 2019



(Source: NTP)

<sup>2</sup> Microscopy exceeds GeneXpert in all regions except for Osh city, where a pilot project run by Médecins Sans Frontières (MSF) in Kara-Suu rayon implemented a different algorithm with GeneXpert as the main initial diagnostic test.

Figure 6. National GeneXpert test coverage, 2018-2020



(Source: NTP/NRL)

In order to conduct regular monitoring of the adherence to the TB diagnostic algorithm and quality of diagnostic tests, the Cure Tuberculosis project provided technical support to develop key indicators for laboratory data for Oblast TB Centers, along with standard reporting forms, which are generated based on LDMIS data at the regional level and can be used in the future to create graphs for monitoring purposes. These indicators include DST coverage, turnaround time (TAT), and discrepancies between culture on Löwenstein-Jensen medium and microscopy. Forms on turnaround time (TAT) for tests of molecular genetic diagnostic methods, culture and DST were compiled. In Quarter 4, project specialists, with the participation of the NRL, conducted an online instruction for laboratory coordinators of all regions on how to generate and use these reporting forms. Moving into Project Year 2, this data will be collected routinely at the regional level throughout the country.

#### *Laboratory Data Management Information System (LDMIS)*

In Year I, the Project worked on the expansion of the TB LDMIS developed in 2016 by a previous USAID tuberculosis initiative. The LDMIS software is synchronized with other Medical Information System (MIS) components and with the Electronic Medical Record (EMR) system. LDMIS has been implemented at the National Tuberculosis Center, all Oblast TB centers (OTCs), all TB hospitals with the EMR in place, and at some PHC facilities, including all nine FMCs of Chui Oblast as described above.

The LDMIS system allows for immediate sharing of information on results between FMCs that collect sputum samples (so-called collection points) and TB laboratories where microscopy and GeneXpert MTB/RIF testing are carried out (so far only in Chui Oblast), and Oblast-level laboratories in other oblasts or the National Reference Laboratory, and receive results of tests from the TB laboratories in real time.

The LDMIS system in place and trained medical personnel ensure faster TB diagnosis and more effective treatment based on accurate and rapid laboratory test results. With the full-fledged implementation of MIS at the primary health care level, including the implementation of the EMR and LDMIS, TB patients will save time and money avoiding time-consuming travels to the oblast centers or the capital and will receive their results at rayon Family Medicine Centers/health organizations much faster than previously.

The system is being continuously fine-tuned. Cure Tuberculosis MIS specialists created a GeneXpert testing personification module in order to automate the input of patients' test results and ensure data quality, thereby reducing the burden on medical staff and guaranteeing the rational use of work hours. The module allows for linking test results to each individual patient and automatically enters the data into the LDMIS without the need to physically enter each result, thus removing the risk of incorrect input. To date, the GeneXpert equipment used this module to automatically enter more than 200 tests into the database. In Year 2 Quarter 1, the software will be finalized and tested by users.

In total in Year 1, the LDMIS software has been installed in 27 TB laboratories, 14 hospitals, nine PHC facilities in Chui Oblast, and 12 SES laboratories (COVID-19 module for LDMIS). The full list of 48 laboratories is presented in Annex 3. To promote long-term use, the Project conducted on-the-job training for TB laboratory specialists and nurses online and in-person throughout the year, demonstrating the advantages of the system and how to correctly use it. The entries made in LDMIS were used by clinicians to prescribe treatment, including during Concilium meetings, to monitor the effectiveness of treatment and to determine treatment outcomes. From Quarter 1 to Quarter 4, the number of health care workers (HCW) using LDMIS has more than doubled (Table 1).

Table 1. Number of LDMIS users among health care workers by the end of each quarter in Year 1

<b>Date</b>	<b>Number of HCW</b>
<b>December 31 (2019)</b>	80
<b>March 31</b>	106
<b>June 30</b>	179
<b>September 30</b>	202

The number of TB test results in the LDMIS system has steadily increased since the beginning of the Project and has reached over 72,000 by the end of Year 1 (Table 2). The rate of increase of new TB test results slowed in Q3 and Q4 due to the COVID-19 epidemic and decreased testing. In addition, the COVID-19 module of LDMIS developed by the Project in Year 1 to capture test results for COVID-19 has added a further 238,000 tests to the system, effectively surpassing the number of TB tests in the system. Further information on the COVID-19 module is described under Sub-Purpose 4.

Table 2. Number of LDMIS lab tests by the end of each quarter in 2020

<b>Date</b>	<b>Number of TB tests</b>	<b>Number of COVID-19 tests</b>
<b>March 31</b>	>50,000	
<b>June 30</b>	>70,000	>150,000
<b>September 30</b>	>72,000	>238,000

The COVID-19 epidemic emerged in Kyrgyzstan in late March, with the introduction of an emergency situation and restrictions on movement. The LDMIS has become the only source of information about patient tests since the beginning of the epidemic and the related restrictions on movement and physical exchange of information, for example, on paper. This once again has proven the importance of a system like LDMIS for the country. LDMIS has been so successful that the Government of the Kyrgyz Republic is interested in rolling it out nationwide in all state and private laboratories to capture lab results for diagnosis and monitoring of all diseases. The Government has already implemented LDMIS in all laboratories conducting testing for COVID-19 (more information in SP 4), and they are now considering its use for other diseases.

The Project procured equipment to guarantee the work with the Medical Information System components in the TB service: 10 laptops, 38 all-in-one computers, and 23 barcode scanners. The equipment will be distributed among the NTP, Oblast TB Centers, TB hospitals, FMCs, and TB laboratories at all levels based on their needs to support the work of the MIS software.

#### *Transportation system strengthening*

The efficiency of the sputum transportation system was further strengthened in Year 1 to improve the quality of diagnostics in TB. Cure Tuberculosis initiated the development of a Transportation of Biomaterial software for the automation and control of transportation processes. The software will optimize the logistics and routing of the flows of samples and analyses of clinical and biological material to a clinical diagnostic laboratory for TB, and allow for the automation and control of the transfer of biological samples for testing to another laboratory, control of the shelf life of the biomaterial, the calculation and analysis of shipping costs, and monitoring of the process of transportation of biomaterials with regard to temperature control, delivery time, and completeness of delivery in accordance with a delivery note. Cure Tuberculosis developed a TOR for the Transportation of Biomaterial software development. A tender will open in Quarter 1 of Year 2.

During COVID-19, Cure Tuberculosis helped to mitigate coordination problems within the transportation system by providing technical assistance to Oblast laboratory coordinators on timely transportation of samples to the NRL for culture and DST. Assistance included online communication with the transport company and the Oblast laboratory coordinators, development of temporary instructions, and changes in the transportation schedule. Thanks to Project assistance, all samples were delivered without interruption.

In April, the NRL was designated as one of the laboratories to test for COVID-19. After PCR equipment was installed and NRL staff trained in diagnostic methods for COVID, a system of shifts was established to enable TB testing to continue during the day, with COVID testing taking place at night. The Cure Tuberculosis Project conducted on-the-job training for 10 specialists from the NRL on using PPE and ensuring safety during COVID-19 testing.

## **SSPI.2: PHC and community-based detection and contact tracing expanded**

#### *Contact investigation*

By the beginning of the first year of the Project, TB contact investigation activities were supposed to be carried out on the basis of Ministry of Health Order No. 429 of June 13, 2018, developed with the technical support of the USAID Defeat TB project, which included a new approach and concept for tracing TB contacts, updated the 'Index case' category, and expanded the category of persons for compulsory observation and TB examination. Unfortunately, the NTP did not take appropriate measures to ensure the implementation of the Order and many PHC health workers and SES staff were not trained. In Quarter 1, the Project analyzed the effectiveness of measures for tracing TB contacts based on the data for 2018-2019. In general, the data for 2019 on the number of index cases, the average number of TB contacts per index case, the number of those diagnosed with active TB among contacts were close to the data for 2018, except TB preventive treatment (TPT) indicators which decreased slightly compared to 2018 (Table 3).

Table 3. Comparative analysis of TB contacts tracing indicators for 2018-2019

	<b>2018</b>	<b>Proportion</b>	<b>2019</b>	<b>Proportion</b>
<b>Total new TB cases</b>	7,319	100%	6,865	100%
<b>Index cases (among all notified TB cases)</b>	3,761	51.4%	3,530	51.4%
<b>TB contacts</b>	8,830	2.3 <sup>1</sup>	9,888	2.8 <sup>1</sup>
<b>Active TB among contacts</b>	129	1.5%	154	1.6%
<b>Contacts eligible for TPT</b>	660	7.5%	672	6.8%
<i>Children under 5</i>	371	56.2%	332	49.4%
<b>TPT coverage</b>	568	86.1%	479	71.3%
<i>Children under 5</i>	342	60.2%	263	54.9%

<sup>1</sup> Average number of TB contacts per index case.

(Source: NTP and Sanitary Epidemiological Service)

Overall, the quality of data on TB contact tracing needs improvement. First of all, there are no standard forms for collecting primary information, as a result of which manually calculated indicators cannot be reconciled. In Year I, the Cure Tuberculosis Project conducted a baseline assessment of the implementation of TB contact tracing in health care organizations of Chui Oblast. Below are some of the key findings:

- The coverage of index cases by epidemiological investigation is low. According to the assessment, approximately 50% of index cases were not investigated by Sanitary and Epidemiological Service (SES) specialists. The reasons for the low coverage are: (i) failure to hold an epidemiological investigation of patients who are admitted to the hospital after diagnosis; (ii) refusal of patients for epidemiological investigation due to fear of stigma and discrimination.
- In the case of deaths of index cases, no epidemiological investigation or TB contact tracing are carried out.
- TB examination by PHC health care workers is carried out only among family contacts who are registered with PHC organizations and does not cover other close contacts.
- The examination does not always cover all TB contacts identified for each index case. The initial examination often ends the process of tracing TB contacts, and there is no observation and screening for TB symptoms for two years, as prescribed in the MOH Order. The main reasons for the low coverage are the lack of interest from TB contacts, financial difficulties, and social barriers.
- There are difficulties in tracking the results of the examination of TB contacts from the close environment of index cases (colleagues from work, friends, etc.), since the examination of this category of patients is beyond the competence and authority of PHC specialists.

In general, the Project's assessment results justified the need to introduce additional mechanisms for tracing TB contacts not accounted for in the current Order of the Ministry of Health and improve the system for recording data on TB contacts in PHC organizations, including TPT data.

In Year I, the Cure Tuberculosis Project:

- Revised the procedure for epidemiological investigation of index cases to include expanded requirements for the identification of TB contacts. A compulsory condition for the creation of a list of TB contacts for subsequent examination is, in addition to routine measures such as visiting the place of residence, a survey of persons who permanently lived with the index case for TB symptoms.

- Extended the time for an epidemiological investigation from 3 to 7 days, due to the inclusion of additional processes for identifying TB contacts.
- Revised the procedure for the examination and monitoring of TB contacts in PHC organizations.

With the technical support of the Cure Tuberculosis Project, the Ministry of Health approved the above initiatives by Order No. 171 of March 20, 2020 and prompted their implementation in Sokuluk and Kemin rayons of Chui Oblast. In June, Cure Tuberculosis specialists held a one-day training for health care workers of Kemin and Sokuluk on updated algorithms and instructions for tracing TB contacts for health care workers. In total, 63 specialists were trained in Kemin and 143 in Sokuluk rayon. In addition, the Project developed and introduced new recording and reporting forms for TB contacts.

In the period from March to September, due to the unfavorable epidemiological situation related to COVID-19, both the SES and PHC organizations sharply scaled down the tracing of TB contacts. In the second year of implementation, the Cure Tuberculosis Project will continue building the capacity of SES and PHC specialists in all pilot regions to trace TB contacts. The Project will also continue to develop additional mechanisms and algorithms aimed at improving the effectiveness of TB contact tracing measures, including the involvement of civil society organizations (CSOs). Thus, a full package of measures will be developed for further expansion throughout the country.

#### *Community-based awareness-raising and case detection*

In Year I, the Cure Tuberculosis Project worked to strengthen TB awareness among the population to improve community-based case detection. All TB awareness activities had an emphasis on the need to reduce stigma and discrimination against TB patients.

In March 2020, Cure Tuberculosis, together with the Republican Health Promotion Center (RHPC), carried out a training of trainers (TOT) for regional Health Promotion Unit (HPU) specialists and representatives of sub-grantees on informing the population on tuberculosis. The training was part of a cascade training of trainers based on the guide, "Improving the awareness of the population about tuberculosis," which was developed under a previous project and approved by the MOH Expert Council on July 17, 2018. The Project trained 10 representatives of sub-grantees (two from the National Red Crescent Society and eight from the Association of Village Health Committees) and 12 regional HPU specialists, who then trained 72 rayon HPU specialists, who in turn, trained a total of 6,911 community leaders in Year I. This included 4,601 Village Health Committee (VHC) volunteers, and 2,310 FGP/FAP medical workers and local self-government (LSG) representatives. The ultimate goal of this activity was to improve the detection of people with presumptive tuberculosis and their referral to primary health care, reduce stigma and discrimination against TB patients and support them in treatment. Due to the spread of coronavirus and the introduction of the emergency situation in some areas of the Kyrgyz Republic, training and dissemination of information was transferred from in-person format to online (4,186 VHC members and 1,696 LSG representatives, social workers, teachers and FGP/FAP medical workers were trained in online format in Quarter 4).

To increase the efficiency of communication with the public and data exchange, the sub-grantees used various information platforms. The Association of Village Health Committees (AVHC) created a network of WhatsApp groups, which was used by the HPU specialists to quickly exchange and distribute necessary information about TB to Village Health Committees, which in turn distributed the information to community members who signed up to receive health information from VHCs via WhatsApp. In Year I, information on TB was regularly sent to a total of 168,149 WhatsApp users. The information was developed in the form of short texts in Kyrgyz and Russian or videos, infographics, and links to detailed posts on Facebook, Instagram, and Odnoklassniki.



The National Red Crescent Society (NRCS) selected promoters among well-known and respected community leaders to use their influence to encourage early diagnosis and treatment of tuberculosis to the population. NRCS patronage nurses (visiting nurses who provide outreach and support to TB patients) trained 14 promoters and seven community volunteers; 3,161 people were reached through information sessions and through individual outreach work with risk groups. This outreach work led to new TB screenings, and as a result, 19 people were sent for examination, 12 people were examined, but there were no confirmed cases of TB.

Picture 1. NRCS volunteers conducting outreach work with risk groups on tuberculosis



The NRCS carried out a series of events throughout the country to raise public awareness of tuberculosis and also used audio announcements at large markets and supermarkets with an approximate coverage of about 162,000 people in Bishkek, Chui and Talas Oblasts. The cultural and sports events planned for World TB Day were canceled due to COVID-19, but NRCS transitioned a significant part of their TB outreach to social media instead.

The COVID-19 epidemic in the country prevented the Cure Tuberculosis Project from holding several activities planned for World TB Day in March, including a press conference, a press tour and a series of television and radio broadcasts. The Project cancelled the planned activities in order to avoid mass gatherings and the risk of infection of participants. TB information was conveyed instead through the social media accounts of the NTP and the Project's sub-grantees.

In order to involve religious leaders in the public tuberculosis awareness campaign and use their platform to reduce stigma and discrimination, support people affected by TB, and increase early seeking of testing among people with symptoms of TB, the Cure Tuberculosis sub-grantee TB People conducted four training sessions for 93 religious leaders (imams) in Chui, Talas, Naryn, and Jalal-Abad Oblasts. The training aimed to increase TB awareness through the trained religious leaders to better identify people with presumptive TB, reduce stigma and discrimination, and encourage support for TB patients.

In addition, TB People held informational sessions for 479 students and teachers at the Koran Institute in pilot oblasts. Among other issues, the students considered the role of religious leaders in informing the population about tuberculosis and improving the attitude of the community towards TB patients.

In April 2020, a TB People consultant from the Spiritual Administration of Muslims of Kyrgyzstan (SAMK) used social media to address Muslims before Ramadan on the topic “Health is Wealth.” He covered TB, the importance of treatment, and stigma and discrimination against patients with tuberculosis; the video (<https://youtu.be/ITsjdfAYT28>) was watched 1,955 times. On June 27, the consultant appeared on Channel 7 to discuss Acquaintance with Koran, where he also highlighted the likely symptoms of TB, the importance of timely diagnosis, examination and treatment of TB, compliance with regimens and doctors’ prescriptions, and the consequences of treatment with traditional remedies. The video (<https://youtu.be/kXiN3hra4Rk>) has 203 views.

Picture 2. Training for religious leaders of Jalal-Abad Oblast, September 15, 2020



## Sub-Purpose 2: More patients cured of DR-TB

### Sub-Purpose 2 Key Achievements:

#### SSP 2.1: All patients treated with appropriate regimens of quality-assured drugs

1. Facilitated the revision of the **Clinical Guidelines for DR-TB Management** and their approval by the Expert Council of the Ministry of Health (Order No. 759 of September 25, 2020).
2. Conducted a **baseline assessment** of Concilium functions, which showed low effectiveness and capacity, unclear responsibilities and procedures, leading to treatment delays and prescription of ineffective regimens.
3. Began the **reform of Oblast DR-TB Concilia**, including changes to the structure and composition of Concilia, capacity-building for Concilium members, guidelines for presenting cases at the Concilium, online format of meetings, and introducing a cohort analysis approach.
4. Developed a **modular training program** for TB specialists on DR-TB management, which was approved by the Kyrgyz State Medical Institute for Retraining and Further Training (KSMIR&FT) and the Ministry of Health.
5. Developed a regulation **for video-controlled directly-observed treatment** (video DOT) and instructions for HCWs and patients on video DOT rules. MOH Order No. 225 adopted these regulations as of April 8, 2020 as a temporary measure to ensure treatment of TB patients under the COVID-19 restrictions.
6. Facilitated the participation of **nine NTP specialists** in the advanced training on DR-TB clinical management through the WHO Collaborating Center for Research and Training in Management of Multidrug Resistant Tuberculosis (Riga, Latvia).
7. Developed tools consolidating routine review of **drug management and active drug safety monitoring (aDSM)** in a single document.
8. Revised the current **SOP on drug management**, which was approved by the NTP and accepted for implementation.
9. Developed a **pharmacy software** for planning, management and distribution of TB drugs.

#### SSP 2.2: Treatment completion rate increased

10. Developed an algorithm and tools for the interaction of civil society organizations (CSOs) with the health care system to **support TB patients**.
11. Developed criteria for inclusion in the **social support** program, a package of services and assessment indicators for sub-grantees (NRCS and TB People) providing support to vulnerable patients at risk of treatment interruption, lost to follow-up and who refused treatment.
12. The NRCS provided social support to **161 TB patients**, including psychological counseling in Chui and Talas Oblasts, gave out 690 vouchers worth **690,000 soms** to purchase food and non-food products, and returned **25 patients** to treatment.
13. TB People signed a cooperation agreement with the State Penitentiary Service to help TB patients released from prisons transition to health care organizations to continue treatment. TB People provided social support to **41 TB patients** who have been incarcerated.
14. The AVHC, through fundraising and advocacy among local governments and VHCs, mobilized **361,060 soms** in financial assistance for **251 TB patients** from vulnerable groups.
15. Implemented the **Electronic Medical Record (EMR)** in **14 TB hospitals**; the system currently has **620 users** and data on **7,259 patients**.

## SSP 2.1: All patients treated with appropriate treatment regimens of quality-assured drugs

### *Clinical guidelines on DR-TB management*

Kyrgyzstan began to introduce new drugs and treatment regimens for drug-resistant forms of TB in 2017 (MOH Order of 2016). Currently, almost 100% of DR-TB patients are on individual or shorter treatment regimens. Until 2020, the country used a 2014 clinical guideline on DR-TB management, which did not include the latest evidence-based recommendations for DR-TB management. In 2018, the Ministry of Health initiated the development and adoption of updated guidelines for DR-TB management. Cure Tuberculosis helped revise the guidelines and facilitated the required external and internal review process. This year, thanks to the active facilitation by Cure Tuberculosis of the discussion and revision processes, the Clinical Guidelines for the Management of Drug-Resistant Tuberculosis were approved by the Expert Council for Clinical Guidelines and Clinical Protocols of the Ministry of Health (Order No. 759 of September 25, 2020). These Guidelines reflect the latest WHO recommendations for management of DR-TB (2019) and include a universal diagnostic algorithm for all TB cases instead of separate MDR-TB and XDR-TB diagnostic algorithms, individualized and shorter treatment regimens with all-oral drugs (replacing injectable drugs), and active drug safety monitoring of all drugs, including new TB drugs. Since September, the Cure Tuberculosis Project has begun training on the updated WHO recommendations for TB doctors in Chui Oblast. In total, 33 phthisiatricians and 19 nurses from the TB hospital in Bishkek, the TB hospital in Kara-Balta, and the TB Center in Bishkek received training.

### *Reform of Oblast DR-TB Concilia*

Regional DR-TB Concilia are an important mechanism which allows prescription of effective regimens and monitoring and evaluation of the results of treatment of DR-TB patients. Currently, there are seven regional DR-TB Concilia and the Central Concilium in Bishkek. The Concilia operate based on the MOH regulations on DR-TB Concilium of 2014. Cure Tuberculosis conducted a baseline assessment of Concilium functions in Chui Oblast in Quarter 1 which detected numerous issues. Similar baseline assessments were conducted in Talas Oblast in Quarter 3 and in Jalal-Abad, Naryn and Batken Oblasts in Quarter 4, which all detected similar issues across Concilia. The assessments found that the effectiveness of the Concilium institution is low due to:

- Unclear criteria for the membership of the Concilium; lack of specified roles and responsibilities of Concilium members;
- Low decision-making capacity and authority of Concilium members; a void in decision-making authority in the absence of the Chair;
- Lack of clear rules and procedures for the Concilium; irregular meetings;
- Unclear algorithm and procedure for submitting patients (cases) by rayon TB doctors to the Concilium.

These issues cause a poor quality of DR-TB case review, delays in treatment, and prescription of ineffective treatment regimens.

The Cure Tuberculosis Project worked to address these problems in Year I by initiating a pilot project in Chui Oblast to reform the activities of the Oblast DR-TB Concilium. The reform included:

- Expanding the composition of the Concilium to include rayon TB doctors (attending physicians from PHC organizations), who will rotate as deputy chair for 1.5 months every year, in order to give all TB specialists a chance to participate in decision-making and build their capacity;

- Developing clear definitions of the roles and tasks of each member, including revised functions of the OTC director and rules for conducting weekly regular meetings and assessing the competence of Concilium members;
- Establishing guidelines for presenting DR-TB cases at Concilium meetings for the prescription of treatment regimens, active monitoring of TB drug safety and the management of adverse events for treatment monitoring purposes, including laboratory and clinical test results required to be presented in each case;
- Providing LDMIS access to all members of the Chui Oblast Concilium in order to view patient test results;
- Structuring online formats for Concilium meetings through videoconferencing and online sharing of test results;
- Building the capacity of the Concilium members on DR-TB case management, through the development of a modular training program and qualification requirements.

The Chui Oblast DR-TB Concilium started working according to the new format and procedures in January 2020. The effectiveness of the Concilium reform will be assessed during the analysis of interim results of the 2020 cohort of DR-TB patients in Chui Oblast. Previously, the NTP only conducted analysis of final treatment results after the cohort completed treatment, which precluded any chance to make corrections during treatment. In contrast, the cohort analysis approach requires on-going analysis during treatment in order to be able to course-correct: to adjust the treatment regimen if it is not effective and there is no sputum conversion, to manage adverse events and substitute any drugs as necessary in the case of severe side effects, and apply the case management approach to patients with a high risk of treatment interruption, by taking into account their risk factors and linking them to community-based services. The cohort analysis approach requires obtaining all necessary data for analysis from patients beginning from the very first day of enrollment in the cohort. Contrary to previous practice, all required data and characteristics are now being collected from patients in the beginning in order to make it possible to evaluate treatment progress on an on-going basis and assess interim treatment results. Below are the characteristics compiled to-date for the first three quarters of the 2020 cohort (Table 4).

Table 4. Characteristics of DR-TB patients in Q1-Q3 cohorts of 2020, Chui Oblast

Criteria	Q1 cohort	Q2 cohort	Q3 cohort
<b>Total number</b>	106	42	23
<b>Sex (M/F)</b>	67 (63.2%) / 39 (36.8%)	28 (66.7%) / 14 (33.3%)	13 (56.5%) / 10 (43.5%)
<b>New cases / Previously treated</b>	85 (80.2%) / 21 (19.8%)	29 (69.0%) / 13 (31.0%)	14 (60.9%) / 9 (39.1%)
<b>Pulmonary TB / Extra-pulmonary TB</b>	100 (94.3%) / 6 (5.7%)	38 (90.5%) / 4 (9.5%)	22 (95.7%) / 1 (4.3%)
<b>Bacteriologically confirmed / Clinically confirmed</b>	100 (94.3%) / 6 (5.7%)	39 (92.9%) / 3 (7.1%)	23 (100%)
<b>MDR-TB / Pre-XDR-TB / XDR-TB</b>	88 (83.0%) / 14 (13.2%) / 4 (3.8%)	37 (88.1%) / 4 (9.5%) / 1 (2.4%)	19 (82.6%) / 3 (13.0%) / 1 (4.3%)
<b>Individual regimen / Short regimen</b>	92 (86.8%) / 14 (13.2%)	41 (97.6%) / 1 (2.4%)	23 (100%)

(Source: Chui Oblast DR-TB Concilium)

At the end of Quarter 2 (first quarter of 2020) when the COVID-19 epidemic emerged in Kyrgyzstan and it became difficult for doctors to attend Concilium meetings in-person, Cure Tuberculosis provided technical assistance to transition Concilium meetings online. The first such meeting took place on March 30, 2020 and allowed rayon doctors from three rayons of Chui Oblast to discuss individual cases of 17 patients (Picture 3). The meetings of the Concilium were held by Skype using the equipment that had been installed by the USAID Defeat TB project.

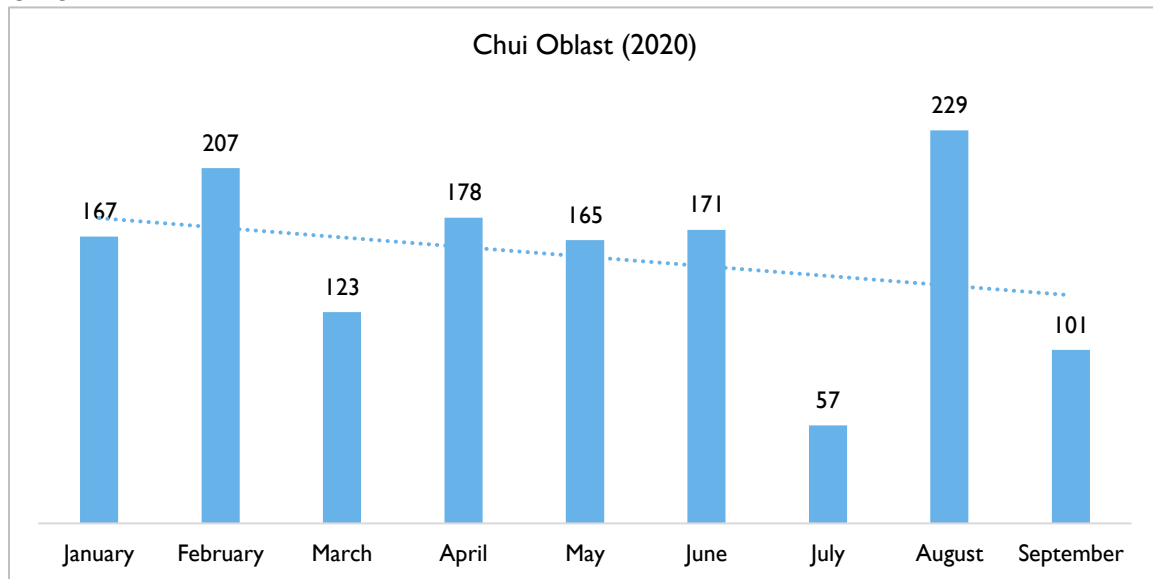
Picture 3. First online meeting of the Chui Oblast DR-TB Concilium, March 30, 2020



Despite being a forced measure in response to the COVID-19 epidemic, the online meeting format was found to be more efficient for timely presentation and consideration of cases of DR-TB patients than the traditional in-person format. Previously, TB doctors often failed to present the cases of their patients due to their inability to be physically present at the Concilium meetings. Going forward, the online meeting format will remain a viable alternative for holding regular meetings of the Concilium. Skype has a number of limitations, however, including inability to present X-ray images, ECG results, and other tests. To address these limitations, in Year 2 the Project will develop an information system that will allow quick exchange of necessary information and test results between the members of the Concilium in an online format.

In the third and fourth quarters of Year 1, under the imposed restrictions due to the COVID-19 epidemic, the Chui Oblast Concilium successfully continued its work in the online format. This format of work became a necessary measure, which allowed Concilium meetings to continue without significant interruptions. As shown in Figure 7, the number of cases considered by the Chui Oblast Concilium fell sharply in July, due to TB doctors being fully tasked with treating COVID-19 patients at the height of the epidemic. However, numbers increased again in August. Overall, the number of discussions held at the Concilium during the second quarter of 2020 (April to June, the first quarter during COVID-19 – 514 discussions) increased compared to the previous quarter (January to March, pre-COVID – 497 discussions), and a total of 901 discussions could still be held during the last six-month period of the COVID-19 epidemic.

Figure 7. Number of TB cases considered by the Chui Oblast DR-TB Concilium during the COVID-19 epidemic



(Source: Chui Oblast DR-TB Concilium)

During the height of the COVID-19 epidemic and ensuing restrictions in some part of the country, a critical situation developed with the organization of treatment monitoring of TB patients. Since along with the general population, TB patients were forced to refrain from visiting health care organizations to avoid co-infection, Cure Tuberculosis provided technical support to develop a regulation on the organization of video-controlled directly-observed treatment (video DOT) and an instructional guide for health workers and patients on the rules for conducting video DOT (MOH Order No. 225 of April 8, 2020). According to interviews with doctors during the September monitoring visits in Naryn, Jalal-Abad, and Batken Oblasts, video DOT and treatment through community-based treatment supporters became more widely used. In Year 2, the Project will start to monitor the use of various approaches in the organization of treatment monitoring and further expand such approaches in the treatment of TB patients.

In order to build the capacity of the Concilium members on DR-TB case management, the Cure Tuberculosis Project developed a new modular training program structured into four modules on TB diagnosis, treatment, case management, and prevention. This program includes modern evidence-based guidelines for DR-TB management and is developed in a format that allows for on-the-job training in six months. The modular program was approved by the Kyrgyz State Medical Institute for Retraining and Further Training (KSMIR&FT) and the Ministry of Health, with the issuance of 72 credit hours, which will be taken into account when certifying TB specialists.

#### Advanced DR-TB training curriculum:

- **Module 1:** TB diagnostics (lab diagnostic tests, LPA, GeneXpert, New Generation Sequencing, diagnostic algorithm, X-ray, other technologies)
- **Module 2:** TB treatment (TB drugs, treatment regimens, treatment results)
- **Module 3:** TB case management (TB drug side effect management, clinical management, follow-up, counselling)
- **Module 4:** TB prevention (latent TB, TPT, infection control, contact investigation)

In September 2020, KSMIR&FT, with Cure Tuberculosis technical support, launched the approved training program for the members of the Chui Oblast Concilium. Pre-tests administered before starting

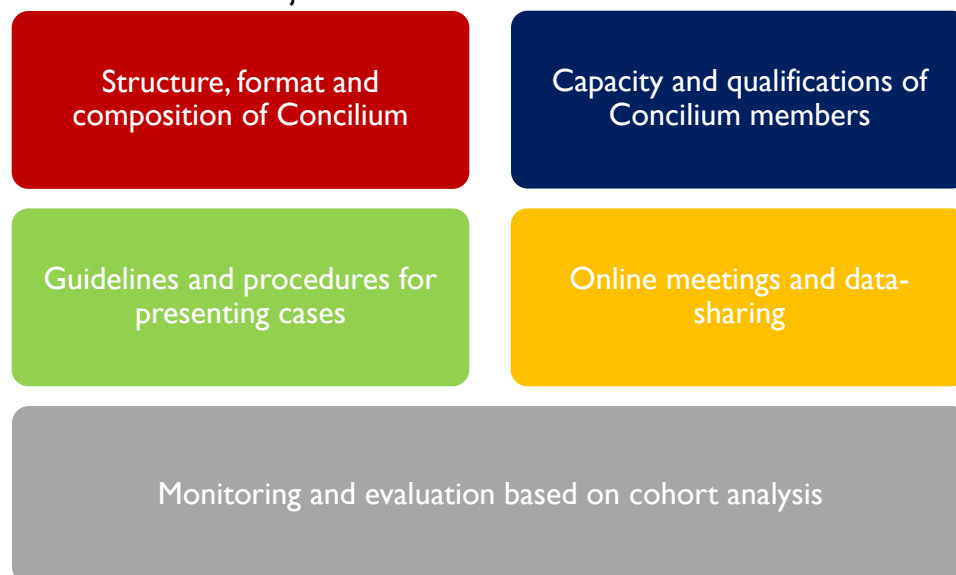
the first module on diagnosis confirmed the low capacity of the members of the DR-TB Concilium: two TB specialists showed a level of knowledge of 40%; three phthisiatricians 41-60%; and three others 61-80%. Post-test results will be assessed after completion of each module.

In addition, the Project is introducing cohort analysis as a new approach within Concilia and training of Concilium members is currently underway. This evidence-based approach will underpin the work of the Concilia going forward and will serve to monitor their effectiveness in prescribing appropriate regimens and monitoring treatment. This approach will allow Concilium members to conduct on-going assessments of treatment to apply any necessary interventions to improve treatment results, such as changing treatment regimens, preventing treatment interruption etc., and to assess interim treatment results such as sputum conversion during the course of treatment. The results of this approach will ultimately serve as a proxy to evaluate the success of Concilium reform initiatives and their impact on the quality of treatment provided, the quality of monitoring of treatment, and treatment outcomes.

Figure 8 summarizes the main elements of Concilium reform established during Year 1, encompassing three levels of change:

- 1) structural (restructuring and capacity-building)
- 2) procedural (guidelines for presenting cases and online work formats)
- 3) methodological (cohort analysis approach).

Figure 8. Elements of reform in Project DR-TB Concilium work



During Year 1, Cure Tuberculosis facilitated the participation of nine NTP specialists in the flagship advanced DR-TB management course “Program and clinical management of DR-TB aimed at achieving the Sustainable Development Goals” offered by the WHO Collaborating Centre for Research and Training in Management of Multidrug Resistant Tuberculosis (Riga, Latvia). The first four participants were trained during an in-person course in Riga from March 2 to 11. After the emergence of COVID-19, the training was transferred online and the participation of the next five specialists was organized through a regional initiative of the USAID ETICA project. This was the first time this training was held online, from September 21 to October 2. The training was highly evaluated by the participants, and this initiative will be continued.



### *Drug management*

For the past 10 years in Kyrgyzstan, all TB patients have been provided with necessary medicines. Second-line drugs and drugs for children are purchased with funding from the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) through the Global Drug Facility (GDF) mechanism. First-line drugs are purchased from public funds, and they are not WHO prequalified. In 2020, a WHO-prequalified manufacturer of levofloxacin and ethambutol took part in a tender for the procurement of second-line TB drugs for poly DR-TB patients. By local regulations, to participate in a public procurement, drugs must be registered in the country. In 2019, 16 TB drugs were submitted for registration, of which 11 were registered. In Kyrgyzstan, procedures are not synchronized with the accelerated registration procedure of WHO; they are stretched in time, with limited access to manufacturers' files. In Year 2 the Cure Tuberculosis project, in conjunction with the United States Pharmacopeial Convention (USP), is developing a number of initiatives to increase the capacity of the Department of Drug Supplies & Medical Equipment (DDS&ME) staff on registration procedures, through trainings and introduction of WHO tools for drug registration.

In Year 1, Cure Tuberculosis provided technical support to revise the current SOP on drug management, which did not previously include such sections as stock assessment, needs assessment and forecasting, drug storage conditions, monitoring and evaluation, and feedback communication. In addition, the proper assessment of TB drug stocks, forecasting and needs assessment are carried out only at the NTP level and not at the regional level. The updated SOP systematizes all stages of drug management at different levels of the health care system, including stock assessment, calculation, analysis and feedback for each level, and will improve drug management at the regional level. The results of an assessment carried out by the Cure Tuberculosis Project in the pilot regions showed that there are large gaps in the storage of drugs in health care organizations. According to the assessment, storage conditions for TB drugs are not appropriate in 85% of health care organizations in Naryn Oblast, 50% in Jalal-Abad Oblast, and 20% in Batken Oblast – there are gaps in compliance with temperature and humidity. The lack of an automated information system for recording TB drugs in regional pharmacies, which reduces the efficiency of pharmacies, is an important drawback in the drug management system. In September 2020, the updated SOP was approved by the NTP and accepted for execution. In Year 2, the Cure Tuberculosis Project will support the NTP in the implementation of the revised SOP in health care organizations and in building the capacity of OTC specialists in drug management monitoring.

The Project Cooperative Agreement emphasized the value in developing a pharmacy software for recording the consumption of TB drugs. The pharmacy software will provide an online system for monitoring and tracking of TB drug stocks in each health care organization. These data will provide the information needed for planning and distribution at the central level and integration with the National Medicines and Medical Devices Database and EMR software, as well as the epidemiological surveillance system. Additionally, this software will automate drug distribution to specific patients, improving control at the individual level.

In Year 1, Cure Tuberculosis has developed the main components of the pharmacy software code and its preliminary testing in a test environment is being conducted. Development of the software will be finished at the end of October 2020 and it will be piloted in the NTP and Bishkek City TB Center.

The DDS&ME will use the experience of the pharmacy software application in TB for nationwide procurement, distribution, consumption, and monitoring of drugs and medical equipment. The pharmacy software will provide for data verification and analysis for the Logistics Management Information System (LMIS).

## SSP 2.2: Treatment completion rate increased

One of the reasons for the high prevalence of DR-TB in the country is treatment interruption and Lost to Follow-Up (LTFU) among TB patients. According to 2019 NTP data, LTFU among susceptible forms of TB averaged 10% in the country, with Chui and Naryn Oblasts showing results above the national average – 12% and 14%, respectively. LTFU among patients with resistant forms of TB are 25% on average across the country, 23% in Chui Oblast, and 19% in Naryn Oblast (NTP, 2019). Poor monitoring and poor quality of TB case management in health care organizations are the main reasons for treatment interruptions and LTFU. In order to improve adherence to treatment, reduce treatment dropouts, both among patients with susceptible and resistant forms of TB, the Ministry of Health approved the Regulation on TB Case Management developed with the technical support of USAID in 2018. The Regulation structures the basic elements necessary for the successful management of TB cases and adherence to TB treatment of patients.

Cure Tuberculosis aims to implement the TB case management (TB-CM) approach in health care organizations to improve treatment outcomes for DR-TB patients. This approach provides for the assessment of the needs and requirements of a TB patient, support during treatment, follow-up on treatment adherence, and, if necessary, the involvement of CSOs to ensure successful completion of treatment.

### *Community-based treatment support*

In Year I, Cure Tuberculosis cooperated with four CSO sub-grantees, the National Red Crescent Society (NRCS), the TB People Public Foundation (TB People), the Association of Village Health Committees (AVHC) and the Hospital Association of the Kyrgyz Republic (HAKR). Each sub-grantee was assigned support activities within the Cure Tuberculosis Project's goals and objectives, algorithms of work with TB patients, and performance indicators.

Cure Tuberculosis developed a procedure for the interaction of CSOs with the health care system to support TB patients in treatment. In addition, criteria for inclusion in the social support program, a package of services and assessment indicators were developed and introduced into the activities of the project sub-grantees. The involvement of CSOs in the social support of TB patients is coordinated by rayon TB doctors.

### **Social support of TB patients at risk of interruption includes:**

- Food and hygiene packages
- Patient support groups
- Individual counselling
- Training on IC measures
- DOT

The National Red Crescent Society (NRCS) focuses its efforts on patients at risk of treatment interruption, lost to follow-up, and refusing treatment among the categories of people who face problems with access to health services, such as internal migrants, people who are homeless, people who have been incarcerated, people living with HIV, people who inject drugs, people who misuse alcohol, etc.

In Year I, the NRCS provided social support to 161 patients with treatment adherence problems in Chui and Talas Oblasts, of whom:

- 28 had drug-sensitive (17%) and 133 drug-resistant forms (83%) of TB;
- 111 were men (69%) and 50 were women (31%);
- 19 patients (11 men and eight women) received DOT at home from visiting patronage nurses as community-based treatment supporters;

- 157 disadvantaged patients received 690 vouchers worth 690,000 soms through project funds and with the help of patronage nurses used these vouchers to buy food and non-food products at local stores;
- All 161 patients under patronage received individual psycho-social counselling;
- 10 patients received assistance with the follow-up examination;
- 3 patients received online legal counseling;
- 49 completed patronage (38 completed treatment, four died, four are now on supportive care, two moved, one was transferred to the Republican Rehabilitation Center (RRC) in Jeti-Oguz).

Picture 4. Patients use vouchers to buy food stuffs and essentials at a Globus supermarket



In Year I, Chui and Talas TB specialists requested to return 59 patients to treatment: 56 patients from the category “lost to follow-up” and three patients from the category “refused to start treatment.” The NRCS found and returned to treatment 22 patients (39%) from the category “lost to follow-up” (four DS-TB and 18 DR-TB) and convinced three DS-TB patients (100%) to start treatment from the category “refused to start treatment.” During the search for patients who were lost to follow-up, it turned out that 9 patients migrated to Russia, and 3 patients underwent examination for TB but the Concilium kept them under observation without prescribing treatment due to residual side effects.

To improve TB patients’ adherence to treatment, the NRCS conducted TB support groups facilitated by NRCS patronage nurses and held with the participation of a nurse from an FMC TB cabinet. This approach has been used by the NRCS for more than 10 years. Cure Tuberculosis specialists helped structure the content of these support group discussions based on topics that are most in-demand by patients and according to the findings of the Social and Behavior Change formative research (further described in SP 3). The support group discussions serve to provide additional information about the disease and treatment, share experiences, manage stress and offer patient support. Psychological support was especially relevant during the COVID-19 epidemic. The threat of co-infection, personal losses, and the need to stay at home were psychologically difficult for many patients. During the COVID-19 epidemic, the support groups were suspended. Partially, group support was offered in group WhatsApp chats created with the consent of TB patients. Since September, the support groups have resumed their meetings in the usual in-person format (once a month); however, WhatsApp patient support groups are still in use as they offer an important opportunity for daily support and will continue

to be used if the epidemiological situation worsens. In total, 14 support group meetings were held, in which 116 TB patients took part.

Since January 2020, on the basis of a cooperation agreement signed between TB People and the State Penitentiary Service (GSIN), TB People accompanied TB patients released from places of detention to health care organizations in the civilian sector to continue and complete treatment. According to the agreement provisions, the GSIN medical service regularly provides information on TB patients released from Correctional Facility (CF) No. 31 and Detention Center (SIZO) No. 1 in Bishkek, with copies of all the necessary medical documents. In Year 1, TB People provided support to 41 TB patients (39 men and 2 women), including 14 DS-TB and 27 MDR-TB patients transitioning from the penitentiary system to the health care system. Of these, 23 TB patients continue to be under the patronage of TB People, six successfully completed treatment, three died, two patients were lost to follow-up (more than 2 months), three interrupted treatment and are being searched for, two refused to continue treatment, and two were excluded from the social support program for repeated violation of the hospital regime, alcohol abuse, and behavior that endangered and threatened the lives of medical workers. Among the 23 still under patronage, four TB patients received treatment through TB People's staff as community-based treatment supporters.

During the COVID-19 epidemic, Cure Tuberculosis addressed the challenge of sustaining support to TB patients from vulnerable categories of the population and made adjustments to the activities of the sub-grantees, taking into account the epidemiological situation and response of the Kyrgyz Government to the COVID-19 outbreak. During this period, TB patients needed financial assistance and support, as well as uninterrupted provision of drugs. The NRCS and TB People continued to provide social support to TB patients under their patronage during the lockdown and the state of emergency in the country.

In Year 1, the AVHC carried out community mobilization activities to support TB patients in treatment. The AVHC held two rounds of meetings of rayon health committees (RHCs) with a total of 2,160 participants in each of the 32 rayons of the pilot Chui, Talas, Jalal-Abad, and Naryn Oblasts to inform heads of local self-governments (LSGs), FMCs/FGPs, TB doctors, VHCs, and village medical workers about AVHC activities in the framework of the Cure Tuberculosis Project and to strengthen the interaction of VHC volunteers with FGPs/FAPs and local authorities, and the RHCs with FMCs/FGPs and rayon state administrations (RSAs). Based on information on the incidence of tuberculosis at oblast and rayon levels and discussion of problems in TB detection, diagnosis and treatment, the AVHC, rayon state administrations and the FMCs/FGPs drafted and signed joint action plans to inform the population about TB, reduce stigma and discrimination against people affected by tuberculosis, and provide care and support for TB patients. In July-August 2020, the second round of these meetings was conducted in on-line format and focused on the importance of community mobilization and advocated for financial support for TB patients in need to help them complete their treatment. Patients mostly need assistance to cover food and transportation costs, which became more critical during the COVID-19 epidemic as many people were out of work. Local self-governments, VHCs and Fundraising Committees (initiated by VHCs) mobilized 361,060 soms in financial assistance to 251 TB patients from the most vulnerable groups of the population.

#### *Management of adverse events*

Failure to relieve adverse events during treatment is one of the well-known main factors causing interruptions in TB treatment, and in Kyrgyzstan, adverse events are a reason for treatment interruption in 71% of lost-to-follow-up cases (NTP and Challenge TB, 2018). The recent Social and Behavior Change research conducted by Cure Tuberculosis (described in SP 3) confirmed this: drug adverse events were

the number one reason cited as a difficulty or barrier to completing treatment, among patients interviewed who failed to complete treatment.

Provision of the necessary resources and processes for active TB drug safety monitoring and management (aDSM) during treatment was included as one of the priorities of case management. Within the framework of the USAID Defeat TB project, a number of mechanisms were developed aimed at providing aDSM, such as a mechanism for providing laboratory services to patients on short-term and individual treatment regimens, and the MHIF allocated funding to pay for these laboratory services. Cure Tuberculosis conducted a baseline assessment in September 2020 in the primary health care facilities in Naryn, Jalal-Abad, and Batken Oblasts which revealed that the majority of FMCs (50% or more) of these regions had access to only 10 to 11 out of the 20 mandatory tests for clinical management of DR-TB cases. Tests that were not accessible in most FMCs included markers of viral hepatitis, liver tests, glomerular filtration rate, thyroid hormones, and CD4 counts.

It was also revealed that TB patients at the outpatient stage of treatment were not provided with the necessary drugs to relieve adverse events. Only 50% of health care organizations had access to 10 out of 20 drugs for the relief of adverse events. Most often, there were no drugs to relieve dyspeptic disorders, anxiety, depression, disorders of the cardiovascular and osteoarticular systems. These are precisely the events that make patients to often refuse to continue treatment.

Large gaps were identified in using the adverse event (AE) severity rating scales. Through the Challenge TB project, all organizations were equipped and trained in the use of WHO-recommended clinical tools to assess the safety of TB drugs. The above-mentioned baseline assessment in Naryn, Jalal-Abad, and Batken Oblasts found that these tools were not being fully utilized due to low supervision and monitoring by the NTP and Oblast TB Centers. The scales of anxiety and depression, peripheral neuropathy evaluation, the Ishihara test, and others were practically not used. To support health care organizations' capacity to reduce interruptions in treatment, in Year 2, the Cure Tuberculosis Project will use the cohort analysis approach in Concilium activities to strengthen the role of Oblast TB Centers in monitoring and assessing the quality of TB services in PHC organizations. As mentioned earlier, the new cohort analysis approach requires conducting on-going analysis of treatment beginning from the very first day of enrollment, in order to assess intermediate treatment results and to make any necessary corrections during the course of treatment. Among other things, this approach allows TB doctors to better identify patients at risk of treatment interruption (due to adverse events, belonging to certain risk groups, difficult life circumstances etc.) in order to refer them to targeted community-based treatment support.

### *Electronic Medical Record*

In Year 1, Cure Tuberculosis MIS specialists implemented the Electronic Medical Record (EMR) system in 14 TB hospitals which are being retained for TB purposes without being restructured (the full list of TB hospitals where EMR is implemented is available in Annex 3). The EMR was recognized by the Ministry of Health and Mandatory Health Insurance Fund as a top-notch system in the Kyrgyz health sector. The EMR was developed in 2017 under previous USAID technical support using web-based software and the latest technology. This system consists of different modules, such as: patient registration, doctor's and nurse's work automation, drug prescription, pharmacy drug claim form, and manager's dashboard. By expanding the use of EMR in TB hospitals, the Project contributes to reduced time spent on paper turnover, pending lab test results, and failed timely communication; it enables medical staff to perform tasks effectively, and promotes faster and more efficient decision-making for diagnosis and treatment. Once the pharmacy software is installed, it will be integrated with the EMR so that doctors will have complete information on drug management within their facilities.

The EMR is being continuously updated and fine-tuned. To ensure its uninterrupted and smooth operation, MIS specialists regularly checked computers and peripherals, communication channels, and the local network, and trained staff of the medical facilities.

By the end of Quarter 4, the EMR database had 620 system users and contained information on 7,259 TB patients (4,459 men and 2,800 women). This represents a 31% increase in users and 20% increase in patient records since the end of Quarter 3, and the number of users doubled overall over the course of Year I (Table 5 and 6).

Table 5. Number of EMR users among health care workers by the end of each quarter in Year I

<b>Date</b>	<b>Number of HCW</b>
<b>December 31 (2019)</b>	317
<b>March 31</b>	442
<b>June 30</b>	472
<b>September 30</b>	620

Table 6. Number of EMR database records by the end of each quarter in 2020

<b>Date</b>	<b>Total</b>	<b>Male</b>	<b>Female</b>
<b>March 31</b>	5,013	3,225	1,788
<b>June 30</b>	6,009	3,816	2,193
<b>September 30</b>	7,259	4,459	2,800

## Sub-Purpose 3: Prevention of DR-TB Infections

### Sub-Purpose 3 Key Achievements:

#### SSP 3.1: Improved infection control in health facilities and laboratories

1. Conducted **6 baseline assessments** of infection control (IC) measures in OTCs in Chui, Talas, Naryn, Jalal-Abad, and Batken Oblasts, and in Kara-Balta TB Hospital.
2. Based on the baseline assessment results, **developed 4 IC plans** for the Chui, Talas, Naryn, and Jalal-Abad OTCs for 2020-2021.
3. Assessed IC measures in **18 PHC organizations**: in all PHC facilities of Naryn and Batken Oblasts and in half of facilities in Jalal-Abad Oblast.
4. Provided technical assistance to the NTC to **strengthen IC measures** at the specialized MDR-TB ward the NTC re-purposed to treat patients with COVID-19 and **trained 49 NTC staff** in IC measures when dealing with COVID-19.

#### SSP 3.2: Provider, patient, and at-risk populations behaviors changed for TB prevention, detection, and treatment

5. Conducted a **qualitative formative research study** in collaboration with the RHPC in Naryn, Chui, and Jalal-Abad Oblasts and Bishkek to learn about key behaviors in health care-seeking and TB treatment among target groups and inform the development of a project SBC strategy.
6. **Developed project SBC strategy** with an explicit strategy for each of the key behaviors of testing, completing treatment, infection control and stigma, with tailored key messages and communications channels and materials for each group.
7. Shared results of the SBC research and project SBC strategy with national stakeholders through a workshop to initiate the process of developing the **national SBC strategy**.
8. Prepared **five videos** using a behavioral journalism approach to encourage behaviors relating to TB patient treatment adherence, social and psychological support to TB patients, and the role of religious leaders in disseminating TB information and combating stigma. All videos were broadcast multiple times on EITR and STV channels and via social media.
9. Developed **two animated videos** on the importance of regular and balanced nutrition for TB patients during treatment and regular ventilation of TB patients' rooms, both approved by the Expert Council of the Ministry of Health.

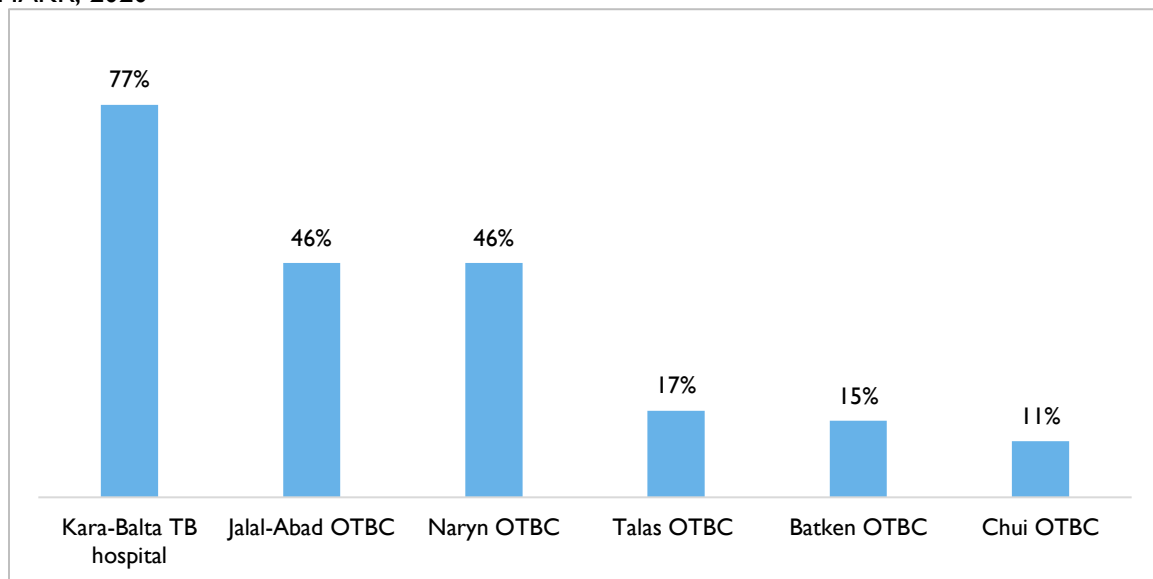
#### SSP 3.1: Improved infection control in health facilities and laboratories

The current country guidance on infection control for TB for health care organizations was developed and approved in 2014. In 2017, the USAID Defeat TB project provided technical support to develop a guideline for the monitoring of infection control measures in TB hospitals and primary health care organizations. This guideline included checklists for management, administrative, and environmental (engineering and technical) control measures, and personal protection measures.<sup>3</sup> In total, 18 criteria for TB organizations and 16 for PHC organizations were approved. Since 2018, the guideline and checklists have been routinely used by SES specialists in monitoring and evaluating IC measures in health care organizations.

<sup>3</sup> Management measures include having an IC plan, procurement of IC equipment etc.; administrative measures include TB screening, routine training on IC measures etc.; environmental controls include ventilation, UV lamps etc.; and PPE includes masks, respirators, fit testing, etc.

In Year I, building on previous successes in TB hospitals and primary health care organizations, the Cure Tuberculosis Project endeavored to improve IC measures in TB organizations. With the support of the Hospital Association of the Kyrgyz Republic (HAKR), a project sub-grantee, Cure Tuberculosis conducted an assessment of IC measures at the Oblast TB Centers of Chui, Talas, Jalal-Abad, Naryn and Batken and at the TB Hospital in Kara-Balta (Figures 9 and 10). The assessment shows that almost none of the IC requirements are fully satisfied. Due to outdated infrastructure built during the Soviet period, all facilities have poor environmental control measures which are virtually non-existent. Consistently low indicators on administrative and management measures show a lack of understanding of the importance of these measures on the part of the leadership of these organizations and their low potential for effective planning. Only Kara-Balta Hospital has satisfactory administrative and management measures in place thanks to intensive technical assistance provided under a previous USAID project. The criteria on personal protection measures were inadequate overall, with some limited measures in Naryn and Talas OTCs as well as Kara-Balta Hospital.

Figure 9. Overall score of infection control measures (weighted average) at Oblast TB Centers assessed by HAKR, 2020



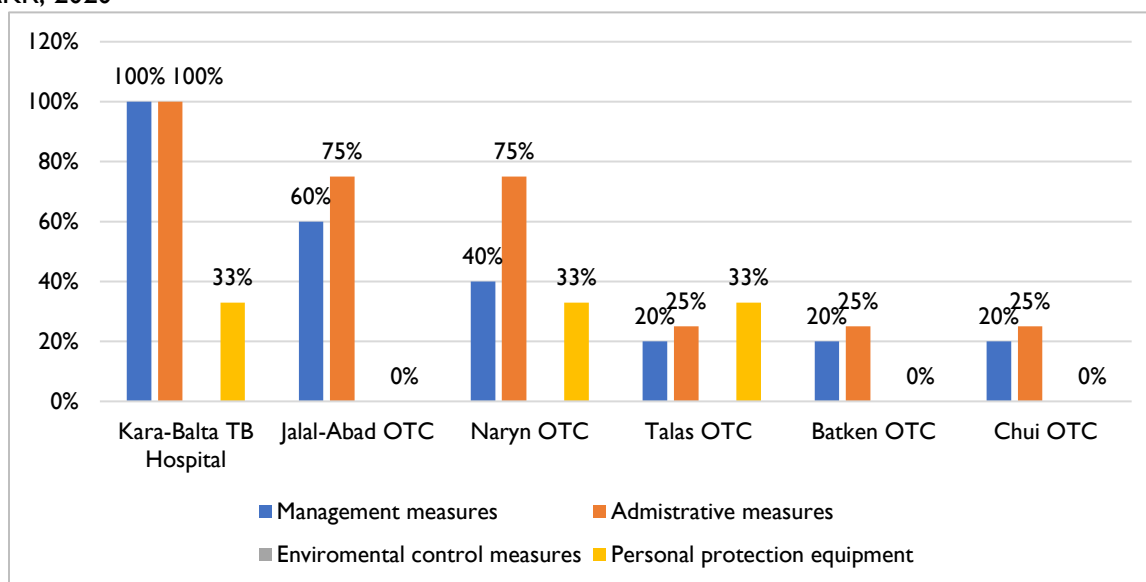
\* Aggregate scores across 18 indicators.

The main infection control problems identified through the assessment and common to all OTCs include the following:

- The IC plan is not updated annually; internal monitoring and evaluation of IC activities is not carried out; staff training on IC measures is not conducted on a regular basis and compliance is irregular;
- There are no internal procedures for sorting patients (triage); there are no isolation wards for patients with an undetermined spectrum of sensitivity to TB drugs; the premises of medical personnel are not separated by airlock entry from the high-risk area;
- The system of annual preventive TB examinations of OTC employees is poorly organized and coverage by quarterly TB screening is low;
- Fit testing of respirators is not carried out; OTC employees do not know how to use respirators; respirators are not used in high-risk areas; there is no proper planning for procurement of respirators.



Figure 10. Breakdown of infection control scores by key IC elements at Oblast TB Centers assessed by HAKR, 2020



\* Aggregate scores across 18 indicators.

Based on the results of the baseline assessment, with HAKR technical support, an IC plan for 2020-2021 was developed and approved for the Oblast TB Centers of Chui, Talas, Jalal-Abad, and Naryn Oblasts. The main emphasis in the IC plans was placed on the improvement of administrative and management measures, the introduction of mandatory screening for TB among employees of the organizations, and technical assistance on quantification and procurement of PPE. HAKR specialists involved regular employees, the heads of departments, and the heads of the organizations in the development of IC plans. The close involvement of the leadership was aimed at their correct understanding of the importance of the IC measures, the assured allocation of funds to maintain IC measures, and the insurance of constant control and monitoring of the implementation of the IC plans.

In Year 1, the Cure Tuberculosis Project, together with the SES, also assessed the IC measures for tuberculosis at PHC organizations in all seven oblasts; Cure Tuberculosis assessed all of the PHC facilities in Batken and Naryn Oblasts and around half (57%) of the PHC facilities in Jalal-Abad Oblast (Table 7). According to the data, environmental control measures are low on average (24%). They are 50% in Osh and Talas and 67% in Chui, but in the four other regions they are essentially absent. The provision of personal protective equipment is better in Chui and Issyk-Kul Oblasts, but the national average is 26%. The assessment found a critical shortage of respirators for health care workers. This served as the basis for the Project to plan to purchase respirators for medical workers in Year 2, along with providing technical assistance on adequate needs quantification. Along with this procurement, in order to ensure the sustainability of this solution, the Cure Tuberculosis project will explore and propose a mechanism for routine procurement of respirators by the health organizations themselves. Overall IC measures are the highest in Chui and Talas which were pilot oblasts for the implementation of comprehensive TB reforms under the Defeat TB project, and in Issyk-Kul which was a pilot for PHC reform under a Swiss-funded project and incorporated many of the reform initiatives developed under Defeat TB into their package of interventions. The successful results in these pilots demonstrate the effectiveness of these approaches, which Cure Tuberculosis will continue to replicate in Year 2 oblasts.

Table 7. Implementation of IC measures at PHC organizations, by overall score

Region	Management measures	Administrative measures	Environmental control measures	PPE	Overall score
<b>Batken</b> (Cure Tuberculosis) 100% of facilities	24%	55%	0%	10%	29%
<b>Osh (SES)</b>	47%	48%	50%	8%	43%
<b>Naryn</b> (Cure Tuberculosis) 100% of facilities	44%	67%	0%	8%	44%
<b>Jalal-Abad</b> (Cure Tuberculosis) 57% of facilities	59%	56%	0%	13%	49%
<b>Issyk-Kul (SES)</b>	78%	68%	0%	64%	71%
<b>Talas (SES)</b>	86%	81%	50%	13%	73%
<b>Chui (SES)</b>	87%	83%	67%	67%	81%
<b>Kyrgyz Republic</b>	61%	65%	24%	26%	56%

\* Aggregate scores across 16 indicators.

This year, in addition to planned activities in infection control, the Cure Tuberculosis Project implemented a set of ad-hoc measures to help the health care system during the COVID-19 epidemic. One of the key areas of activity was the introduction of urgent measures to increase the capacity of NTP employees for infection control under COVID-19. In April 2020, the specialized MDR-TB ward of the National Tuberculosis Center was re-purposed to host patients with COVID-19 by MOH decree. In order to ensure the safety of the employees of the MDR-TB ward, Cure Tuberculosis provided technical assistance to strengthen infection control measures as follows:

- The MDR-TB ward was divided into three zones: a contaminated zone, a potentially contaminated zone, and a clean zone.
- Three brigades of medical staff from the NTC MDR-TB ward were created. Each brigade had three groups (including one doctor and two nurses) and worked for 14 days, then self-isolated for another 14 days.
- A step-by-step algorithm of actions of medical staff when entering the contaminated zone from the clean zone and vice versa was developed.

When developing administrative and management measures, Project specialists were guided by Order of the Ministry of Health No. 208 of March 30, 2020 on the prevention of infections in the context of the COVID-19 epidemic. Cure Tuberculosis also conducted training for NTC medical staff from other departments on infection control measures under COVID-19. In total, 49 medical workers took part in the training. The training covered the following topics:

- Management of patients with confirmed COVID-19 (isolation, triage, use of PPE);
- Personnel and process management (medical workers staying in clean, potentially contaminated and contaminated areas, screening, bio-emergency events, quarantine, management of diagnostic and treatment processes);
- Medical waste management and disinfection measures when dealing with COVID-19.

The COVID-19 situation highlighted the issue of ensuring the safety of health care workers when working with infected patients. About 30 new cases of TB among health care workers are registered in the country every year: 70% of them are health workers from the general medical network (including

territorial hospitals), 26% are from PHC facilities, and 4% are from specialized TB hospitals (Table 8). For 2019, this translates to a TB incidence rate among health care workers of 96 per 100,000, above the target of 52 per 100,000. Due to a lack of strict reporting of TB screening and testing among health care workers, actual figures are likely underreported.

Table 8. Number of TB cases among health care workers

Facility	2017	2018	2019	Total
<b>TB hospitals</b>	0	1	3	4
<b>PHC facilities</b>	10	9	7	26
<b>General health care organizations</b>	26	20	24	70
<b>Total</b>	<b>36</b>	<b>30</b>	<b>34</b>	<b>100</b>

(Source: NTP and SES)

In Year 2, the Cure Tuberculosis Project has planned a set of measures aimed at ensuring a safe environment in health care organizations for medical workers, including:

- Mandatory screening for TB among health care workers;
- Update of guidelines and policy on infection control in TB (tools and approaches used by health care organizations and the SES on infection control in tuberculosis will be revised);
- Capacity building events for health facility leadership on IC issues in TB.

### **SSP 3.2: Provider, patient, and at-risk populations behaviors changed for TB prevention, detection, and treatment**

In Year 1, Cure Tuberculosis designed and conducted a qualitative formative research study in Naryn, Chui, and Jalal-Abad Oblasts and Bishkek to inform the development of a project Social and Behavior Change (SBC) strategy. After conducting an initial situation analysis of risk groups for TB and barriers to testing and treatment in Kyrgyzstan, the Cure Tuberculosis team along with an international consultant and key researchers from the Republican Health Promotion Center (RHPC) designed tools to inform gaps in knowledge about behaviors among the different high-risk groups. The involvement of RHPC from design through implementation of the study served both as capacity development in research methods and SBC strategy development, as well as to ensure their buy-in and coordination for the future development of the national SBC strategy.

The study had the following objectives:

- 1) Understand the perspectives of persons with TB and their household members on seeking diagnosis, starting and completing treatment;
- 2) Explore the factors that underlie the widespread stigma of TB patients;
- 3) Learn about possible support systems and channels of communication for reaching high-risk groups including former prisoners, migrants, people who misuse substances, people living with HIV, and people who are homeless.

The research study was conducted in February-March 2020 and enrolled a total of 547 participants. The study consisted of focus group discussions, semi-structured interviews and structured interviews called Doer/Non-doe interviews which elicit behavioral differences between those who carry out a behavior of interest and those who do not. The behaviors of interest were defined as seeking testing, starting and completing treatment, and stigma. Responses to the doer/non-doe questionnaires were coded, tabulated, and ranked by frequency to establish enabling factors and barriers to each behavior. The study identified many differences between the original hypotheses established for target group and the findings of the study for each group.

#### Study scope:

- 25 focus group discussions with men and women from the general population, external migrants and their families, internal migrants, and health care workers
- 277 doer/non-doe interviews on testing, starting and completing treatment, and stigma
- 23 semi-structured interviews with high-risk groups and staff working with high-risk groups

The study results revealed the following enabling factors and barriers for seeking testing and completing treatment. For the behavior of starting treatment, it was impossible to recruit sufficient non-doers (people diagnosed with TB who did not start treatment) to enable a robust analysis, but barriers and enablers were similar to those found for testing. This behavior was dropped from the SBC strategy after additional data collection indicated that the behavior may not be as problematic as hypothesized: health workers do a good job of encouraging patients to start treatment, and patients are interested in getting well. Figure 11 shows the main enabling factors and barriers to testing and completing treatment.

Figure 11. SBC formative research main findings on enabling factors and barriers to testing and completing treatment

<b>Main Findings: Enabling Factors and Barriers</b>	
<b>Enabling factors for seeking testing</b>	<b>Barriers to seeking testing</b>
<ol style="list-style-type: none"> <li>1. Self-motivation to know one's TB status</li> <li>2. Concern about infecting family members</li> <li>3. Knowledge that treatment is effective</li> <li>4. Having someone to take over household responsibilities</li> <li>5. Access to free testing</li> <li>6. Receiving rapid results</li> </ol>	<ol style="list-style-type: none"> <li>1. Lack of time</li> <li>2. Cost of diagnostic tests</li> <li>3. Lack of transportation</li> <li>4. Concern about stigma</li> </ol>
<b>Enabling factors for completing treatment</b>	<b>Barriers to completing treatment</b>
<ol style="list-style-type: none"> <li>1. Desire to be cured</li> <li>2. Concern about infecting others</li> <li>3. Feeling better after starting treatment</li> <li>4. Advice and support from health workers or NGO staff</li> <li>5. Convenience of the treatment regimen</li> <li>6. Receiving material incentives or good hospital care</li> </ol>	<ol style="list-style-type: none"> <li>1. Drug adverse reactions</li> <li>2. Difficulties with drug intake</li> <li>3. Family issues</li> <li>4. Alcohol dependence</li> <li>5. Co-existing illnesses</li> <li>6. Inconvenience of daily travel to health facilities</li> <li>7. Lack of residence registration</li> <li>8. Long duration of treatment</li> </ol>

The main sources of support mentioned by participants in helping them to complete treatment were family, who provided both emotional and financial support, and health care workers, who provided advice and encouragement. Some patients, especially from high-risk groups, reported receiving important support from NGO workers. Given the crucial role of health workers in treatment support,

training on regular counseling of TB patients and development of interpersonal communication skills for health workers and NGO staff are critical.

Focus group discussions and interviews revealed a wealth of misinformation about TB, including misconceptions about:

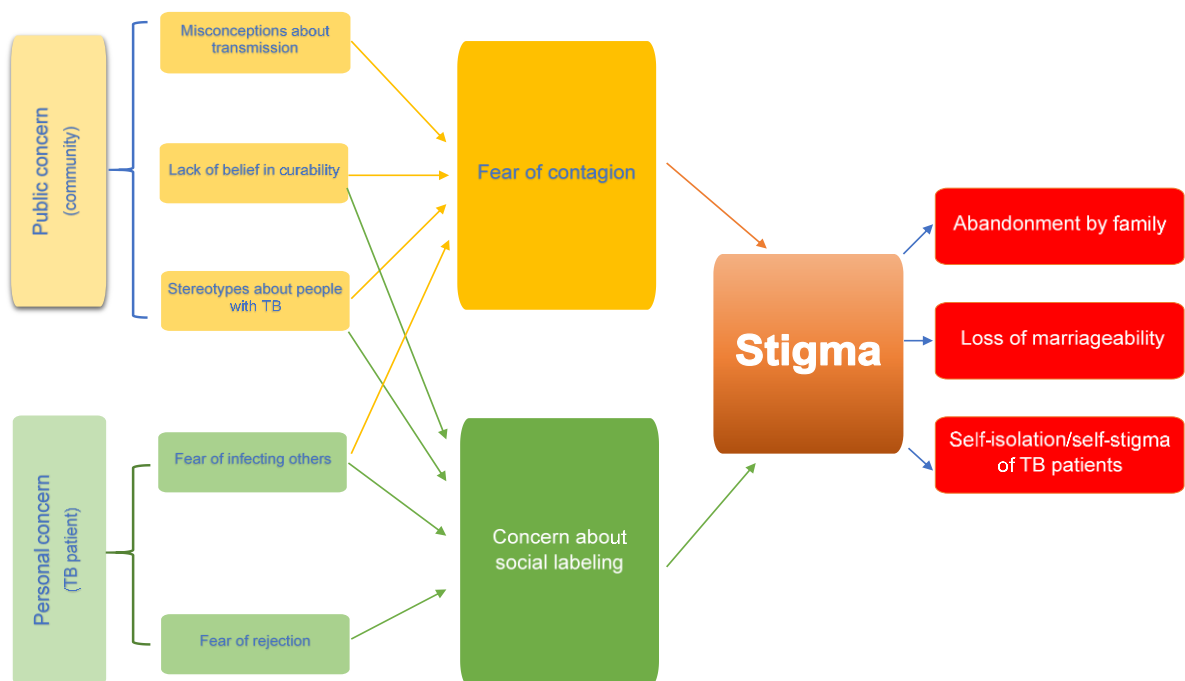
- Causes (cold/damp conditions, deterioration of other respiratory illnesses)
- Transmission (through dishes, food, clothes)
- Inheritability (genetic, affecting ability to have healthy children)
- Treatment and curability (ineffective drugs, incurable, chronic TB, folk medicine)
- Many stereotypes about the types of people who contract TB, with mention of prisoners, smokers, people who misuse alcohol, poor people, and those who have poor hygiene.

Stigma was evaluated in this study through a multi-pronged approach among the general population, people with presumptive TB, TB patients, families of TB patients, and health care workers. Overall, stigma was found to be widespread, with regional differences in how stigma was expressed. The study revealed the following four types of stigma, as well as some stigma reported by TB patients from health workers who are non-TB specialists. The causal analysis of stigma below (Figure 12) shows how community-level and patient-level factors including misconceptions about transmission, disbelief in the curability of TB, and stereotypes fuel stigma through a fear of contagion and social labelling. In addition to (real and perceived) avoidance and rejection by the community, the most significant social consequences of stigma include abandonment by family, loss of marriageability for TB patients or their family members, and self-isolation and self-stigma among TB patients.

#### Four types of stigma identified:

- Public stigma
- Perceived stigma
- Self-stigma among TB patients
- Secondary stigma towards health workers who treat TB patients

Figure 12. Community and Personal Factors Leading to Stigma and its Most Significant Social Consequences



Further gender-related findings of the research study are summarized in the Cross-cutting issues section on Gender equality and female empowerment.

The full research report with detailed findings, *Evaluation of factors affecting the behavior of target groups in health care-seeking and tuberculosis treatment*, is available on the USAID DEC and on the [JSI website](#).

Based on the formative research findings, the Project's SBC strategy was developed according to an established 12-step process. For each of the defined behaviors – testing, completing treatment, infection control practices, and stigma – an audience segmentation exercise was conducted to identify the primary, secondary, supporting and normative audiences who can influence the behaviors of each target group. An explicit strategy was developed for each behavior and target group, along with tailored messages and communications channels and materials for each. A detailed stakeholder analysis was also conducted for each key behavior to determine the steps needed to change the broader enabling environment.

#### Steps in the SBC strategy process:

- 1) Define the ideal behavior
- 2) Compare the ideal behavior with the actual behavior and existing research
- 3) Identify the priority audience
- 4) Select appropriate qualitative research methods
- 5) Carry out the formative research
- 6) Analyze the findings
- 7) Describe the audiences
- 8) Identify the factors that enable or impede the key behaviors
- 9) Decide on key messages and channels
- 10) Develop the actions to address the key factors
- 11) Establish indicators to monitor the effectiveness
- 12) Complete the behavior change strategy with details for implementation.

On September 30, a national SBC workshop was held with the participation of the NTP, RHPC, SES, MHIF and other partners and NGOs to begin developing the national SBC strategy. Cure Tuberculosis shared the results of the SBC formative research and the project SBC strategy in order to begin discussions and form working groups to start building different parts of the national strategy.

Based on the project SBC strategy, the Cure Tuberculosis team is developing a series of tailored materials to disseminate key messages and information to dispel myths and misconceptions on TB and reduce stigma and discrimination. So far, the Project has developed 5 videos using a behavioral journalism approach, which demonstrate encouraged behaviors and motivate the adoption of key behaviors by target groups in the following areas: (i) the provision of psychological support to TB patients by health care workers; (ii) the role of community-based supporters in TB treatment; (iii) the provision of social support to patients in need; (iv) good patient adherence to treatment and well-coordinated teamwork of health care workers; and (v) the importance of informing the population about TB by religious leaders to reduce stigma and discrimination and provide support to people affected by tuberculosis. All videos were broadcast multiple times on EITR and STV channels and via social media.

The multiple-channel broadcasting approach was used to create a multiplicative effect of the videos:

- A patient's story of good adherence to TB treatment and well-coordinated teamwork of medical workers (Picture 5) was repeatedly broadcast (27 times) by EITR, STV, Zamana TV studio of OTRK and also posted on social media pages of these TV companies, thus continuing to collect additional views.
- A video about an FMC staff, who showed empathy to a TB patient, helped him get a job, and thereby improved adherence to treatment and successful completion of treatment was shown

42 times on TV channels EITR, STV, and Zamana TV studio of OTRK with subsequent posting on their pages in social media.

- The videos were also posted on the NTC and sub-grantees' social media pages, which increased the multiplicative effect and viewing by various target audiences and will contribute to the changes in attitudes and behavior of people.
- In addition, the Project developed and had approved by the Expert Council of the Ministry of Health two animated videos on the importance of regular and balanced nutrition of TB patients in during treatment and on the importance of proper and regular ventilation of TB patients' rooms.

Picture 5. A patient with XDR-TB receives drugs from a feldsher at a FAP in Kemin rayon, Chui Oblast. This patient, who features in the treatment adherence video, credits his health worker with helping him to complete his long two-year course of treatment. His story illustrates the critical role of health workers in treatment support – one of the main findings of the SBC research.



The Project will continue producing videos featuring people sharing stories of encouraged behaviors reflecting the key messages of the SBC strategy and will strengthen the multiplicative dissemination of SBC information with an expansion through other channels: radio, social media (official RHPU, MOH accounts), messengers (WhatsApp groups of the NRCS, HPU specialists, and VHCs for the rural population), the PHC television network (demonstration of SBC videos on TV screens in waiting areas, TB rooms), etc.

## Sub-Purpose 4: Improved enabling environment

### Sub-Purpose 4 Key Achievements:

#### SSP 4.1: Improved financing for TB services

1. Developed a **financing standard for the transportation system** estimated at **1 million soms** for Chui and Talas Oblasts – and provided technical assistance to the Mandatory Health Insurance Fund (MHIF) to integrate it into their budget. In 2020 MHIF paid 350,200 soms out of their budget for transportation services.
2. Developed a **novel per capita financing standard** for Oblast TB Centers – estimated at **1.6 soms per population** – to cover additional OTC coordination functions with PHC organizations, and trained 59 specialists of OTCs and MHIF territorial departments on the new standard.
3. All financing standards **institutionalized** and incorporated into the MHIF 2020 budget and 2021-2022 forecast and signed by the President into the **MHIF Budget Law**.
4. **Developed a joint MOH-MHIF** order to operationalize the coordination functions of OTCs with PHC organizations using the per capita financing standard.
5. The **incentive payment system for successfully-treated cases** continues to operate in Chui and Talas Oblast and some rayons of Jalal-Abad and Osh Oblast. In 2020 MHIF allocated 34.2 million soms for the payment system.
6. Revised the **Financing of Treated TB Cases at PHC Level** software to allow collection and analysis of clinical data on treatment cases (treatment outcomes) in addition to financial data (payments for successfully-treated cases).

#### SSP 4.2: Improved data for decision-making

7. Completed the **reengineering of the clinical module of the TB Surveillance Information System (ES/TB)**.
8. Designed and implemented **TB MIS systems** to automate the routine work of health care workers: EMR, LDMIS, LDMIS/COVID and the Financing for Treated Cases software at PHC level for MHIF, and developed NTP website.
9. Developed and distributed **50 manuals and 50 training videos** to educate HCWs on LDMIS.
10. Achieved **99.6% accessibility** of MIS systems in Year I through technical support to the NTP for maintenance of the TB MIS systems developed (EMR, LDMIS, GxAlert).
11. Developed a **COVID-19 module for LDMIS** to enable tracking of test results for COVID-19. The new software was installed in **all 12 laboratories nationwide** performing testing for COVID-19. Staff were trained and a dashboard was developed to provide real-time monitoring and mapping of COVID-19 cases. **Over 238,000 test results** for COVID-19 were entered into the system.
12. A system of **real-time notification** about COVID-19 test results via SMS was developed to provide immediate test results to people tested. By the end of September 2020, **over 21,000 notifications** about test results had been sent and over 12,000 viewed test results online.
13. In Year I, **822 health care workers** have been trained and are currently using TB-MIS in their routine work.



#### SSP 4.3: Improved policies

14. Conducted a **situational analysis** in each of the 4 Oblast TB Centers in Chui, Talas, Jalal-Abad and Naryn.
15. Developed **3-year master plans** for each of the OTCs to optimize operations, reform M&E departments and improve coordination functions.
16. Developed an **MOH order on the provision of TB services under emergency conditions** in response to the COVID-19 emergency, allowing a 14-day drug supply for patients, remote DOT options including through video DOT and community-based treatment supporters, and online Concilium meetings.
17. Developed and adopted **12 governance documents** on TB financing and restructuring, clinical guidelines and training, Concilium reform, contact investigation, information systems, and COVID-19 policies.
18. In Year 1, **1,001 individuals were trained** in components of the WHO End TB Strategy.

#### SSP 4.4: Reduced stigma and discrimination

19. Developed a **strategy to combat stigma and discrimination** as part of the SBC strategy focusing on dispelling myths and misconceptions which fuel stigma through mass media and social outreach and interpersonal communication.
20. Developed the content for the **NTP website** and helped disseminate information on TB
21. Distributed **TB-related information materials** through 99 TV stories, 35 radio spots, six printing materials, 116 online publications, and 114 video reports posted on the social pages of TV companies. Significant reach with TB and TB/COVID-19 messages was also achieved through the **social media pages** of the NTP, MOH, and sub-grantees.
22. During the COVID-19 emergency, disseminated **important information on TB and COVID-19**, vulnerability of TB patients to COVID-19, and TB/COVID-19 co-infection, and reiterated the importance of TB treatment adherence through social media and mobile communication.
23. **Seconded two project SBC staff members to the MOH** to help with the COVID-19 strategic communications response; helped produce **120 communications materials**.

#### SSP 4.1: Improved financing for TB services

Methods of financing and committed government budgets are essential to ensuring the sustainability of new approaches and tools developed in the TB service. This year was pivotal for strengthening the system of financing of TB services in the country. The Cure Tuberculosis Project provided technical support to develop methods and standards for financing the transportation system and newly assigned functions and tasks of Oblast TB Centers.

One of the Cure Tuberculosis goals is to ensure the effective and sustainable functioning of the transportation system of biomaterials and TB drugs. Since August 2019, financing of the transportation system in Chui and Talas Oblasts has been transferred to the MHIF. Cure Tuberculosis provided technical assistance to the MHIF to amend existing financing regulations in health and include financing standards for the transportation system in two regions in the MHIF budget. Project specialists provided technical support to develop a methodology for calculating a standard for financing the transportation system to secure funding from the state budget. According to this standard, the transportation system requires 1 million Kyrgyz soms for both pilot regions of Talas and Chui together.

According to the MHIF, from January to September 2020 in Chui Oblast, 4,536 sputum samples were delivered from FMCs for GeneXpert testing, culture and DST through the transportation system and 1,728.9 kg of TB drugs were delivered from Oblast TB Centers to PHC facilities at the rayon level. In total, the MHIF paid 291,800 soms from the state budget for the transportation system.

In Talas Oblast for the same 9-month time period, 935 sputum samples were delivered from FMCs for GeneXpert testing, culture and DST through the transportation system and 136.27 kg of TB drugs were delivered from Oblast TB Centers to PHC facilities at the rayon level. In total, the MHIF paid 58,400 soms from the state budget for the transportation system.

Cure Tuberculosis also provided technical support to develop a novel standard for per capita financing of Oblast Tuberculosis Centers. Prior to 2012, TB hospitals were funded on a per-bed basis and PHC organizations were funded on a per capita basis. In 2015, when developing new methods of financing of TB organizations, results-based financing (financing per treated case) was adopted in all TB hospitals and Oblast Tuberculosis Centers in order to incentivize more efficient TB services. However, while this financing method worked well to cover the inpatient care functions of OTCs, it failed to take into account the important OTC functions of coordination, monitoring, and technical support to PHC organizations. This method of financing therefore led to a gradual reduction in these critical functions. Per capita financing is a more appropriate method to finance some of these coordination functions. A decision was therefore made to adopt a mixed method of financing for OTCs, including both financing per treated case and per capita financing. Cure Tuberculosis developed a new per capita financing standard specifically for OTCs, estimated at 1.6 soms per patient.

The MHIF allocated a budget for financing TB services (Table 9) which includes financing per treated case, per capita financing, financing for the transportation system, and the incentive payment system for successfully-treated cases at PHC level. These new financing standards were incorporated with corresponding amendments in the Law on the Budget of the Mandatory Health Insurance Fund under the Government of the Kyrgyz Republic for 2020 and Forecast for 2021-2022. The Law was approved by the Jogorku Kenesh (Parliament) of the Kyrgyz Republic and signed by the President.

Table 9. Basic MHIF standards for financing TB services for 2020 (Kyrgyz soms)

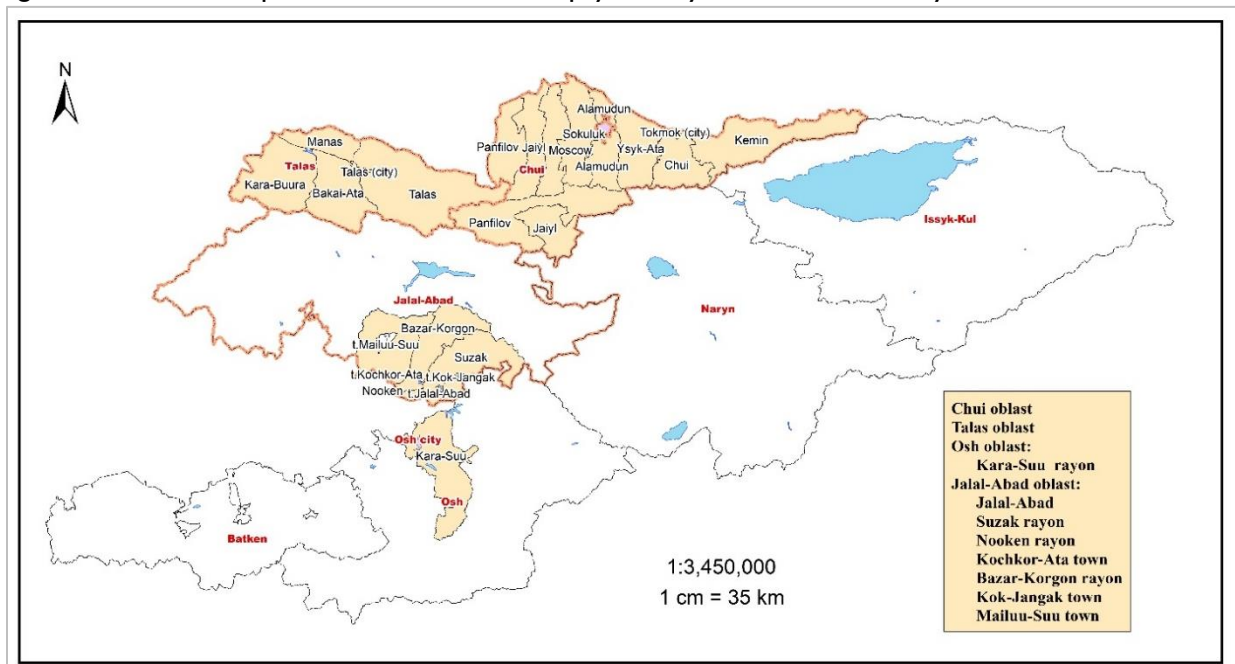
	<b>Amount / coefficient</b>
<b>Base rate for in-patient medical services of TB organizations (cost per treated case)</b>	42,445
<b>Per capita financing of coordination functions for the NTC and regional tuberculosis centers</b>	1.6
<b>Payment per case for successful completion of treatment at PHC level:</b>	12,000
- drug-sensitive tuberculosis	24,000
- drug-resistant tuberculosis	
<b>Standard for financing the transportation of biomaterials for the NTC and regional tuberculosis centers (per pilot oblast)</b>	500,000

The Cure Tuberculosis Project also provided support to the Ministry of Health and MHIF to ensure the effective implementation of financing methods in the OTC. The support included training for 59 specialists of the OTCs and MHIF territorial departments (15 male, 44 female) through online training on the new financing standards, and the development and implementation of tools to effectively use the allocated funds to perform new functions and tasks. The Project facilitated the adoption of a joint MOH

and MHIF order on measures to improve the coordination of PHC organizations implementing TB measures, which serves as a guide for the NTC and OTC on the correct and efficient use of the per capita financing standard (MOH Order No. 187 of March 24, 2020 and MHIF Order No. 113 of March 24, 2020). The total coordination budget for 2020 amounted to 9.9 million soms. Cure Tuberculosis also helped to revise the model agreements of the MHIF with organizations involved in the coordination.

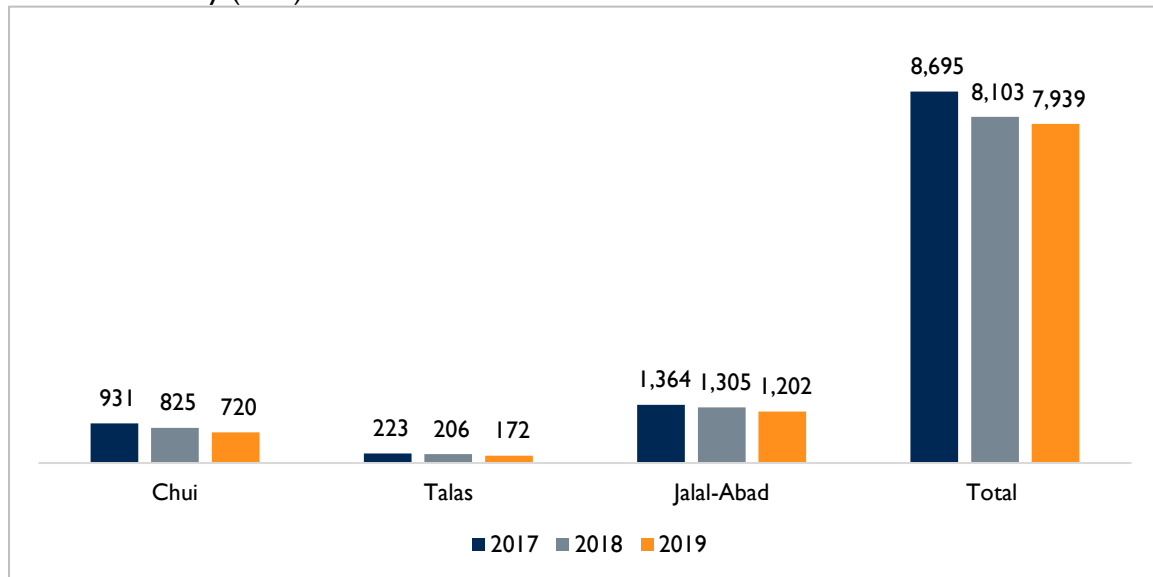
In Year 1, with Project support, the PHC system continued to receive payments for successfully-treated TB cases in Chui and Talas Oblasts, several rayons of Jalal-Abad Oblast, as well as in Kara-Suu rayon of Osh Oblast (Figure 13). In total, the MHIF has allocated 34.2 million soms for this payment system in 2020. So far, from January to September 2020, 1,579 TB cases have successfully completed treatment at the PHC level in these regions (1,095 DS-TB cases and 484 DR-TB cases). For the period January to June, 918 TB cases (667 DS-TB and 251 DR-TB) were reimbursed for a total sum of 14 million soms. For the period July to September, the remaining 661 cases (428 DS-TB, 251 DR-TB) are awaiting reimbursement after the payment system was temporarily interrupted due to COVID-19. For this reason, the health care system has so far only utilized 14 million (41%) out of the allocated 34.2 million soms for 2020. In Year 2, Cure Tuberculosis will initiate a policy dialogue with MHIF and the NTP to restart these payments and pay them retroactively. The possible effects of this payment interruption on the quality of case management services are not yet known.

Figure 13. Areas of implementation of the PHC payment system for successfully-treated TB cases, 2020



In general, according to the MHIF, there has been a reduction in hospitalization for TB in the Kyrgyz Republic, but the decline over the last three years is due in large part to the decrease in the regions where the incentive payment system for successfully-treated TB cases for health care workers was introduced. From 2017 to 2019, hospitalizations decreased in the pilot regions of Chui Oblast by 23%, in Talas Oblast by 23%, in Jalal-Abad Oblast by 12% (Figure 14), and in Kara-Suu rayon of Osh Oblast by 35%.

Figure 14. The number of treated cases in TB hospitals in 2017-2019 in Chui, Talas and Jalal-Abad Oblasts and nationally (total)



(Source: MHIF)

In Year 1, Cure Tuberculosis specialists revised the software Financing of Treated TB Cases at PHC Level. As a result of the proposed changes, in addition to monitoring the financial component of the PHC payment system for successfully-treated TB cases, the MOH and the NTC will be able to monitor and analyze cases that have been treated at the PHC level, including treatment outcomes. The updated software will be installed in Oblast TB Centers.

In Year 2, the Cure Tuberculosis Project will assess the impact of the payment system on the TB program using operational research and an analysis of treatment outcome data obtained from the revision of the Financing of Treated Cases software. Based on the results of this assessment, a decision will be made to further expand the payment method for the successful completion of TB treatment at the PHC level.

Cure Tuberculosis will also calculate the costing of TB laboratory services based on which a method of payment for TB laboratory services will be proposed. The funding for the transportation system and the new functions of the OTC will continue with the enhanced capacity of the OTC to effectively use the allocated funds.

#### SSP 4.2: Improved data for decision-making

In Year 1, the Cure Tuberculosis MIS team helped to design and implement software that facilitates the routine work of health care workers in TB. The following TB Medical Information Systems (TB MIS) software products have been developed and implemented with the financial and technical support of USAID:

1. Electronic Medical Record (EMR) for TB hospitals
2. Laboratory Data Management Information System (LDMIS)
3. Laboratory Data Management Information System – COVID-19 module (LDMIS/COVID)
4. In addition, the MHIF utilizes the Financing of Treated TB Cases at PHC Level software.

These systems were designed to automate the daily routine work of health care workers in TB, and currently, most health care workers prefer to use the TB MIS software instead of paper. Unfortunately, there is no institutional capacity to ensure technical maintenance of TB MIS, which is evidenced by requests from the NTC for technical support.

The Cure Tuberculosis Project conducted an assessment of the current needs of the NTP for technical support and maintenance and developed technical specifications for maintenance services to ensure flawless operation of all systems. Cure Tuberculosis conducted tenders and selected two companies, which, under Project supervision, ensure the functioning and government-approved accessibility of the software products all over the country, as well as maintain all the connections and configuration of GeneXpert equipment and GxAlert systems.

Throughout the year, they ensured a 99.6% accessibility of TB MIS and restored the performance of services after an unplanned network outage, electricity cutoffs, and the failure of the NTC transformer. Their quick response to restore the performance of services after the NTC transformer had failed ensured that many users could work with the TB MIS and enter more than 2,500 test results that accumulated when the transformer was down.

Cure Tuberculosis also addressed an issue of high staff turnover and the aging of medical personnel faced by the health sector of the Kyrgyz Republic. This problem is especially severe in regional health care organizations, in particular in oblast TB centers. To provide for faster and quality on-boarding of health workers in TB, the Project initiated the development of educational video materials, focusing on medical information systems and their use in TB. Fifty manuals and 50 training videos for eight LDMIS roles (validator, doctor (test viewing), laboratory assistant, test setting, settings and other options, mailing of tests, registration desk, manager) in two languages were distributed in all TB facilities through the existing TB MIS software.

In Year I, Cure Tuberculosis completed the reengineering of the clinical module of the TB Surveillance Information System (ES/TB). In 2018, the MOH initiated an independent assessment of the TB Surveillance Information System (ES/TB) with the financial support of USAID. Based on an independent assessment by the MOH, two of the three modules (pharmacy and laboratory) of the TB Surveillance Information System were found to be non-functional and the third module (clinical) was determined to have serious weaknesses which required re-engineering. Technical specifications for the re-engineering of the third module were developed with USAID financial support. This year, the Cure Tuberculosis project reviewed the technical specifications and held a tender to select a contractor for software re-engineering services. The selected contractor developed the software code and completed the re-engineering of the TB Surveillance Information System (ES/TB) clinical module, and the testing protocol was signed by the National Tuberculosis Center.

The testing process of the TB Surveillance Information System (ES/TB) clinical module after reengineering is accompanied by consultations from the representatives of the National TB Program. The pilot implementation of this program will be carried out in accordance with the agreement with the NCP in certain TB organizations (at the district, oblast/city levels), and taking into account the existing system of data collection and reporting on tuberculosis. Further dissemination and implementation of this information system across the country will be carried out with the active involvement of NTP in order to ensure its sustainable use by the TB control service at all levels. By the end of the Project, it will be planned to hold workshops for managers and trainings for district level primary health care workers.

In accordance with the USAID decision to provide technical support to curb the spread of COVID-19 in the Kyrgyz Republic, Cure Tuberculosis developed a COVID module in LDMIS and facilitated the implementation of the LDMIS software and the COVID module in the laboratories of the Department of Disease Prevention and State Sanitary and Epidemiological Surveillance (DDP&SSES) that currently conduct COVID testing nationwide. The LDMIS with the COVID module was implemented in all 12 laboratories nationwide that are equipped to conduct PCR tests for COVID-19 (full list in Annex 3). Forty-three new users from the staff of the DDP&SSES were trained to use the LDMIS software.

In addition to the COVID module in LDMIS, the MIS team developed a dashboard with options for output and visual presentation of data necessary to monitor and map new COVID-19 cases in real time. This dashboard was introduced in the 12 laboratories conducting PCR tests for COVID-19 and in the Ministry of Health; 57 users were trained.

From April to September, the COVID module collected information on over 238,000 test results (as of September 29). More than 3,000 test results are entered daily. Below are snapshots from the LDMIS dashboards which show the breakdown of COVID-19 test results by gender, with 50.29% of those tested being women and 49.71% men (Figure 15) and by age group, with the 30-45-year olds representing the largest proportion of test results (32.15%) (Figure 16).

Figure 15. LDMIS/COVID dashboard snapshot. Gender breakdown of COVID-19 test results as of September 2020

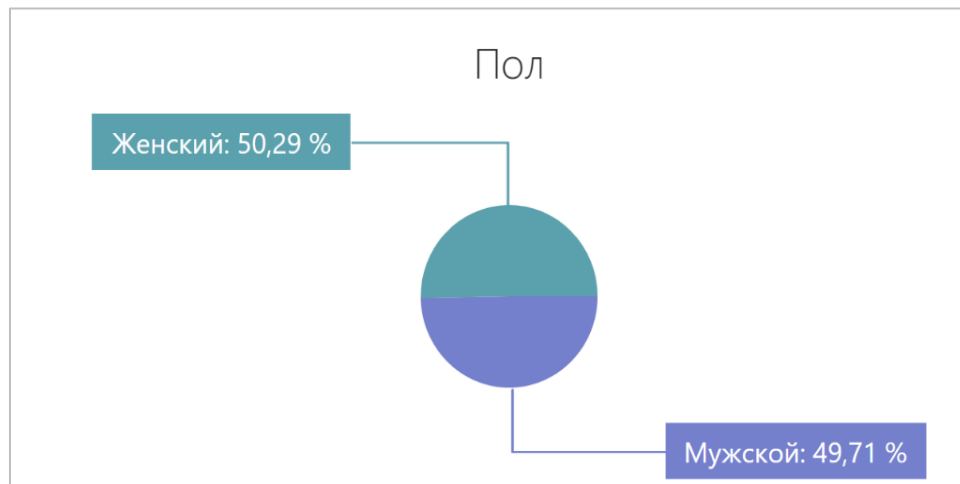
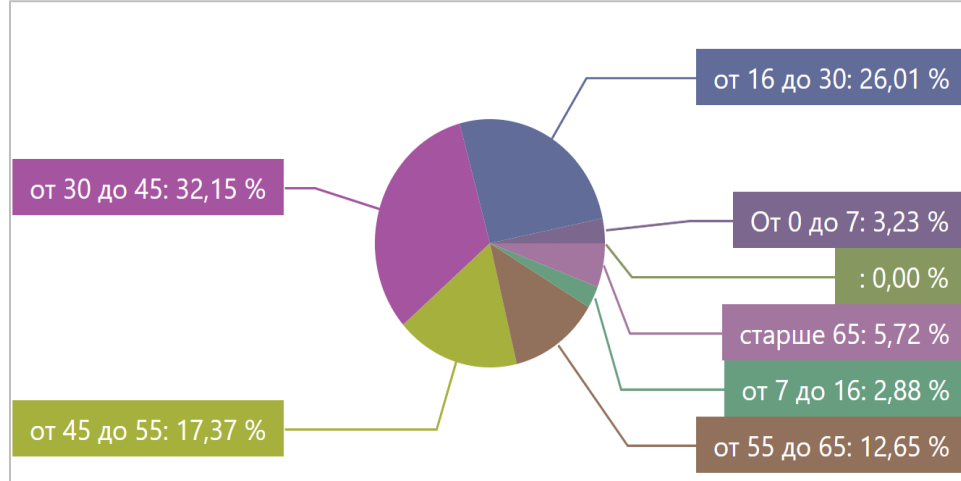


Figure 16. LDMIS/COVID dashboard snapshot. Age breakdown of COVID-19 test results as of September 2020



The Project also developed a system of notification about test results for COVID-19 in real time via SMS (text messages). The SMS notification module enables patients to receive test results online, reduces waiting times, eliminates the need to spend time and money to travel to a health facility, and reduces the risk of infection by minimizing contacts and interaction with doctors, laboratory technicians, and other patients. As soon as a test result is ready, the patient receives an SMS notification and can directly follow the link to a page to search for their result using a code, phone number or social identification number (Figure 17). By the end of September 2020, over 21,000 notifications about test results had been sent to people tested for COVID-19, and over 12,000 viewed test results online.

Figure 17. Screenshot of COVID-19 test results page

Просмотр лабораторных анализов

Код:

Телефон:

ИИН (ПИН):

Найти

USAID  
 OF AMERICAN PEOPLE

JSI

Данная информационная система была разработана при поддержке проекта USAID «Вылечить туберкулез».

In Year I, a total of 822 health care workers have been trained and are using TB-MIS in their routine work, including the LDMIS, LDMIS COVID module and EMR. 546 health care workers are new users in Year I (276 previously trained), overachieving the annual target of 400 by 137%.

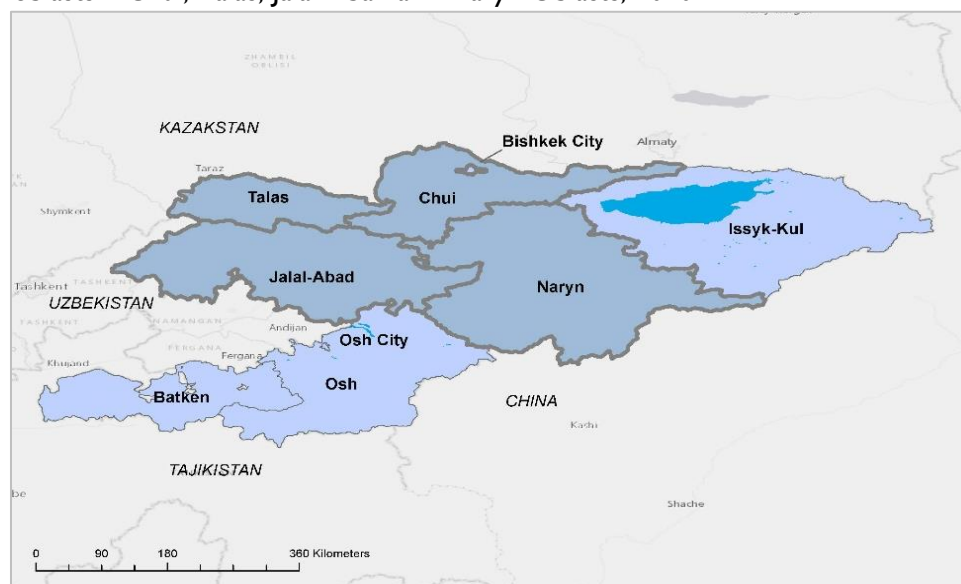
### SSP 4.3: Improved policies

In Year I, the Project focused on optimizing the regional tuberculosis centers. In each oblast, the OTC should reform into an organization responsible for introducing new approaches and tools in the TB service in the designated territory. There are currently 19 TB hospitals with 2,605 beds in Kyrgyzstan.

In Year I, the Hospital Association of the Kyrgyz Republic (HAKR) conducted a situational analysis of the activities of each of the Oblast TB Centers in Chui (Quarter 2), Talas, Jalal-Abad (Quarter 3), and Naryn Oblasts (Quarter 4). The analysis showed that the structure, staffing, and functional responsibilities of the employees do not correspond to the functions and tasks assigned to the OTC in the TB services. The clinical units are ineffective; The occupancy of beds is on average 70%; the average length of stay of a patient is unnecessarily long – 85.6 days; on average, about 50% of hospitalized patients do not meet the criteria for hospitalization according to national regulations. The work load of TB specialists of clinical departments is an average of 4.5 patients (lower than the standard of eight patients per month per doctor); the Monitoring and Evaluation Department is staffed by specialists who are also employed in clinical units; the level of effort factor is 1.75 (above the standard maximum of 1.5), which affects the quality of services and the performance of functions; there is no systematic approach to the coordination and provision of methodological assistance to PHC organizations in their provision of TB services; monitoring is carried out inconsistently and without clear guiding principles; data collected at the regional level is not analyzed; the employees admit low capacity and lack of skills for analysis; there are no tools that can visually demonstrate the overall picture and dynamics; all data generated at the regional level are only in tabular format.

Based on the situational analyses, HAKR specialists developed 3-year master plans for optimizing the OTCs. The main focus was on optimizing and strengthening the monitoring and evaluation department, starting with changing its name, since the functions assigned to the department were much broader. Staffing will be set up with the assignment of fully employed specialists, with clear functions and tasks. The new per capita financing of the OTC, developed and incorporated into the MHIF budget by Cure Tuberculosis, will allow adequate budgeting for the implementation of new functions and tasks.

Figure 18. Roll-out of the optimization of Oblast TB Centers (situation analyses and master plans) in all four Year I oblasts – Chui, Talas, Jalal-Abad and Naryn Oblasts, 2020





In 2021-2022, the OTCs of Chui, Talas, Jalal-Abad, and Naryn Oblasts will implement their master plans. At the end of 2021, HAKR specialists will conduct an interim assessment of implementation. In Year 2, the Batken and Osh Oblast TB Centers and master plans will be developed. Thus, by the end of Year 2, six out of seven OTCs will have received necessary reforms in structure and functions to be able to reduce TB incidence and mortality in their designated territories through improved quality of TB services and effectively-implemented functions of coordination and monitoring.

Taking into account the results of the situational analysis in the pilot oblasts, and the overall problems with the national system for monitoring and evaluating tuberculosis activities, the project plans to hold a series of consultations with representatives of the NTP and TB advisers in order to discuss the issues planned for the second year by the project on strengthening the capacity of National M&E system of the NTP.

In addition, within the framework of this component, the project facilitated the process of revision and printing of recording and reporting forms for NTP. In Year 2, Cure Tuberculosis plans to revise national M&E Guideline, M&E tools, as well as training of TB specialists at the national and regional levels on surveillance, M&E, collection and analysis of key national TB indicators and process indicators.

Following the Government response to COVID-19 when the epidemic emerged in Kyrgyzstan in late March, which included a series of measures restricting movement and large gatherings, an emergency situation throughout the country, and a state of emergency in Bishkek, the Cure Tuberculosis Project drafted an order for the Ministry of Health on the provision of tuberculosis services under emergency conditions. The order allowed patients to receive drugs for 14 days at a time, developed guidelines allowed for providing video-observed treatment, and allowed alternative methods for treatment monitoring through the internet, mobile communications, and community-based treatment supporters. The order also allowed for Central and Oblast Concilia to operate online and the Project provided video-conferencing support to enable these meetings. The decree was signed by the Ministry of Health on April 8, 2020.

In total, during Year 1, 12 governance and regulatory documents were developed and approved/implemented with the help of the Cure Tuberculosis Project, including in the areas of TB financing and restructuring, PHC service delivery, clinical guidelines and training, Concilium reform, contact investigation, information systems, and COVID-19 policies. This represents an over-achievement of 171% over the annual target of seven governance and regulatory documents, and a significant achievement for the project in the regulatory sphere. The full list of regulatory documents, with a summary of their individual content and significance, as well as the Project's role in developing them, is presented in Annex 4.

#### **SSP 4.4: Reduced stigma and discrimination**

As described in SSP 3.2, in Year 1, Cure Tuberculosis conducted an SBC formative research study on barriers to testing and treatment, behaviors of target groups, and stigma and discrimination. Based on the stigma results, a specific component of the SBC strategy addressing stigma was developed, which focuses on dispelling some of the myths and misconceptions which fuel stigma, as well as combating the negative narratives of stigma, including around inheritability and marriageability of those with TB, using a combination of mass media, social media, and interpersonal communication strategies.

In Year 1, the Cure Tuberculosis SBC team conducted outreach work aimed at reducing stigma and discrimination and changing people's behavior towards TB patients and their families. A special role was

given to media and social networks, which are a cornerstone of the project SBC approach, and became particularly important means of reaching people during the COVID-19 context.

Based on the results of a Soros Foundation-Kyrgyzstan study on the level of media literacy of the Kyrgyz population in 2017 which identified the popular social media sites Facebook, Instagram and Odnoklassniki as important sources of information for the populations sampled, the Project developed a media plan for the first year to build a communication system to disseminate uniform information on tuberculosis through the most popular channels of information regularly throughout the year. During the SBC formative research among both the general population and target groups, preferred channels of information were discussed and largely confirmed the results of the Soros study (except for certain risk groups who may benefit more from interpersonal communication.) Many participants also highlighted the effectiveness of hearing stories through the media with the participation of real TB patients, which further supported the Project's existing focus on behavioral journalism approaches.

The Project conducted outreach work according to the media plan. During the reporting period, Cure Tuberculosis distributed information materials on TB and SBC videos through TV, radio, the Internet, and in print. In total, 99 television stories, 34 radio spots, six printing materials, 116 online publications (including 49 on the websites of news information agencies and 67 on the official website of the Ministry of Health, National Tuberculosis Center, Mandatory Health Insurance Fund) were developed and publicized. In addition, 114 video reports were posted on the social pages of television companies.

In Year I, the SBC team provided technical assistance to the NTP in informing the public about TB and COVID-19 through the official NTP website and pages on the most popular social media resources Facebook, Instagram, and Odnoklassniki. Until 2019, the NTP had had no official social media accounts. Now, thanks to Cure Tuberculosis technical support, the NTP Facebook page has 1,315 followers and 299 posts (in Quarter 4, the total reach was 1,467,774 people resulting in 5,163 engagements), the Instagram page has 410 followers and 286 posts, and the Odnoklassniki page has 83 followers and 298 posts. Cure Tuberculosis helped the NTP to boost its social media accounts through paid targeted and contextual advertising in order to increase the number of subscribers and reach the target audiences with information on TB. The monthly budget is \$200. Boosting was used as a short-term strategy to increase the reach of the NTP pages, especially during the COVID-19 health crisis, in order to disseminate critical health and TB information as widely as possible. The Project will train NTP staff in social media marketing to hand over management of these information platforms over the course of the project.

The NTP requested technical assistance to develop a website as part of the universal digitalization of public services in the Kyrgyz Republic in 2019. The [NTP website](#) was developed and launched in January 2020. Throughout the year, the SBC team provided technical support to the NTP to create and manage the contents of its official website and developed a mock-up page about the Cure Tuberculosis Project as one of the listed international cooperation programs in health. Cure Tuberculosis will continue to assist the NTP with the creation and management of content and maintenance of the website until it is ready for handover to the NTP. The Project is simultaneously training NTP staff on website maintenance and content management to ensure a smooth handover and will gradually hand over these activities over the course of the project as the NTP capacity to manage the website is developed.

As a result of Cure Tuberculosis' advocacy, since November 2019, the Press Center of the MOH has started posting about TB on their official social medial channels. The Press Center shared 111 posts on their Facebook page with 7,666 followers (in Quarter 4, the total reach was 28,932,372 users resulting in 1,833,044 engagements) and 97 posts on their Instagram account with 16,600 followers.

Cure Tuberculosis works on improving the population’s awareness of tuberculosis and dispelling myths and misconceptions of tuberculosis to reduce stigma and discrimination faced by TB patients and their families in agreement with the project sub-grantees. The project sub-grantees disseminated information about TB through social media. The National Red Crescent Society published 54 posts on their Facebook page with 8,614 subscribers (in Quarter 4, the total reach was 937,815 users resulting in 23,852 engagements), and 54 posts on their Instagram page with 13,156 subscribers. The AVHC posted 135 posts on its Facebook page with 1,631 followers (in Quarter 4, 93,462 users were reached resulting in 6,019 engagements); 124 posts on their Instagram page with 610 subscribers; and 99 posts on Odnoklassniki with 62 followers. TB People posted 95 times on its Facebook page with 297 followers (reached 3256 users resulting 240 engagements) and made 59 posts on Instagram with 70 subscribers (Table 10).

Table 10. Social media metrics for July-September 2020

Partner	Social media	Posts		Followers	Engagement, people <sup>1</sup>	Reach, people <sup>1</sup>
		Q4	Year I	Q4	Q4	Q4
<b>NTP</b>	Facebook	98	299	1,315	5,163	1,467,774
	Instagram	98	286	410	n/a <sup>2</sup>	n/a <sup>2</sup>
	Odnoklassniki	98	298	83	n/a <sup>2</sup>	n/a <sup>2</sup>
<b>MOH</b>	Facebook	48	111	7,666	1,833,044	28,932,372
	Instagram	48	97	16,600	n/a <sup>2</sup>	n/a <sup>2</sup>
<b>AVHC</b>	Facebook	54	135	1,631	6,019	93,462
	Instagram	54	124	610	n/a <sup>2</sup>	n/a <sup>2</sup>
	Odnoklassniki	54	99	62	n/a <sup>2</sup>	0
<b>TB People</b>	Facebook	22	95	297	240	3256
	Instagram	22	59	70	n/a <sup>2</sup>	0
<b>NRCS</b>	Facebook	7	54	8,614	23,852	937,815
	Instagram	7	54	13,156	2,401	3,742

<sup>1</sup> Facebook data are exported through the free and accessible “Statistics” tool. Indicators of Engaged users and People reached are calculated here as a sum of daily totals of unique users. (Daily Engaged Users: the number of people who engaged with your Page; engagement includes any click or story created. Daily Total Reach: the number of people who had any content from your Page or about your Page enter their screen. This includes posts, check-ins, ads, social information from people who interact with your Page and more.)

<sup>2</sup> Statistics of Instagram and Odnoklassniki for Engaged users and People reached cannot be presented at this time for the following reasons: Instagram statistics are available only to organizations with business accounts; Odnoklassniki provides statistics only to users with more than 100 followers. These data will be collected in future quarters as soon as these conditions are met.

The following figures show social media metrics for all five organizations: number of posts during Year I (Figure 19); number of followers (Figure 20, MOH data is extracted due to very large comparative numbers); number of people reached on Facebook (Figure 21, both MOH and NRCS are extracted due to larger numbers of people reached owing to having older existing social media sites); and number of engaged users on Facebook (Figure 22, MOH and NRCS extracted for same reason). All graphs show a steady increase in engagement over time, with a specific spike in Q3 due to heightened interest towards health issues because of COVID-19 (especially for the MOH site which garnered tremendous attention during this time).

Figure 19. Number of posts made during Year I on Facebook, Instagram and Odnoklassniki by the NTP, MoH, AVHC, TB People and NRCS.

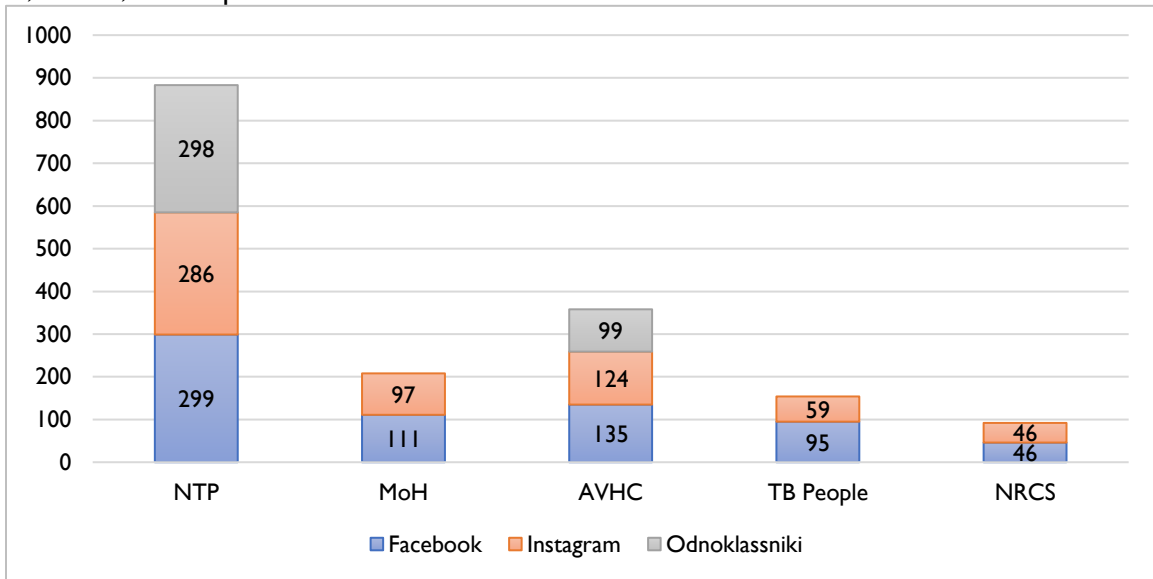


Figure 20. Number of followers on Facebook

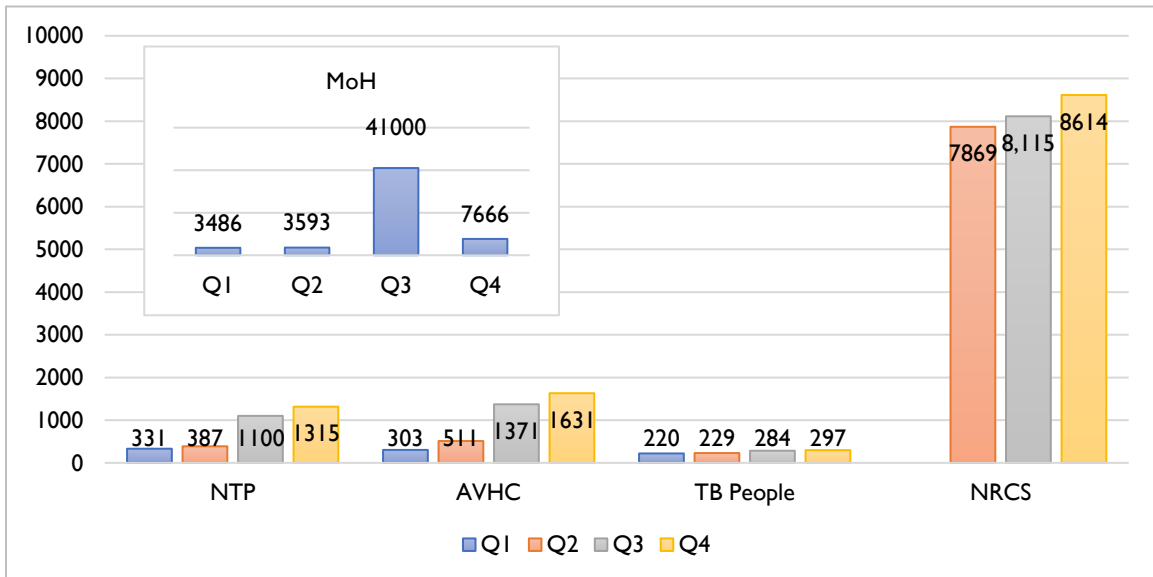


Figure 21. Number of people reached on Facebook

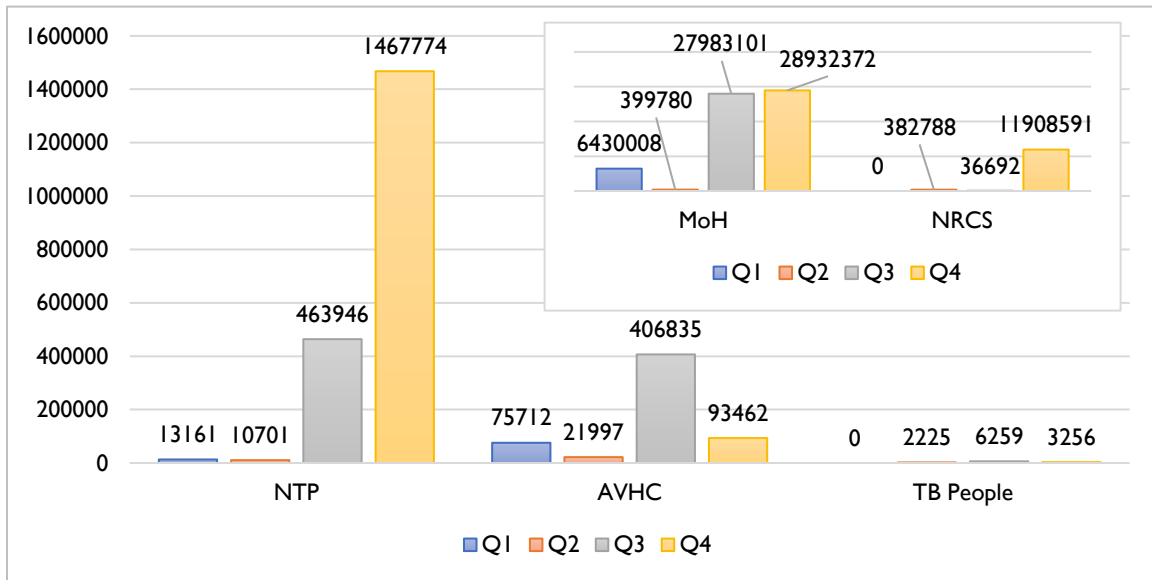
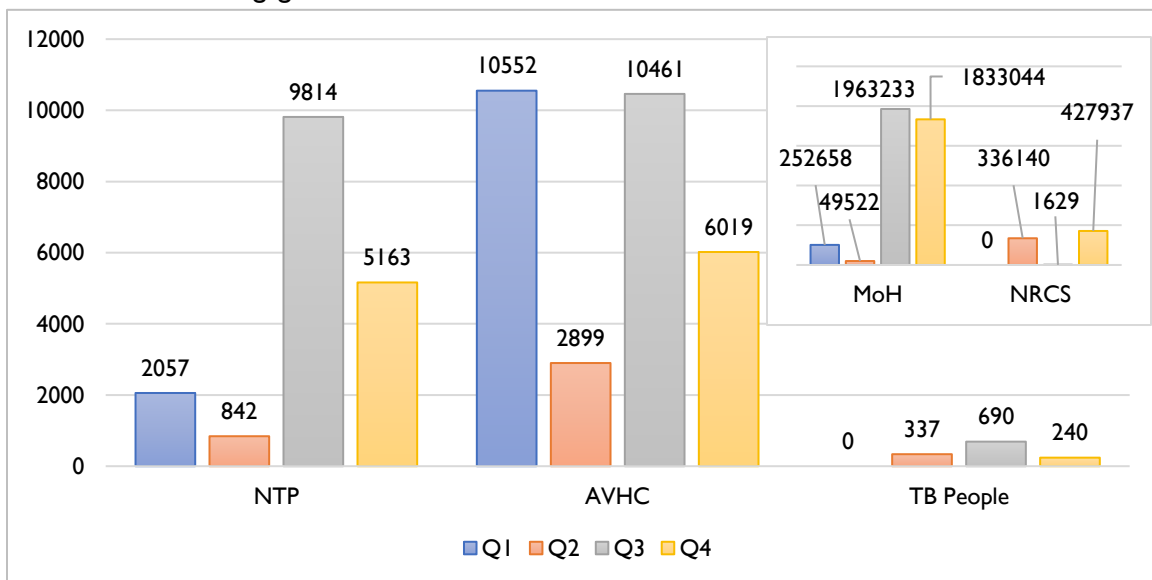


Figure 22. Number of engaged users on Facebook



During the COVID-19 epidemic, the Cure Tuberculosis SBC team developed a social media posting plan based on approved information and education materials on TB and COVID-19. The sub-grantees publicized information on TB and COVID-19 on their social media pages. The posts included information on the similarities and differences between TB and COVID-19, how to prevent infection with COVID-19, and, in case of TB/COVID-19 co-infection, the importance of completing TB treatment and providing patients with comprehensive assistance and support during the COVID-19 epidemic. In addition, two staff members from the project SBC team were seconded to the Ministry of Health in March and April to assist with the emergency response to COVID-19. In this capacity they advised the MOH and RHPC on strategic communications for COVID, helped them develop information on their social media pages, and trained staff of the press center on social media marketing. They developed nine TV spots and nine radio informational materials in Russian and Kyrgyz on the work of the TB services during COVID-19 (35 materials total), 3 video clips, 5 programs and 17 videos on the involvement of

doctors in the fight against COVID-19, and 60 information materials on the work of the MOH. Partnerships were arranged with university communications departments for free filming and editing.

The SBC team also worked closely with Door Media under the USAID Support to TB Patients Project to develop common approaches to informing the public to reduce stigma and discrimination and change the behavior of the population, patients, and health care providers; sharing information and experience; and providing methodological assistance in the development of information materials. A small training was held for Door Media employees on June 4 on tuberculosis issues and modern trends in the reform of TB care consistent with Cure Tuberculosis messaging. Cure Tuberculosis makes regular contributions to the Door Media monthly digital TB Bulletin informing the readers about the project work and achievements. Door Media was also invited to present results of their basic assessment of stigma and discrimination at an SBC workshop on the findings of the SBC formative research and the national SBC strategy development conducted by the Cure Tuberculosis project on September 30, 2020.

## Cross-Cutting Issues

### Gender equality and female empowerment

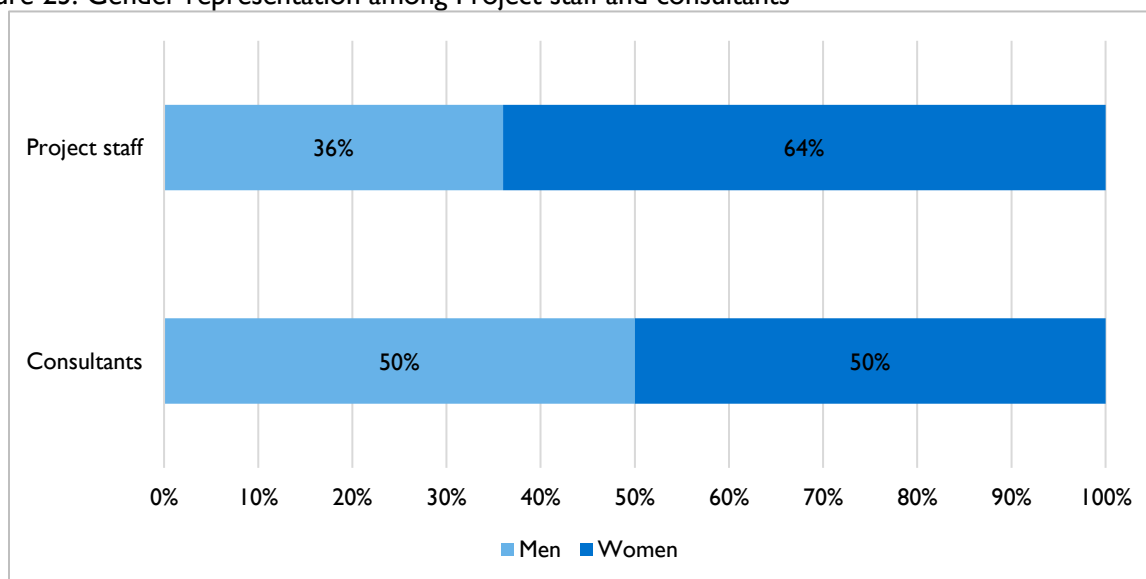
The Cure Tuberculosis Project adheres to the principles of gender equality and ensures that women's needs and concerns are equally addressed in its own agenda and in the work of its sub-grantees and partners.

#### *Gender in Project activities*

Overall, women have a relatively strong representation in the Kyrgyz health sector, with some key leading figures in the MOH, MHIF, and NTP being women. The Cure Tuberculosis leadership is also represented by women who hold COP and line director positions and together with other female members of the Project contribute to the project objectives and goals equally with men. The share of women in the Project team is 64%.

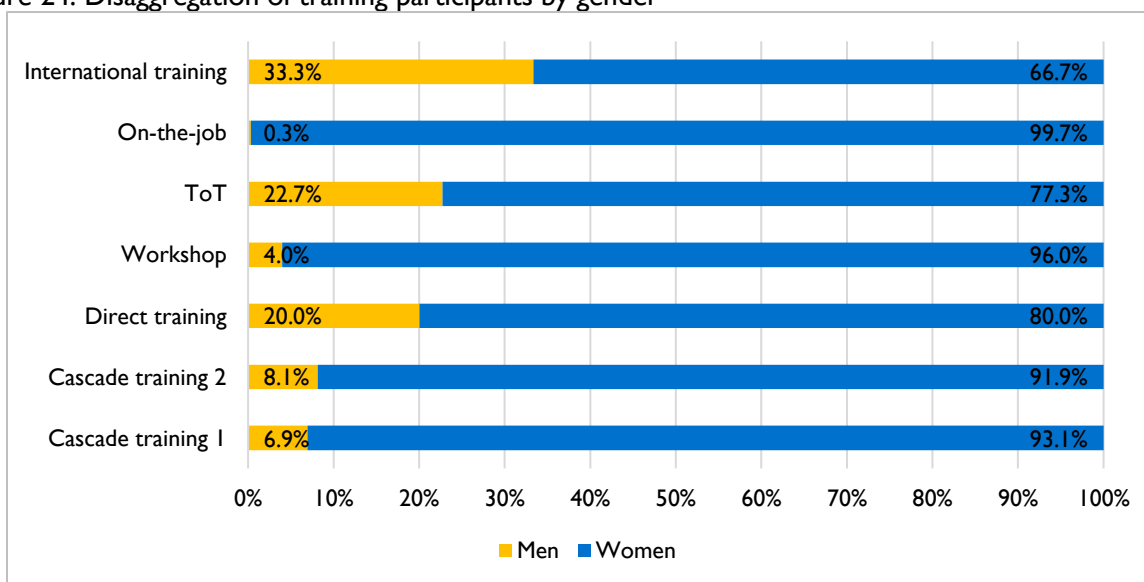
To help partners achieve set goals in building better health infrastructure and providing quality TB services, the Project hires short- and long-term consultants where a gender balance is also achieved. In Year I, Cure Tuberculosis contracted 42 consultants (50% male and 50% female) in information systems, law, financial systems and accounts, health issues, analytics, and outreach (Figure 23).

Figure 23. Gender representation among Project staff and consultants



When holding training for sub-grantees, partners, and other counterparts, Cure Tuberculosis makes sure that female specialists have equal access to knowledge as men. In Year I, the Project held numerous on-the-job and specialized trainings for the leadership of republican and local HCOs and regulatory bodies, clinicians, nurses, laboratory specialists, community leaders, volunteers, and others. In total, 10,437 people participated in 58 local and international workshops, training sessions, on-the-job classes, and TOTs, among whom women were represented 11 times more than men. Of these, 10,437 people, 6,911 were community leaders, most of whom are members of Village Health Committees which tend to be 90-95% women. Among health workers as well, women are more represented than men. Specialized subject trainings were delivered to 1,009 specialists involved in TB, of whom 80% were women. Figure 24 shows the gender disaggregation for all types of training activities.

Figure 24. Disaggregation of training participants by gender



In training for HPU specialists and representatives of sub-grantees on informing the public about tuberculosis, the Project used the MOH-approved guide on improving the awareness of the population about tuberculosis and other educational materials, which contain gender-specific information on the diagnostics and treatment of TB and the manifestations of stigma and discrimination related to the gender of TB patients. Training conducted by TB People for clerics and madrasah students were based on the methodological manual for religious leaders on tuberculosis prevention approved by the Spiritual Administration of Muslims of Kyrgyzstan and included gender-specific information on the attitude of family and community towards female TB patients.

#### *SBC gender strategy and gender-based approach in community work*

In the SBC formative research study, gender was an integral part of study design in order to assess the gender-related dynamics of TB awareness, testing, and treatment; family support of TB patients; and stigma. More focus group discussions were conducted with women than men in order to explore the higher levels of stigma reported among women, and 26 separate doer/non-doer interviews on stigma were conducted with female family members of TB patients.

The SBC strategy developed based on the findings of the formative research has gender-related recommendations, which include gender-sensitive messaging in communications, acknowledging differential risk factors and barriers to care for men and women in designing case management approaches, and women's traditional roles in care-taking for TB patients. The SBC strategy employs behavioral journalism and dissemination of positive scenarios through conventional and social media aimed at countering the negative narratives around marriageability and inheritability, which contribute to increased stigma for women. The Project is finalizing a technical brief on TB and gender summarizing the gender findings of the formative research and approaches developed in the SBC strategy for further dissemination among the wider public.

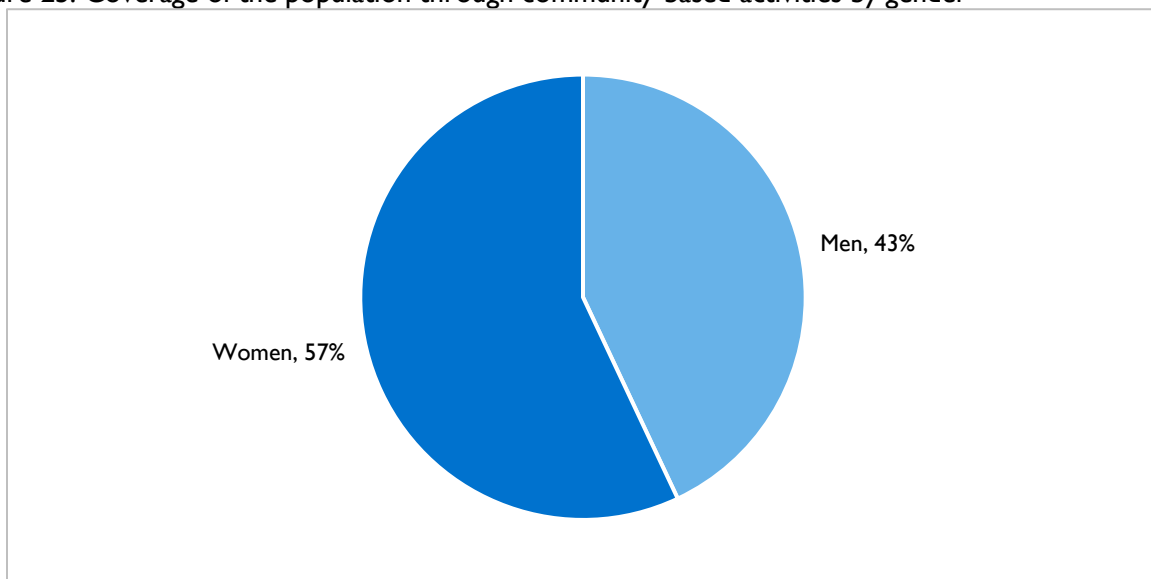
A situation analysis of barriers to testing and treatment among vulnerable groups in Kyrgyzstan and Central Asia more broadly, conducted as part of the SBC research (and included in an annex in the research report) showed that many of the risk groups for TB are predominantly represented by men,



including prisoners, labor migrants, people who misuse alcohol, people who inject drugs, and homeless people. Targeted case-finding strategies among these groups therefore involve an implicit gender orientation. In addition, religious leaders and religious circles including people who attend mosque and madrasahs are predominantly men. Sub-grantee activities which focus on these groups through involvement of religious leaders in disseminating messages about TB also target these male segments of the population which may be more vulnerable to TB.

Cure Tuberculosis pays significant attention to working with the population and communities to improve people's perception of TB, eradicate stigma and discrimination, ease the access to health services for persons affected by TB, and create an environment that enables faster diagnosis and treatment, with a particular focus on women making sure that they receive necessary information on TB on par with men and know about their options in answering concerns, and receiving counseling and advice when showing symptoms of tuberculosis. The Project's sub-grantees conducted work with the population in all regions and covered over 3,600 people from all social and age groups, from urban and rural settlements. Women constituted 57% of the covered population (Figure 25).

Figure 25. Coverage of the population through community-based activities by gender

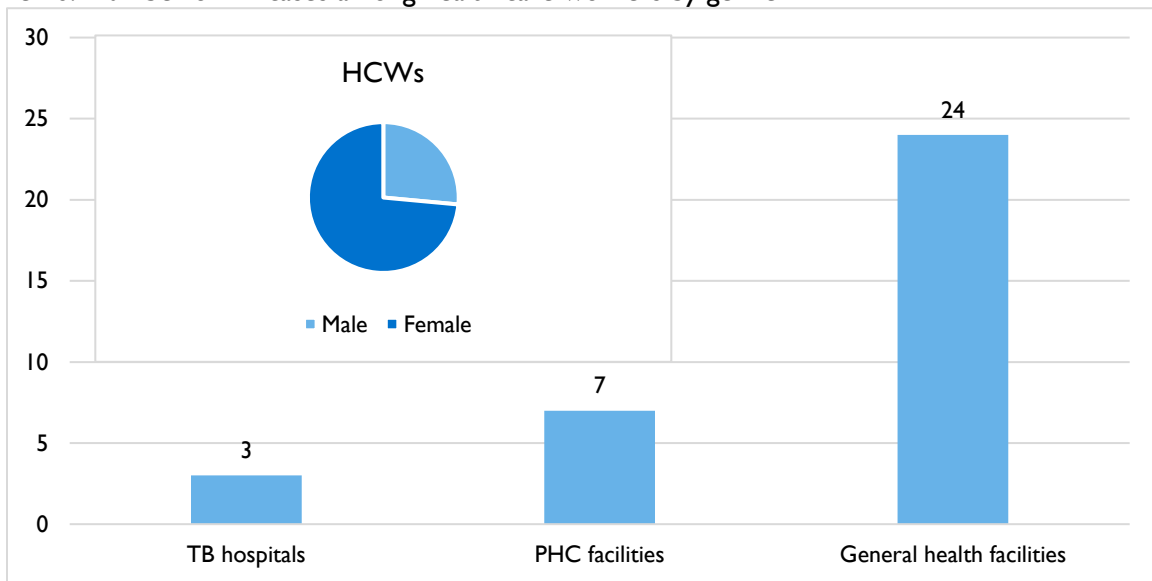


#### *Gender-disaggregated data*

Gender is also one of the key factors when collecting information on tuberculosis for monitoring and evaluation. Among others, Cure Tuberculosis collects and analyzes data on the incidence of TB among health care workers and notification rate for new TB cases, with disaggregation by gender. The analysis of this information shows if there is a gender gap in screening, diagnosis, and treatment and if the Project's immediate action is required and where.

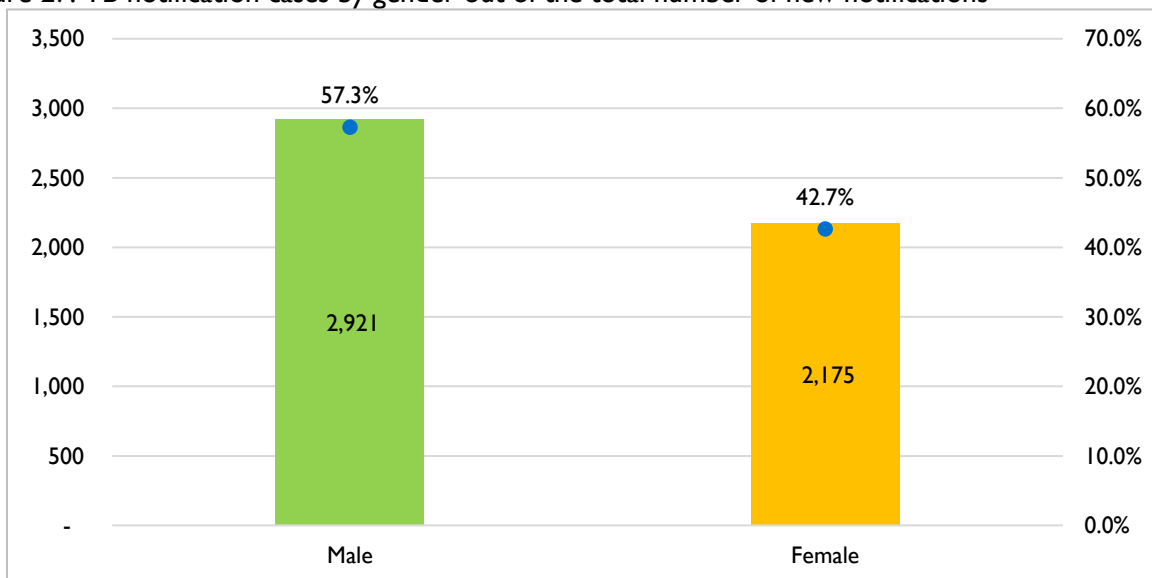
The number of health care workers diagnosed with TB in 2019 increased by four from 2018 to 34 medical specialists. The TB incidence rate among HCWs reported by DDP&SSES is 96 per 100,000 population (2019), with an annual target of 52 per 100,000 population for 2019. Among those with TB, nine are male and 25 are female (TB hospitals – 3; PHC facilities – 7; general health facilities – 24) (Figure 26). This higher rate among women most likely reflects the fact that female workers dominate in the health field in general, and therefore higher incidence among women HCWs is more likely.

Figure 26. Number of TB cases among health care workers by gender



The notification rate for new TB cases is 78.9 per 100,000 population, or 5,096 TB cases registered in 2019, with 2,921 male cases and 2,175 female cases (Figure 27). Similar to the situation often seen in other countries, there are more TB cases registered among men than women. The lower notification rate for new TB cases among women may indicate lower knowledge about TB and its symptoms among the female population or worse access to screening and diagnosis. Thus, the Project intends to boost its outreach campaign and strengthen the work with the population with gender-sensitive messaging in communications and a special focus on eliminating barriers to care for women.

Figure 27. TB notification cases by gender out of the total number of new notifications



## Sustainability mechanisms

The Cure Tuberculosis project works closely with the Kyrgyz government structures to ensure the institutionalization and long-term sustainability of improved TB services, improved infrastructure and law framework, and the self-reliance of national partners.

Thanks to Cure Tuberculosis advocacy and technical assistance to the MHIF, the financing methodology and standards developed to allocate funding from the state budget to the USAID-supported transportation system in Chui and Talas Oblasts were institutionalized and incorporated into the MHIF Budget Law for 2020 and Forecast for 2021-2022. In addition, the MHIF budget has now incorporated and provided funding for a USAID-developed standard for per capita financing of Oblast TB Centers in order to fully fund their services, as well as a system of incentive payments to primary health care workers for successfully-treated TB cases. These achievements helped ensure the sustainability of the transportation system by ensuring state funding and also institutionalized the successful financing mechanisms developed with project support in order to better finance TB services.

The Project worked closely with the MOH, MHIF, and the NTP to develop policies and guidelines related to the operationalization of these financing mechanisms and restructuring of Oblast TB Centers to improve their functioning, the optimization of the laboratory network to improve diagnostic capacity, and restructuring of Oblast DR-TB Concilia to improve their effectiveness for treatment monitoring; upgrade SOPs for labs to improve the quality of diagnostics; and develop relevant tools to monitor drug management and drug safety and adverse events. The Project contributed to the training of DR-TB Concilium staff and the development of a national curriculum to improve the knowledge base of TB specialists. The curriculum has been adopted by the Kyrgyz State Medical Institute for Retraining and Further Training (KSMIRFT) which ensures its institutionalization.

Cure Tuberculosis continued the development and implementation of critical MIS systems including the EMR, LDMIS, and clinical surveillance system. The adaptation of the TB LDMIS system to the needs of the Kyrgyz Republic associated with COVID-19 paves the way for adaptation for other diagnostic needs in the health sector. The Project has started working closely with the SotsService (Social Services) state enterprise under the State Committee on Information Technologies and Communications (SCITC) to build a module in LDMIS for registration and recording of data on laboratory tests for COVID-19 and develop an SMS notification module to provide citizens with timely access to test results for COVID-19. The advantages and strengths of the LDMIS system are highly appreciated by state partners. During the COVID-19 crisis, LDMIS became the only source of information about patient tests and once again proved the importance of a system like LDMIS for the country. The Government of the Kyrgyz Republic is interested in rolling it out nationwide in all state laboratories to capture lab results for diagnosis and monitoring of all diseases.

To increase the potential and improve the sustainability of the implemented SBC approaches, throughout the year, the Project worked closely with the leadership of the RHPC in planning and implementation of joint events. RHPC employees participated in the SBC formative research from the design through implementation stages and received training from an international consultant on qualitative research design, data collection and analysis, and SBC strategy design. The RHPC will now take the lead in the development of a national SBC strategy, SBC training, and supporting information materials following the example, findings, and recommendations of the Project's SBC strategy.

## COVID-19 epidemic

The COVID-19 epidemic emerged in Kyrgyzstan in late March and affected all aspects of the Project, TB services and the health system as a whole. As of September 30, there were 46,669 total cases, including 3,255 cases among health care workers, and 1,064 deaths. The great majority of the burden of COVID-19 has been concentrated in Bishkek city. Annex 5 outlines the background of the COVID-19 epidemic in Kyrgyzstan, including the regulatory changes that came into effect with the declaration of an emergency situation and state of emergency in several parts of the country, and a more detailed analysis of the epidemiology by region.

The urgent need for assistance to the health sector was answered by many international organizations, who provided extensive technical and financial support to ensure uninterrupted treatment of all priority groups and provision of health services to the population, including immunization, non-communicable disease management, reproductive health, mental health, and psychosocial support. USAID was among the first to offer its technical and financial assistance.

The Cure Tuberculosis Project analyzed the situation and recognized a real threat posed by the shift of focus away from tuberculosis. The Project took immediate actions to help the TB service address the challenges.

The analysis of the situation showed the following challenges for the national TB program:

- TB patients became suddenly at high risk for the new infection.
- The declaration of a state of emergency and restrictions on movement made it difficult for health workers to continue providing services and for TB patients to receive care and daily DOT.
- Patients with TB became at risk of interruption of treatment or being lost to follow-up and development of a more severe drug-resistant form of TB.
- DR-TB Concilium meetings had to switch to virtual mode as attending them became difficult.
- The NTP had to re-allocate resources to fight against COVID-19, including purchasing PPE, medicines, medical equipment and supplies (oxygen concentrators, non-contact thermometers, pulse oximeters, etc.) and re-purposing TB beds to treat COVID-19 patients.
- The re-purposing of the MDR-TB ward of the NTC for COVID-19 created new infection control challenges, including cross-infection.
- DR-TB patients on inpatient treatment at the NTC had to be transferred elsewhere, including to outpatient treatment in Chui Oblast.
- Some DR-TB patients required changes in the treatment regimen, including switching from injectable to oral TB drugs.
- The NRL was tasked with testing for COVID-19, which could affect diagnostic capacity for TB.
- The SES and PHC facilities were pulled into contact investigations for COVID-19, which affected their ability to conduct contact investigations for TB.
- The re-focus of tuberculosis and other medical organizations almost entirely on COVID-19 diverted attention from TB and reduced resources allocated for TB.
- The rapid spread of infection among health care workers reduced the capacity of the TB service as well as primary health care.

### Impact of COVID-19 on TB services:

Overall, the impact of the COVID-19 epidemic has been seen so far in the following areas:

#### **TB diagnosis and case detection:**

- The number of diagnostic microscopy tests conducted at PHC level has decreased from Q1 to Q3 of 2020 by 52.5% (Figure 30)
- The volume of sputum samples sent through the transportation system to the NRL from all oblasts in the country has decreased from Q1 to Q3 of 2020, as well as compared to the equivalent periods in 2018 and 2019 (see Figures 31 and 32);
- TB notifications have decreased from Q1 to Q3 of 2020, as well as compared to the equivalent period in 2019 (Table 13 and Figures 28 and 29);

#### **TB treatment and case management:**

- The volume of patients discussed in Concilia has decreased (see Figure 7 in SSP 2.1 for the Chui Oblast Concilium) which shows the drop in numbers of cases discussed at the Concilium in Q3; similar patterns have emerged in Naryn, Talas and Batken Oblasts (Figure 33);
- Patient support for treatment adherence and DOT has become more difficult, which may affect patient treatment adherence;
- The MHIF temporarily ceased payments for successfully-treated TB cases from July through September, which may affect the quality of case management services.

#### **Health system effects:**

- Many health workers infected
- Fewer beds for MDR-TB
- Fewer resources for TB
- Possible decreased diagnostic capacity for TB due to diagnosis of COVID-19
- Enormous infection control challenges throughout the health system
- Possible drug shortages for TB as certain second-line TB drugs become diverted for treatment of COVID-19

Altogether, these issues could force a setback in TB control in detection, treatment, and prevention. Preliminary studies from other countries have shown that even temporary drops in TB case detection due to COVID can lead to long-term resurgences of morbidity and mortality. Below is a more detailed analysis by area.

#### **TB diagnosis and case detection**

Official statistics for tuberculosis demonstrate a decrease in the number of cases. In January – September 2020, the incidence per 100,000 people decreased by 31.9%. The decrease is seen in all regions, with the lowest in Batken Oblast (11.7%) and the highest in Naryn Oblast (58.3%) (Tables 11 and 12).

Table 11. TB incidence in January – September (per 100,000 population)

	Total cases		As percentage of corresponding period of previous year	
	2019	2020	2019	2020
<b>Tuberculosis</b>	62.1	42.3	95.8	68.1

(Source: National Statistical Committee, Social and Economic Development of the Kyrgyz Republic, January – September 2020)

Table 12. TB incidence by region in January – September 2020 (per 100,000 population)

Region	As percentage of corresponding period of previous year
<b>Kyrgyz Republic</b>	<b>68.1</b>
<b>Batken Oblast</b>	88.3
<b>Talas Oblast</b>	85.2
<b>Osh city</b>	75.9
<b>Jalal-Abad Oblast</b>	71.7
<b>Chui Oblast</b>	69.7
<b>Osh Oblast</b>	65.6
<b>Bishkek</b>	58.2
<b>Issyk-Kul Oblast</b>	56.4
<b>Naryn Oblast</b>	41.7

(Source: National Statistical Committee, Social and Economic Development of the Kyrgyz Republic, January – September 2020)

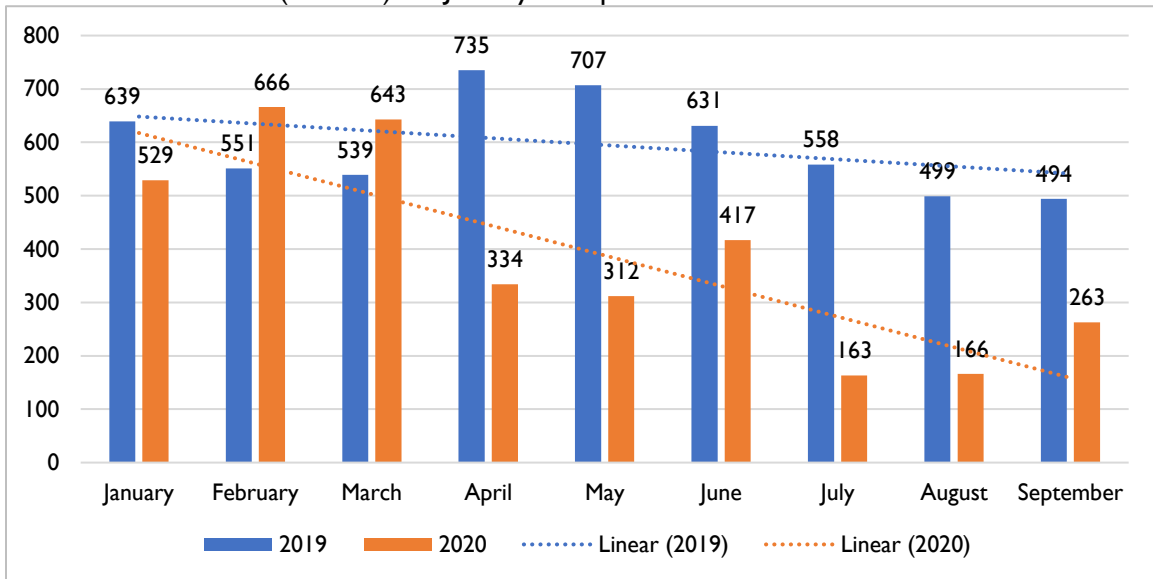
The National Tuberculosis Program reports a decline in the notification of TB cases starting from April 2020 after the declaration of a state of emergency and restrictions on movement and the imposition of strict lockdown measures. A lower number of notifications is observed in the following months. The drop was more than 60% in April and May, and 48% in June. This might be the result of the re-focus of medical staff on COVID-19, failure to conduct epidemiological investigations of TB index cases, contact tracing, fewer patient visits to health care organizations due to the fear of COVID-19 infection, and lower health-care seeking of people with presumptive TB for diagnosis. Table 13 below shows a comparison of TB notification data from January to September of 2019 and 2020 (for 2020, this includes confirmed data for Q1 and Q2 and operational (preliminary) data for Q3 of 2020).

Table 13. TB notification cases in 2019 and 2020, January to September

Period	Total cases		Newly detected cases		Relapses		Previously treated cases	
	2019	2020	2019	2020	2019	2020	2019	2020
<b>January</b>	639	529	417	365	136	83	86	81
<b>February</b>	551	666	403	471	86	102	62	93
<b>March</b>	539	643	402	459	68	94	69	90
<b>April</b>	735	334	570	255	104	40	61	39
<b>May</b>	707	312	563	250	75	30	69	32
<b>June</b>	631	417	454	309	100	45	77	63
<b>July</b>	558	163	426	120	68	35	64	8
<b>August</b>	499	166	380	133	69	18	50	15
<b>September</b>	494	263	355	207	73	35	66	21

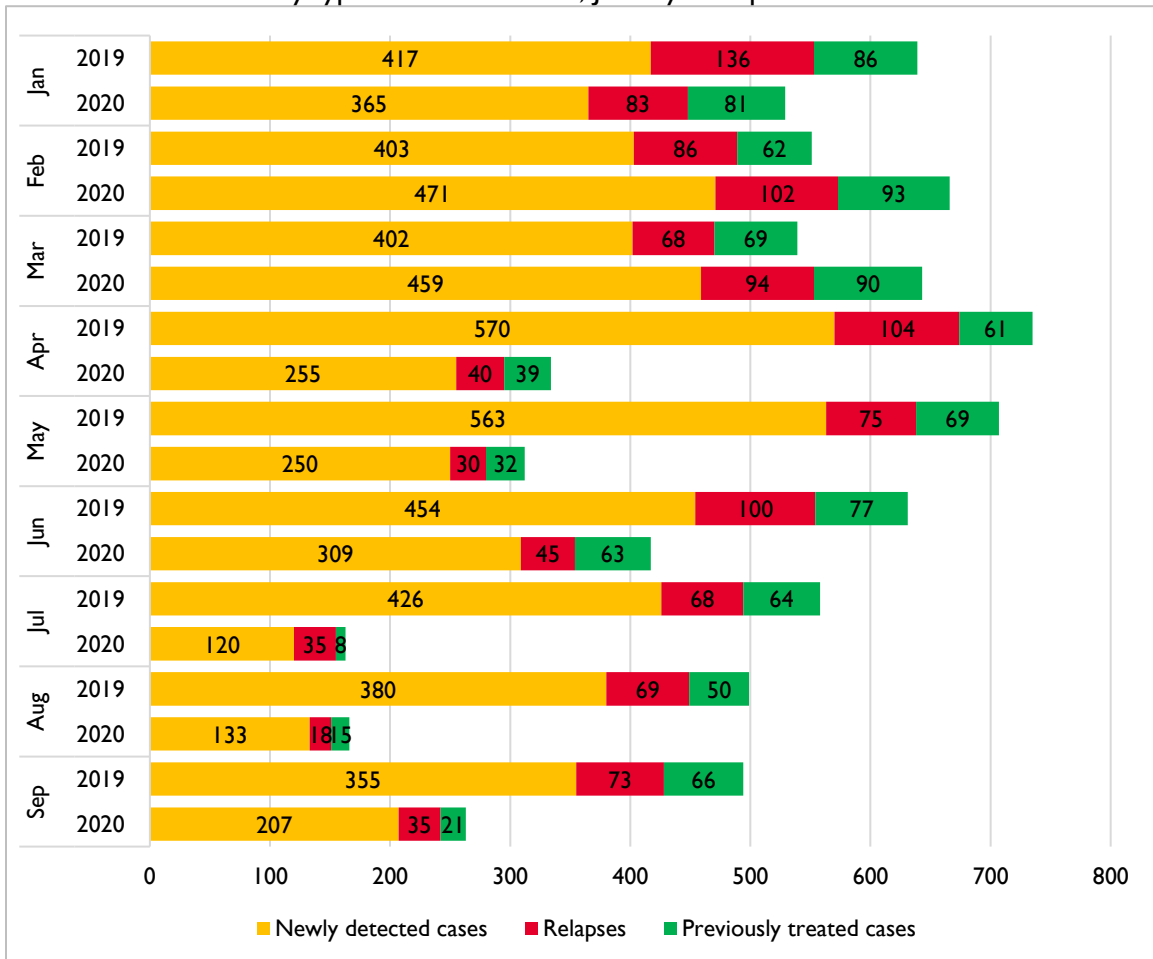
(Source: NTP)

Figure 28. TB notifications (all cases) for January to September in 2019 and 2020



(Source: NTP)

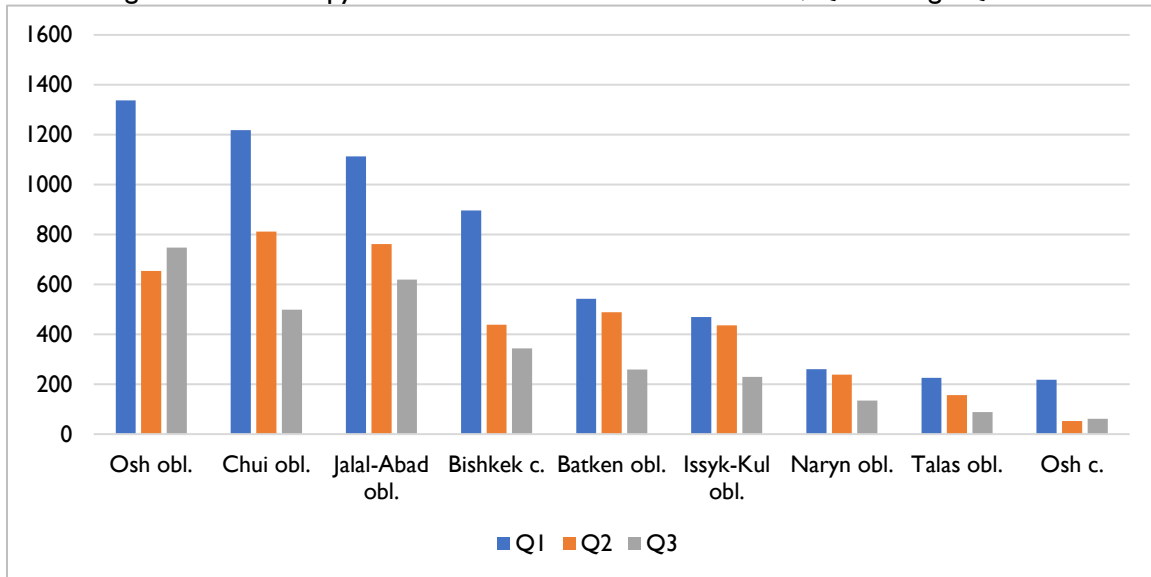
Figure 29. TB notifications by type in 2019 and 2020, January to September



(Source: NTP)

In addition to a decrease in TB notifications, there has been a corresponding decrease in diagnostic indicators. The number of microscopy tests conducted at PHC for diagnostic purposes has consistently decreased in all Oblasts from Q1 to Q3 2020 (Figure 30). The highest decrease was in Osh city (70%). Bishkek (62%) and Talas Oblast (60%). Overall, across the country as a whole, the decrease in microscopy tests conducted at PHC was 52.5%.

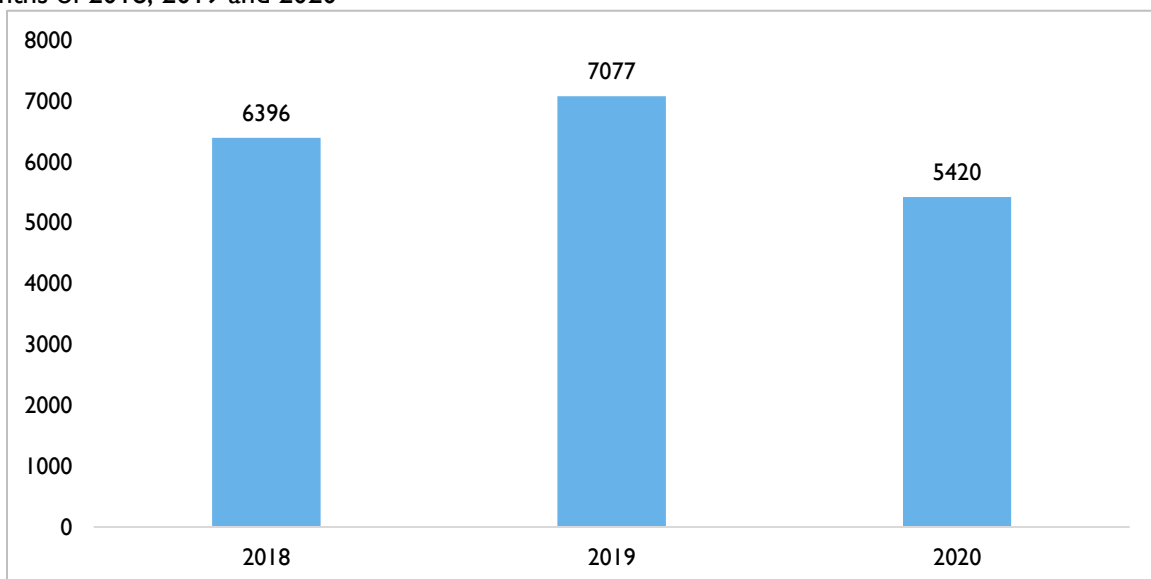
Figure 30. Diagnostic microscopy tests conducted at PHC in all oblasts, Q1 through Q3 2020



(Source: NTP/NRL)

In addition to microscopy, the volume of sputum samples sent through the transportation system to the NRL for culture and DST has decreased in the first 9 months of 2020 compared to the equivalent periods in 2018 and 2019 (Figure 31). The decrease was 23% compared to 2019, and 15% compared to 2018 (there was an 11% increase between 2018 and 2019).

Figure 31. Number of sputum samples sent through the transportation system nationwide for the first 9 months of 2018, 2019 and 2020

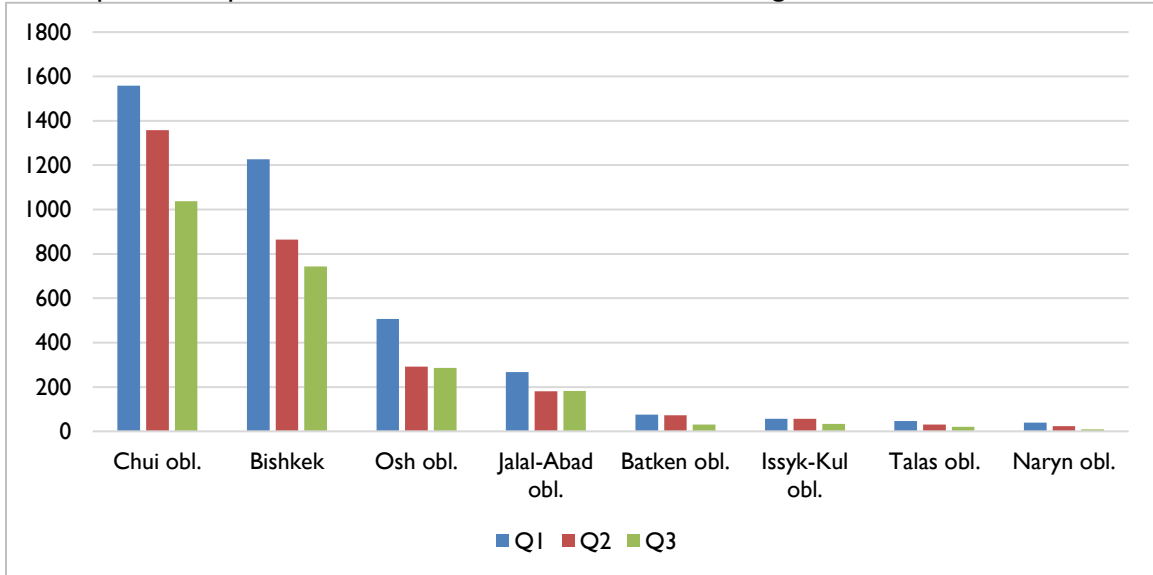


(Source: NRL)



Figure 32 shows the number of sputum samples sent through the transportation system from each Oblast to the NRL. The graph shows a clear downward trend from Q1 to Q2 to Q3 in all 7 Oblasts as well as Bishkek city.

Figure 32. Sputum samples sent from each Oblast to NRL, Q1 through Q3 2020



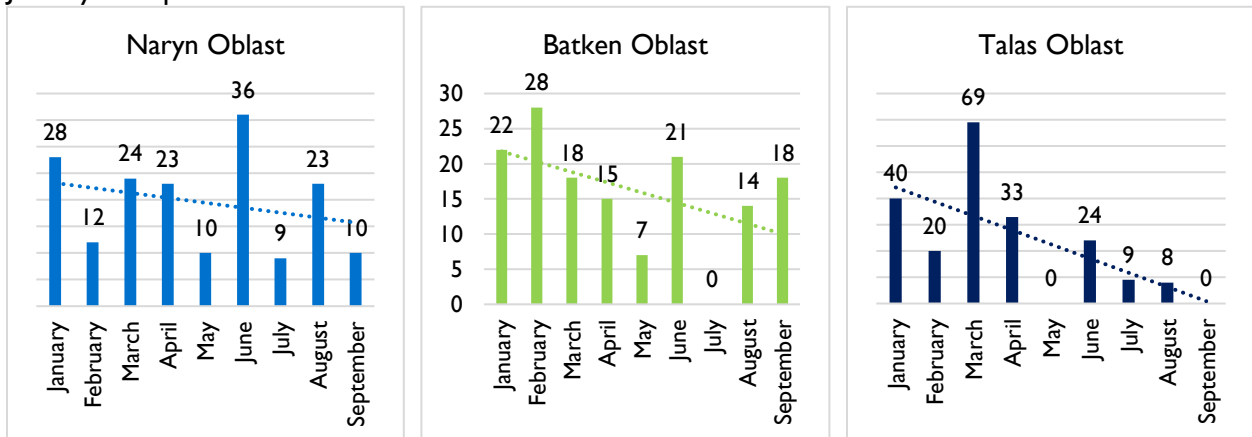
(Source: NRL)

These indicators suggest lower numbers of presumptive TB cases visiting PHC facilities for diagnostic tests, as well as potential lower diagnostic capacity for microscopy, culture and DST.

**TB treatment and case management:**

The number of DR-TB cases considered by the Chui Oblast Concilium during the COVID-19 period decreased (Figure 7 under SSP 2.1). In addition to Chui Oblast, the number of DR-TB cases discussed at Concilia has decreased in Naryn, Talas and Batken Oblasts (Figure 33) but a similar trend was not seen in Jalal-Abad.

Figure 33. Number of DR-TB cases discussed at Oblast Concilia in Naryn, Talas and Batken Oblasts, January to September 2020



(Source: Regional DR-TB Concilia)

## Cure Tuberculosis Project COVID-19 activities:

In response to the challenging situation, the Cure Tuberculosis Project implemented a series of measures to address the issue:

- Developed a MOH order on the provision of TB services under emergency conditions, including establishing a 14-day drug supply for TB patients, alternative mechanisms for remote DOT, and transitioning Concilium meetings online.
- Developed guidelines for video DOT by means of mobile communications, Internet services, and community-based treatment supporters.
- Assisted the transition of the Chui DR-TB Concilium to work online through video-conferencing.
- Provided patient support through sub-grantees including through community-based treatment support, dissemination of critical information on TB/COVID-19 through the media and social media, and patient support groups held online through WhatsApp groups.
- Assisted the re-purposing of the MDR-TB ward of the NTC by providing technical assistance through the DR-TB Concilium on transferring DR-TB patients, including to outpatient treatment and amending their regimens when required.
- Helped revise the infection control protocols of the NTC.
- Provided support for the creation of COVID-19 brigades at the NTC and developed a procedure for shift work in order to ensure the safety of medical staff working with patients with COVID-19.
- Provided training on infection control and use of PPE at the NTC and NRL, and established day and night shifts for TB and COVID-19 testing at the NRL.
- Analyzed the sputum inflows and test workloads on TB laboratories in Chui Oblast and advised on redirecting, if required, the flow of sputum samples for testing from the NRL to Kara-Balta TB Center in order to meet the demand for TB testing.
- Upgraded the LDMIS system to include a new module for COVID-19 diagnosis and implemented the new system in all 12 laboratories of the SES system and NRL performing COVID-19 testing and trained all staff.
- Developed an encrypted notification system to inform patients about COVID-19 test results in real time by SMS notification with a link to posted test results online on the covid.kg website.
- Developed a COVID-19 module for the QTSA baseline assessment to assess the impact of COVID on the TB system. The module includes comprehensive questions for both providers and patients on impacts on TB diagnosis, treatment, infection control, drug management, resource allocation, patient health-seeking behavior, and case management and treatment support.

Cure Tuberculosis will continue improving infection control in health care organizations in the COVID-19 context, strengthening detection of TB cases and treatment follow-up, including through motivation of health care workers at PHC, improving access to TB services (screening, diagnosis, treatment) in all regions with the involvement of health providers, and will work in Year 2 on the adaptation of TB and COVID-19 guidelines.

In the last week of March, the Project adapted its operations to work mostly remotely, shifting most activities online, and shutting down the office entirely in late June in response to an outbreak of COVID-19 within the team. Since September, the team has resumed work in the office on a needs basis strictly following IC measures and hygiene recommendations.

## Monitoring and Evaluation

The Project Analytical team collects and analyzes data obtained through monitoring visits, surveys, MIS, ongoing review of existing health service statistics reported by NTP, MHIF, and SES for MELP indicators, and other project activity tracking indicators, including data from the Project's sub-grantees.

In Year I, the technical staff of the Project paid visits to each pilot oblast of Jalal-Abad, Talas, Chui, and Naryn and Batken Oblast to conduct baseline assessments and produce plans for the optimization of Oblast TB Centers, Oblast DR-TB Concilia, PHC TB units, primary-level TB laboratories, and MHIF territorial departments. The visits also included the function of monitoring and training. The monitoring of PHC organizations dealing with TB in Chui, Talas, Naryn, Jalal-Abad, and Batken Oblasts included the monitoring the implementation of the TB Case Management System, TB transportation system of biomaterials and TB drugs, TB Drug Management system, and PHC payment system for treated TB cases. The monitoring visits included a SWOT analysis of HCOs, working meetings, and a training component.

In April – August, due to the epidemiological situation in the country and restrictions on movement to curb the spread of coronavirus infection, most field visits were canceled. Where possible, meetings were held online.

In Year I, MELP baseline indicators were adopted, as well as targets for some of the project indicators. The project activity baseline indicators were revised and amended based on the information collected during the baseline assessment and the results of the situational analysis. Since the national program Tuberculosis-V ends in 2021 and the National Strategic Plan has not yet been approved, the Project was unable to set long-term targets for the national indicators through 2024. National indicator targets will be defined by the end of the second year of the Project in consultation with the NTP.

During Year I, the Analytical team developed an Excel database to collect data for internal project indicators, MELP indicators, and training data, and track all regulatory and legal documents, and technical and SBC documents developed by the Project.

Cure Tuberculosis built the capacity of its sub-grantees with regard to the monitoring of their activities and creating recording and reporting systems. Analytical and SBC team members met with the sub-grantees to learn their principles and work algorithms and made recommendations on maintaining the project database, reporting, calculating indicators, as well as recommendations related to improving financial and personnel management.

The Project Indicators Tracking Table (PITT) with targets achieved in Year I is included in Annex I. Data for all annual indicators is included here based on the 2019 NTP Annual Report.

### *Operational research*

In Year I, the Analytical team took part in the SBC formative research and contributed to the analysis of research results and findings and writing of the research report. The formative research helped to better understand the prospects of persons with TB and their household members as well as the factors that underlie TB stigma, provided baseline data for social and behavioral change activities, and became a foundation for the Project SBC strategy. The Analytical team will use the research findings to prepare technical briefs on various aspects of TB, including gender, case detection and treatment approaches, and stigma and discrimination.

During the reporting period, the Analytical team continued preparations for a facility-based KAP survey, using the standardized Quality of Tuberculosis Services Assessment (QTSA) tools developed by the USAID/MEASURE Evaluation Project. With the help of Project technical staff, the Analytical team finalized the review and adaptation of all four questionnaires (facility audit, provider interview, patient interview, and register review) to the local context of the Kyrgyz health system. In addition, the Project developed a new module on COVID-19 in collaboration with the USAID TB DIAH project and Afghanistan QTSA team to measure the effects of the COVID situation on TB services. The module includes comprehensive questions for both providers and patients on impacts on TB diagnosis, treatment, infection control, drug management, resource allocation, patient health-seeking behavior, and case management and treatment support. A local research company, PIL, has been selected to conduct the QTSA baseline assessment. Implementation has begun and the Project aims to begin data collection during Quarter 1 of Year 2.

The Project has also begun working on the design of a TOR for an operational research study to measure the effectiveness and cost-effectiveness of the incentive payment system for successfully-treated cases at PHC. The study will be implemented during Year 2.

#### *National M&E System Strengthening*

In Year 1, the Project initiated optimization activities of the regional tuberculosis centers (OTCs). The reorganization will help strengthen the role of the OTCs in monitoring and evaluating the quality of TB services in PHC organizations and the responsibility in implementing the national TB program at the oblast level, as well as in introducing new approaches and tools in the TB service delivery system and the new generation of TB drugs.

A situational analysis of the regional TB centers, carried out by the HAKR in the pilot regions, showed the weakness of the existing structure and capacity of the OTCs. The monitoring and evaluation department of the OTCs is ineffective, human resources are weak, and the functions of collection of statistical information on TB and reporting on TB services need improvement. There is no systematic approach to the coordination and provision of methodological assistance to PHC organizations in their provision of TB services. Monitoring is carried out inconsistently and without clear guiding principles. Data collected at the regional level is not analyzed; the employees admit low capacity and lack of skills for analysis; there are no tools that can visually demonstrate the overall picture and dynamics. All data generated at the regional level is in tabular format.

Taking into account the results of the situational analysis in the pilot oblasts and the overall problems with the national system of monitoring and evaluation of tuberculosis activities, Cure Tuberculosis held a series of consultations with the NTP and TB advisers to discuss plans of the Project for the second year on strengthening the capacity of the M&E system of the NTP.

In Year 1, the Project also made a significant contribution to the monitoring of laboratory services and diagnostic quality by developing indicators and standard reporting forms for indicators related to DST, turnaround time (TAT), and discrepancies between culture on Löwenstein-Jensen medium and microscopy.

During Year 1, the Project also participated in the introduction of cohort analysis through training in Concilia, which will serve to provide an evidence-based approach underpinning the work of Concilia to better monitor their effectiveness and impact on treatment outcomes.

Under the M&E component, the Project also facilitated the revision and printing of recording and reporting forms for the NTP in Year 1.

In Year 2, the Project plans to revise the national M&E guidelines, M&E tools, as well as to conduct training for TB specialists at the national and regional levels on surveillance, M&E, collection and analysis of key national TB indicators and process indicators.

## Challenges and proposed solutions

CHALLENGES	PROPOSED SOLUTIONS
<p>Leadership and structural changes in the key partner organizations:</p> <ul style="list-style-type: none"> <li>- The appointment of a new director of the RHPC in summer 2019;</li> <li>- The appointment of a new NTP Director in November 2019;</li> <li>- Changes in the organizational structure of the Department of Drug Supplies and Medical Equipment (DDS&amp;ME) under the MOH;</li> <li>- The appointment of a new Minister of Health in April 2020;</li> <li>- The functioning of the MOH Medical Department, which oversees TB issues, without a head since June;</li> <li>- The appointment of a new specialist responsible for TB issues at the MOH Medical Department;</li> </ul> <p>Above created difficulties in coordinating work plans and processes as the new hires had to be brought on board, which required additional time and effort, and delays in the approval of many strategic documents.</p>	<p>The Cure Tuberculosis team invested significant time and effort briefing the new appointees on TB and current issues in TB control in the Kyrgyz Republic and explaining Cure Tuberculosis goals and how the Project work is aligned with the NTP, RHPC, and MOH; the new staff received appropriate training to facilitate quick on-boarding and will continue to receive support and instruction from Cure Tuberculosis specialists on TB issues. Informed support and buy-in of the Cure Tuberculosis project by the MOH, NTP, and other stakeholders is critical to program success.</p>
<p>The Ministry of Health plans to introduce the PHC model in four rayons of Issyk-Kul Oblast, Bishkek, and Osh in 2020 interfered with the Cure Tuberculosis roll-out plans – these areas will only be covered starting from 2022. The decrease in the number of area specialists (TB specialist included) undermine the Project’s work to strengthen TB services in the country.</p>	<p>Cure Tuberculosis decided to stick to its roll-out plans and address this issue through the Concilium work, which is not restricted to pilot regions but covers the whole country. The Project amended its approach rather than changing the geographical scope – PHC specialists (FMC doctors, GPs, others) will be attracted to work on TB cases at the Oblast DR-TB Concilia. They will receive necessary training and practice at the Concilium.</p>
<p>Due to the COVID-19 pandemic, the cancellation of flights, and the closure of borders, the USP scoping mission planned for February-March was cancelled.</p>	<p>The Project discussed the details of the assignment with the USP via teleconference, sent necessary documents via e-mail, helped to organize online meetings with the DDS&amp;ME of the MOH, the NTP, and other partners, so that USP could conduct their scoping work remotely. In August, the SOW was approved and a four-year agreement was signed between USP and the JSI. USAID approved the USP Work Plan for Year 1 (Year 2 of the Project). USP will start their assignment in Quarter 1 of Year 2.</p>
<p>The epidemiological situation associated with COVID-19 and strict restrictions on movement and mass gatherings to prevent the spread of coronavirus imposed by regulatory authorities</p>	<p>Cure Tuberculosis tried to find an optimal solution for each scenario addressing new challenges while taking into account its obligations and the safety of its employees:</p>

created many implementation problems for Cure Tuberculosis. The emergency period initiated on March 22 (Government Decree No. 93-r of March 22 “On the introduction of an emergency on the territory of the Kyrgyz Republic from March 22, 2020” and Presidential Decree No. 55 of March 24 “On the state of emergency in Bishkek”) lasted two months until May 10 with a phased return to active business and social life. In June, with the resurgence of more cases of COVID-19, additional government restrictions were put in place, which lasted until mid-August. Hence, the Project faced the following complications in Quarters 2, 3, and 4:

- Planned training and visits to other regions were cancelled or postponed;
- Forced to postpone HSS activities, including on effective TB control, optimizing the provision of TB care in Chui Oblast, and Cure Tuberculosis activities with the MOH, MHIF, NTP, and other stakeholders;
- Suspended the restructuring and optimization of OTCs in pilot regions;
- Slowed down the implementation of LDMIS in Jalal-Abad Oblast;
- Cancelled World TB Day activities in March in Bishkek and the regions, including by the sub-grantees;
- Created difficulties in providing social support to high priority groups for the Project’s sub-grantees;
- Impeded information campaigns for the population, rayon meetings with community leaders, and training for VHC members;
- Halted media communications and outreach work, and training for the media;
- Delayed the project baseline assessment/QTSA;
- Affected the achievement of project indicators and required correction of indicator targets;
- Interfered with regular office work and required the project staff to work mostly remotely during regular business hours from 9 a.m. to 6 p.m.

- Canceled or postponed activities that might cause a risk of coronavirus infection;
- Held visits to other regions only if strictly necessary, with due caution and observation of infection control measures;
- Transferred 90% of work online, including in training, consultation, and outreach;
- Re-focused on the development of regulatory documents and training materials;
- Worked with sub-grantees and partners to strengthen measures to prevent the incidence of COVID-19 among TB patients while continuing to support TB patients on an individual basis;
- Increased advocacy and mobilization from local communities and authorities;
- Held meetings with community leaders and training of VHC members online;
- Strengthened outreach through sub-grantees’ social media (Facebook, Instagram, Odnoklassniki), the NTP website, and other digital communication channels;
- To conduct TB outreach to the rural population, the AVHC created a WhatsApp messenger network;
- Took over creation of project and SBC videos to offer ready content to the media for distribution. Ten videos related to key project activities and five SBC videos demonstrating encouraged behavior patterns were prepared and disseminated through the conventional and social media, and the WhatsApp network of the AVHC.

The Cure Tuberculosis F&A and legal staff ensured the smooth transition to remote work; obtained permission letters for certain key staff to go to work during the lockdown; set up restricted office open hours and guidelines; assigned certain administrative staff to remain in the office to support project work. The project staff maintained constant contact via phone, Skype, Zoom, Google Hangouts, WhatsApp, and email. In response to an outbreak of COVID-19 within the Project team in June, the office was shut down entirely as of June 22. Contact investigations were conducted and seven staff members were tested and put in self-isolation. In addition, a team of five staff members travelling in Talas Oblast who came in contact with another case, were tested and put in self-isolation upon their return to Bishkek. The

	office remained closed till September 1, with limited access for the F&A team.
Restrictions on movement associated with the emergency situation made it difficult for TB patients to travel daily to health facilities to receive their drugs and for health workers to attend Concilium meetings.	Cure Tuberculosis developed a draft order for the Ministry of Health (signed into effect on April 8) on the provision of tuberculosis services under emergency conditions, which allowed patients to receive a 14-day supply of drugs at a time and offered alternative treatment monitoring through the Internet, mobile communications, and community-based treatment supporters. The Project developed guidelines for providing video-observed treatment and helped the NTP to transfer Concilium meetings online via video-conferencing.
The number of samples arriving from all regions in the NRL for TB diagnostics decreased. Possible reasons are fewer patient visits in the health care organizations due to the fear of COVID-19 infection, re-focus of medical staff on COVID-19 diagnoses, and the lack of an integrated diagnostic algorithm including COVID-19 and TB.	Cure Tuberculosis is considering the development of an integrated diagnostic algorithm, which includes TB and COVID-19 as diseases that have a similar clinical picture, in Year 2.
The NTC was required to give up its MDR-TB ward to be re-purposed as a COVID-19 department (MOH order No. 181 of March 23 “On the re-profiling of inpatient health care organizations to create specialized hospitals and treatment departments for COVID-19”). The majority of DR-TB patients (55.3%) who had been receiving treatment in the MDR-TB ward at the time were transferred to outpatient treatment in PHC organizations. Due to the limited access to primary health care facilities, the patients were unable to continue taking injectable drugs. The COVID-19 context once again showed the need to switch patients to oral TB drugs.	The Project held training for the NTP on infection control under COVID-19 conditions, provided support for the formation of COVID-19 brigades, and helped develop a procedure for shift work of health workers in order to ensure their safety. Since April 24, patients with DR-TB are admitted mainly to outpatient treatment and, if necessary, hospitalized in the Kara-Balta TB hospital. Some patients, who were unable to continue receiving injectable drugs, were transferred to individual treatment regimens.
The SES was re-focused on COVID-19. As a result, the necessary monitoring of TB contacts, including epidemiological investigation of TB index cases, was not conducted.	In general, the SES needs adequate funding and staffing and to strengthen personnel capacity. As a short-term measure, Cure Tuberculosis plans to intensify the tracing of TB contacts through training and monitoring visits.
In June-August, TB specialists in all regions were tasked to provide care for patients with COVID-19. In Chui Oblast, TB doctors in seven rayons served in the ‘red zone’ during the height of COVID-19 cases. As a result, they failed to present DR-TB cases at Concilium meetings.	Cure Tuberculosis decided to develop a model for involving other PHC specialists (family doctors, GPs, others) to present cases of DR-TB patients to the Concilium. This approach will be tested in Year 2 in areas with a shortage of TB specialists at the PHC level.
The re-focus of MOH priorities associated with COVID-19 delayed the approval of the DR-TB clinical practice guidelines. Earlier, there were difficulties and delays in reaching consensus on the	It was decided to include the latest WHO updates of December 2019 into the recommendations for the clinical practice guidelines, including the reference list. The Clinical Guidelines on DR-TB



<p>latest version of the clinical DR-TB guidelines due to frequent updates of WHO (WHO Rapid communication, December 2019).</p>	<p>Management were finally adopted by MOH Decree No. 759 of September 25, 2020.</p>
<p>The MHIF failed to execute the budget allocated for TB services for 2020 due to the re-direction of funds to combat COVID-19, in particular, purchase PPE for re-purposed health organizations working with patients with COVID-19. Since July, the MHIF suspended payments to PHC for successfully-treated TB cases and to OTCs for the implementation of new supervision and monitoring functions and tasks.</p>	<p>The Cure Tuberculosis project held working meetings with specialists from the MHIF. In October, the Project COP will have a meeting with the Chair of the MHIF to secure continuation of payments to PHC for the successful completion of TB treatment.</p>
<p>Cure Tuberculosis partners in health lack the necessary IT infrastructure, have unsustainable IT processes and lack of technical support that impede current work and slow down the initiation of further activities.</p>	<p>The MIS team assisted in the gradual upgrade of IT technologies and bringing IT processes and maintenance up to current requirements, including explaining to the heads of health organizations the importance of IT and attracting international donor organizations to help with the acquisition of equipment and creation of IT infrastructure.</p>

## Priority Activities for Next Quarter

In Quarter 1 of Year 2, Cure Tuberculosis will continue to implement activities started in Year 1 and proceed with the roll-out to new pilot regions Naryn, Batken, and the city of Osh and new initiatives to help partners in TB upgrade their processes, find faster and more efficient ways to deliver quality services, and build the capacity of the TB system. Priority activities of the Cure Tuberculosis project in the next quarter will include but not be limited to the following:

### SP 1: Increased DR-TB case detection

- Conduct second round of the cascade QMS training for the national QMS managers;
- Conduct audit of TB laboratories in Jalal-Abad and Naryn Oblasts with further development of optimization plans;
- Scale up the updated QMS manual at first-level TB laboratories in Jalal-Abad and Naryn Oblasts: revise and implement SOPs and guidelines, provide training;
- Improve activities associated with the collection and transportation of sputum samples in Jalal-Abad and Naryn Oblasts;
- Monitor the implementation of TB contact investigation by HCWs and SES specialists in Kemin and Sokuluk rayons of Chui Oblast;
- Develop training program and materials to further expand TB contact investigation activities in other project pilot areas;
- Develop an operational manual on FAST (Find Actively, Separate, and Treat) Approach for further implementation and scaling up in the HCO setting;
- Hold an introduction session to FAST Approach for HCO managers;
- Carry out the development of the transportation software for the accounting, recording, reporting, and monitoring of the transportation of biological materials;
- Develop and implement an algorithm and questionnaire for targeted screening among high priority groups (shelters for the homeless and penal colony-settlements) to detect people with presumptive TB and accompany them to PHC facilities for TB diagnostics and follow-up on the results of TB examination.

### SP 2: More patients cured of DR-TB

- Scale up the new format of DR-TB Concilium in Talas, Naryn, and Batken Oblasts and train Concilium members on new requirements and online format of work;
- Introduce the cohort review approach in the Chui Oblast DR-TB Concilium and provide training for Concilium members;
- Implement the newly approved DR-TB clinical practice guideline countrywide and develop a training program on DR-TB management for TB specialists;
- Obtain MOH approval of the updated TB drug management SOPs;
- Conduct ABC/VEN analysis used for the investigation of medicine use in the NTP and present results;
- Introduce the TB case management approach in Naryn and Batken Oblasts: finalize the package of tools, training materials and conduct TOT;
- Pilot the clinical module of the TB Surveillance Information System (ES/TB) (Clinical TB Surveillance software) in Bishkek and Chui Oblast;
- Develop an electronic outpatient medical record (EOMR) software;
- Pilot the Pharmacy software for recording the use of TB drugs in Bishkek and Chui Oblast;
- Conduct training for project sub-grantees on counseling TB patients on adherence to treatment, treatment completion, side effects, benefits of outpatient treatment, household compliance with IC measures, on providing psychological counseling and engaging community-based treatment supporters, etc.;

- Develop and pilot an algorithm and tools for supporting TB patients at high risk of interruption of treatment by VHC members, with gradual geographical expansion;
- Facilitate the involvement of NGO staff and VHC volunteers as community-based treatment supporters for high-priority groups.

### **SP 3: Prevention of DR-TB infections**

- Initiate the revision of TB IC methodological recommendations for HCOs;
- Develop training program and materials on TB infection control based on updated WHO recommendations for the infection control measures in tuberculosis;
- Facilitate the development of a National SBC Strategy in collaboration with the NCP, RHPC, and other stakeholders;
- Develop a training module on the application of SBC approaches, including TB counseling and IPC for HCWs to further include in the TB Case Management training program;
- Develop guidelines for the application of SBC approaches (including IPC) in working with the population, TB patients and high-priority groups to reduce stigma and discrimination, create an enabling environment for TB screening and treatment;
- Promote the behavioral journalism approach with the media through developing and disseminating TB patients' stories of successful completion of treatment and narratives that serve to dispel myths and stigma in tuberculosis.

### **SP 4: Improved enabling environment**

- Take measures to preserve the budget of the TB service in the context of the COVID-19 epidemic, i.e. hold meetings, workshops, develop necessary regulations, etc.;
- Optimize the activities of the Center for Epidemiology and Informatics of the NTC to enable effective implementation of functions and tasks related to TB program management;
- Facilitate the development of a joint action plan of partners and stakeholders in TB to reduce stigma and discrimination towards TB patients and their families and create a more supportive environment for early detection of TB and completion of TB treatment;
- Conduct training for journalists on TB issues and introduce behavioral journalism approaches in reporting on TB to reduce stigma and discrimination;
- Develop a knowledge management information system;
- Carry out maintenance events of TB MIS.

### **M&E**

- Start the implementation of the facility-based baseline assessment (QTSA) by the selected local research organization;
- Continue developing the TOR for operational research on the effectiveness of the PHC performance-based payment system for successfully-treated cases.

## Administrative and Financial Progress

### Administration

After signing the Cooperative Agreement, JSI registered a branch in the Kyrgyz Republic and opened a local bank account. JSI rented an office space and finalized the procurement of office furniture, equipment, and services by the time the Project staff started work on September 1, 2019.

JSI signed a contract with University Research Co., LLC (URC) as an implementing partner and United States Pharmacopeia (USP) as a technical assistance partner. USP will begin implementation of activities only in Year 2. Four sub-grantees were identified as local cooperation partners: TB People, the Association of Village Health Committees, the National Red Crescent Society, and the Hospital Association of the Kyrgyz Republic. Sub-grantee agreements were signed at the end of Q1 and they began implementation in Q2. The Project identified target groups for each sub-grantee, and set and agreed on indicators for their areas of activity. Cost share tracking and planning was established along with sub-grantee monitoring systems.

In Year 1, financial systems and operations policies were developed, as well as supporting financial and operations processes, guidelines, and templates. The Operations Manual, Local Hire Employee Manual, and Field Office Safety and Security Manual were drafted by the F&A team and approved by the Home Office. In response to the COVID-19 epidemic in the country, the F&A team developed interim safe work and personal behavior guidelines and shared with the staff.

During the height of the COVID-19 epidemic and the established state of emergency in the country, the staff of the Project started to work remotely. To ensure the Internet at their workplace at home, the Project provided incentive payments to cover Internet expenses. Staff presence in the office was restricted to the scheduled meetings and workshops with the stakeholders and sub-grantees, with rules for limits on numbers of staff members in the office. All staff was provided with masks and sanitizers, the office rooms were equipped with disinfectants to ensure safe working conditions.

In Quarter 4, the Project staff continued to mostly work remotely due to the increasing number of COVID-19 cases and worsening epidemiological situation in the country. The project office remains open during regular hours of 9 am to 6 pm but staff is restricted to only some essential access to the office on a case-by-case basis to ensure the infection control and safety requirements. The F&A team creates and works in accordance with the duty schedule and manages all administrative support and procurement needs.

### Human Resources

The Cure Tuberculosis Project Local Hire Employee Manual ensures that all staff salaries, benefits, and employment conditions are consistent with the laws of the Kyrgyz Republic and JSI policies.

In Year 1, JSI hired and signed local employment contracts with 20 staff: 15 technical and five administrative specialists. Additionally, five URC staff joined the team. In Quarter 2, one staff member, an Information System Specialist, left the Project. This position was filled in Quarter 1 of Year 2. At the same time, the Project hired a part-time Legal Advisor. The selected candidates started work on October 12, 2020, when the hiring procedures were completed. All staff received orientation to JSI and to the project.

Due to sharp fluctuations in the USD to KGS exchange rate, and the most recent US Government FSN scale denomination in USD, Cure Tuberculosis shifted to a USD denominated payroll. Local employment contracts were re-signed with Project staff to reflect that local staff salaries are paid in national currency at the exchange rate of Demir Kyrgyz International Bank on the day of conversion (the same date each month). The contracts were re-signed in the form of addendums to the main employment contracts until October 31, 2020.

In May 2020 the Cure TB Field Office Safety and Security Manual was finalized and staff received training on its content.

In the end of the first year, all local staff had to pass an annual performance evaluation by their supervisors. In case of successful evaluation, new one-year local employment contracts will be signed with each employee.

## Finance

Project Financial Report for Year I  
Cooperative Agreement No. 72011519CA00001

Line Item	Total Budget	Spent Through Q3	Current Quarter Spent (Q4) incl. Accruals	Cumulative Spent to Date: Sep 30, 2020	Remaining Balance	QIY2 Projections
<b>Direct Costs</b>	17,038,523	1,766,551	1,004,572	2,771,123	14,267,400	1,086,371
<b>Indirect Costs</b>	1,411,769	344,636	97,545	442,181	969,588	89,747
<b>Total Costs</b>	<b>18,450,292</b>	<b>2,111,187</b>	<b>1,102,117</b>	<b>3,213,304</b>	<b>15,236,988</b>	<b>1,176,118</b>
<b>Cost Share</b>	922,515	7,617	61,657	69,274	853,241	347,886

Funding Status	Amount	Spending
<b>Obligated Amount</b>	7,245,000.00	100%
<b>Total Spent as of September 2020</b>	3,213,303.72	44%
<b>Remaining Balance</b>	4,031,696.28	56%

Non-Federal Share/Cost Share	Amount	Spending
<b>Target Amount</b>	922,515.00	100%
<b>Total Spent as of September 2020</b>	69,273.95	8%
<b>Remaining Balance</b>	853,241.05	92%

## Deliverables

In Year 1, the Cure Tuberculosis project finalized and submitted to USAID:

- Year 1 Work Plan
- MELP
- Communications Plan
- Branding and Marking Plan
- Year 2 Work Plan
- Revised Year 2 MELP

During the year, two modifications were made to the Cooperative Agreement:

- On April 17, USAID issued Agreement Modification 01 to change the title of the Project to Cure Tuberculosis and accept the revised B&M Plan.
- On May 18, USAID issued Agreement Modification 02 to amend the program description in SSP 4.2: Improved data for decision-making to include activities on adapting the LDMIS system for diagnosis of COVID-19 and to increase the obligated amount.

## **Annex 1: PITT Progress**

See attached Excel file.

## **Annex 2: Success Story: USAID Strengthens Chui Oblast DR-TB Concilium**

See attached PDF file.

**USAID Cure Tuberculosis Project Indicator Tracking Table (PITT)**

Indicators	Data Source	Indicator Type	Unit of Measure	Baseline data		Disaggregation*	FY2020		Quarterly Status - FY 2020				Annual Performance Achieved to Date (%)	Frequency of reporting
				Source, Year	Value		Annual Target	Annual Actual	Q1	Q2	Q3	Q4		
<b>Purpose: Decrease DR-TB burden in Kyrgyz Republic</b>														
1  TB notification rate: number of new TB cases notified during a specified period (per 100,000 population)	NTP	Impact	per 100,000 population	NTP Annual Report, 2018	83	Republic (incl. prison)	83	78.9	-	-	78.9	-	105%	Annually
					73	Jalal-Abad o.	73	69	-	-	69.0	-	105%	
					124	Chui o.	124	119.2	-	-	119.2	-	104%	
					68	Naryn o.	68	55.8	-	-	55.8	-	118%	
					60	Talas o.	60	56.1	-	-	56.1	-	107%	
2  TB mortality rate: Number of registered deaths due to TB (per year per 100,000 population)	NTP	Impact	per 100,000 population	WHO Global TB report , 2018	4.6	Republic (incl. prison)	≤5	3.9	-	-	3.9	-	122%	Annually
				NTP Annual Report, 2018	2.7	Jalal-Abad o.	≤5	2.4	-	-	2.4	-	152%	
					8.5	Chui o.	≤5	5.4	-	-	5.4	-	93%	
					3.2	Naryn o.	≤5	3.1	-	-	3.1	-	138%	
					4.2	Talas o.	≤5	1.1	-	-	1.1	-	178%	
<b>Sub-Purpose (SP) 1: Increased DR-TB case detection</b>														
3  RR/MDR-TB case notified: Number RR/MDR-TB cases identified per year	NTP	Outcome	Number	WHO Global TB report, 2018	1685*	Republic (incl. prison)	1500	1359	-	-	1359		91%	Annually
				NTP Annual Report, 2018	322	Jalal-Abad o.	300	259	-	-	259		86%	
					407	Chui o.	430	321	-	-	321		75%	
					52	Naryn o.	50	40	-	-	40		80%	
					58	Talas o.	50	36	-	-	36		72%	
4  Proportion of RR/MDR-TB among new TB cases: #/% of RR/MDR-TB cases detected among new TB	NTP	Outcome	Percent	NTP Annual Report, 2018	30%	Republic (incl. prison)	30%	29%	-	-	29%		Annually	
					29%	Jalal-Abad o.	20%	29%	-	-	29%			
					31%	Chui o.	30%	30%	-	-	30%			
					33%	Naryn o.	30%	35%	-	-	35%			



	patients				Report 2018	33%	Talas o.	30%	33%	-	-	33%			
5	Proportion of RR/MDR-TB among previously treated TB cases: #/% of MDR-TB cases detected among previously treated TB patients	NTP	Outcome	Percent	NTP Annual Report, 2018	70%	Republic (incl. prison)	65%	61%	-	-	61%			Annually
						70%	Jalal-Abad o.	40%	68%	-	-	68%			
						69%	Chui o.	60%	69%	-	-	69%			
						73%	Naryn o.	60%	50%	-	-	50%			
						85%	Talas o.	60%	64%	-	-	64%			
6	Proportion of XDR-TB cases among all DR-TB cases: #/% of XDR-TB cases detected among all RR/MDR/XDR-TB laboratory-confirmed TB patients	NTP	Outcome	Percent	NTP Annual Report, 2018	13%	Republic (incl. prison)	7%	10%	-	-	10%			Annually
						22%	Jalal-Abad o.	7%	14%	-	-	14%			
						11%	Chui o.	7%	8%	-	-	8%			
						10%	Naryn o.	7%	4%	-	-	4%			
						8%	Talas o.	5%	13%	-	-	13%			
7	Bacteriological Diagnosis Coverage: % of new pulmonary bacteriologically- confirmed TB cases among notified new and relapse pulmonary TB cases during reporting period	NTP	Outcome	Percent	NTP Annual Report, 2018	61%	Republic (incl. prison)	66%	63%	-	-	63%		96%	Annually
						60%	Jalal-Abad o.	66%	64%	-	-	64%		96%	
						66%	Chui o.	66%	69%	-	-	69%		105%	
						56%	Naryn o.	66%	62%	-	-	62%		94%	
						48%	Talas o.	66%	55%	-	-	55%		84%	
<b>SSP 1.1: Strengthened laboratory services and diagnostic networks</b>															
8	Coverage with GeneXpert testing: #/% of presumptive TB cases tested with GeneXpert	NTP	Output	Percent	NTP Annual Report, 2018	79%	Republic (incl. prison)	95%	78.3%	-	-	77%		81%	Annually
9	Drug susceptibility testing (DST) coverage among all TB cases: #/% of all TB cases tested for drug susceptibility among all registered TB cases	NTP	Output	Percent	NTP Annual Report, 2018	91%	Republic (incl. prison)	≥ 90%	94%	-	-	94%		104%	Annually
						95%	Jalal-Abad o.	≥ 90%	93%	-	-	93%		103%	
						96%	Chui o.	≥ 90%	97%	-	-	97%		107%	
						94%	Naryn o.	≥ 90%	96%	-	-	96%		107%	
						94%	Talas o.	≥ 90%	89%	-	-	89%		99%	
10	Second line Drug susceptibility testing (DST) coverage: % of RR-TB or MDR-TB cases tested for susceptibility to SLDs	NTP	Output	Percent	NTP Annual Report, 2018	55%	Republic (incl. prison)	85%	71%	-	-	71%		84%	Annually
						36%	Jalal-Abad o.	85%	65%	-	-	65%		76%	
						72%	Chui o.	85%	83%	-	-	83%		97%	
						75%	Naryn o.	85%	65%	-	-	65%		76%	

					62%	Talas o.	85%	89%	-	-	89%		105%	
<b>SSP 1.2: PHC and community-based detection and contact investigation expanded</b>														
11	Children <5 TPT Coverage: % of eligible children aged under 5 years who started TPT among children aged under 5 who are household or close contacts of bacteriologically-confirmed new and relapse TB cases notified during reporting period	NTP	Outcome	Percent	NTP Annual Report, 2018	50%	Republic (incl. prison)	≥ 95%	38%	-	-	37.8%		40%
31%						Jalal-Abad o.	≥ 95%	8%	-	-	8.3%		8%	
32%						Chui o.	≥ 95%	17%	-	-	16.9%		18%	
48%						Naryn o.	≥ 95%	21%	-	-	20.7%		22%	
7%						Talas o.	≥ 95%	0%	-	-	0.0%		0%	
12	Contact Investigation Coverage: #/% of contacts of people with bacteriologically confirmed TB investigated for TB among close contacts identified during the reporting period	DDP&SSES	Output	Percent	DDP&SSES Annual Report, 2018	85%	Republic (incl. prison)	≥90	84%	-	-	83.8%		93%
76%						Jalal-Abad o.	≥90	97%	-	-	97.4%		108%	
91%						Chui o.	≥90	94%	-	-	94.3%		104%	
87%						Naryn o.	≥90	90%	-	-	90.2%		100%	
44%						Talas o.	≥90	100%	-	-	100.0%		111%	
<b>Sub-Purpose 2: More patients cured of DR-TB</b>														
13	DS-TB Treatment success rate: #/% of new and relapse pulmonary TB patients with bacteriologically confirmed TB that were cured or completed treatment among all new and relapse cases in the reporting period	NTP	Outcome	Percent	NTP Annual report, 2018 (2017 cohort)	80%	Republic (incl. prison)	83%	79%	-	-	78.6%		95%
84%						Jalal-Abad o.	85%	81%	-	-	81.1%		95%	
77%						Chui o.	82%	76%	-	-	75.8%		92%	
78%						Naryn o.	82%	70%	-	-	70.3%		86%	
83%						Talas o.	85%	89%	-	-	88.7%		104%	
14	RR/MDR-TB Treatment success rate: #/% of laboratory confirmed RR/MDR-TB cases successfully treated (cured plus completed treatment)	NTP	Outcome	Percent	NTP Annual report, 2018 (2016 cohort)	53%	Republic (incl. prison)	56%	55%	-	-	55.2%		99%
51%						Jalal-Abad o.	55%	48%	-	-	47.8%		87%	
48%						Chui o.	52%	54%	-	-	54.4%		105%	
54%						Naryn o.	58%	52%	-	-	51.6%		89%	
51%						Talas o.	58%	63%	-	-	63.3%		109%	
15	XDR-TB Treatment success rate: #/% of laboratory confirmed XDR-TB cases successfully treated (cured plus completed treatment)	NTP	Outcome	Percent	NTP Annual report, 2018 (2016 cohort)	15%	Republic (incl. prison)	20%	58%	-	-	58.0%		290%
10%						Jalal-Abad o.	15%	58%	-	-	57.6%		384%	
8%						Chui o.	15%	58%	-	-	58.3%		389%	
-						Naryn o.	50%	50%	-	-	50.0%		100%	
-						Talas o.	50%	75%	-	-	75.0%		150%	
<b>SSP 2.1: All patients treated with appropriate treatment regimens of quality-assured drugs</b>														
16	Proportion of RR/MDR TB cases enrolled on treatment: #/% of identified RR/MDR TB cases that have initiated treatment	NTP	Outcome	Percent	NTP Annual report, 2018	80%	Republic (incl. prison)	90%	86%	-	-	86.3%		96%
76%						Jalal-Abad o.	80%	88%	-	-	87.6%		110%	
83%						Chui o.	85%	88%	-	-	87.5%		103%	
96%						Naryn o.	≥ 90	94%	-	-	94.4%		104%	
85%						Talas o.	90%	84%	-	-	83.8%		93%	

SSP 2.2: Treatment completion rate increased																
17	Interim result of treatment of DR TB: % of RR/MDR and XDR TB cases initiated on DR TB treatment regimen who have a negative culture at the end of 6 months of treatment	NTP	Outcome	Percent	NTP Annual Report 2018 (Cohort 2016)	52%	Republic (incl. prison)	70%	69%	-	-	68.9%		98%	Annually	
						52%	Jalal-Abad o.	55%	72%	-	-	71.9%		131%		
						44%	Chui o.	50%	56%	-	-	56.0%		112%		
						51%	Naryn o.	55%	69%	-	-	68.6%		125%		
						74%	Talas o.	65%	65%	-	-	64.5%		99%		
Sub-Purpose 3: Prevention of DR-TB Infections																
SSP 3.1: Improved infection control in health facilities and laboratories																
18	Score of TB hospitals before and after implementing infection prevention and control measures based on updated new TB IC national regulations	Project data	Outcome		KAP survey	TBD		TBD	n/a	-	-	n/a				
19	TB Incidence rate among Health Care Workers: number of HCWs (at PHC and TB facilities) with diagnosed TB per 100,000	DDP&SSES	Outcome	per 100,000	DDP&SSES Annual report, 2018	85	Republic (incl. prison)	52	96.2	-	-	96.2		46%	Annually	
						69	Jalal-Abad o.	TBD	103	-	-	103.3				
						79	Chui o.	TBD	105	-	-	104.7				
						0	Naryn o.	TBD	242	-	-	242.4				
						143	Talas o.	TBD	72	-	-	71.6				
SSP 3.2: Provider, patient, and at-risk populations behaviors changed for TB prevention, detection, and treatment																
20	Percentage of adult TB patients who were treated at PHC facility and reported the receipt of regular TB counseling during treatment (in project-active oblasts)	KAP Survey	Outcome	Percent	KAP survey	TBD based on KAP		TBD	n/a	-	-	-	-	n/a	Y1 and Y4	
Sub-Purpose 4: Improved Enabling Environment																
SSP 4.1: Improved financing for TB services																
21	Financial resources committed to TB services at PHC: % of funds from the total TB service budget allocated to the PHC level for TB services	MHIF	Outcome	Percent	MHIF data, 2018	4%	N/A	5%	4.9%	-	-	4.9%	-	98%	Annually	
SSP 4.2: Improved data for decision-making																
22	HCWs utilizing TB-MIS: # and % of HCWs required to use the TB-MIS who routinely enter data into the TB MIS	TB-MIS, project data	Output	Number	MIS administrator data 2019	276	N/A	676 (+400)	822 (+175)	399 (+123)	550 (+151)	647(+97)	822 (+175)	137%	Quarterly, annually	
SSP 4.3: Improved policies																

23	Governance documents created and adopted/implemented with USG assistance: # of TB-related policies, TB action plans, guidelines, protocols, and curricula adopted and implemented by the Project	Project data	Output	Number	Project report, 2019	0	N/A	7	12	-	-	-	12	171%	Annually
24	Number of individuals trained in any component of WHO End TB Strategy	Project training data	Output	Number	Project report, 2018	0	Total	300	1001	0	220	665 (+445)	1001 (+336)	334%	Quarterly, annually
						0	Men		198	0	80	47	71		
						0	Women		803	0	140	398	265		
<b>SSP 4.4: Reduced stigma and discrimination</b>															
25	Level of Stigma and discrimination against TB patients among health workers	KAP Survey	Outcome		KAP survey	TBD based on KAP			n/a	-	-	-		n/a	Year 1 and Year 4

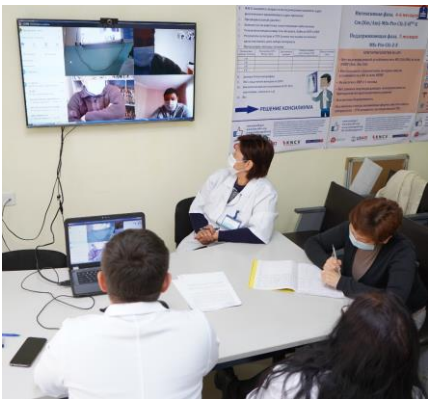
\* Disaggregations besides pilot oblasts cannot be displayed in this table due to length, but are available in separate tables. Disaggregations for indicators #1 and #2 include sex and age group; disaggregations for indicator #19 include sex, oblast, form of TB



## SUCCESS STORY

### USAID Strengthens Oblast Concilium for Better Tuberculosis Treatment Monitoring

**Cure Tuberculosis ensures effective treatment and monitoring of adverse events by strengthening the work of the Chui Oblast DR-TB Concilium**



Cure Tuberculosis

First online Concilium convened on March 30, 2020 to discuss individual cases of 17 patients from three rayons of Chui Oblast. Photo by Cure Tuberculosis Project

*“There might be a concomitant condition, side effects from drugs, the issue is resolved at the Concilium. One shares their opinion, the Central [Concilium] give their opinion – one person cannot solve these problems. Blood indicators, test standards are all posted and available [during the Concilium], we consult and are guided by these indicators of liver tests, electrolytes, blood [to make decisions],”* explains TB specialist Bidzhanova about the Chui DR-TB Concilium.

U.S. Agency for International Development  
Mission in the Kyrgyz Republic:  
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#### September 2020

Drug-resistant tuberculosis (DR-TB) can develop when patients interrupt their treatment for TB. Resistant cases of TB take a very long time to treat, and require many different drugs which cause serious side effects for patients. Patients need to be monitored regularly during treatment to ensure they are making progress towards being cured, and to manage any adverse events from the drugs to help them adhere to treatment.

Kyrgyzstan has some of the highest rates of drug-resistant TB in the world. To better manage these complicated cases, a medical council called a Concilium operates in each of the seven regions of the country, as well as at the national level to coordinate treatment. Concilia serve as a multi-disciplinary advisory body that make collective decisions about individual DR-TB cases. They are important to ensure decisions are made consistently in all cases, and to apply the same standards nationwide, especially in the context of the rollout of new drugs and treatment regimens.

The USAID Cure Tuberculosis project worked to strengthen the Chui Oblast DR-TB Concilium on a pilot basis to make it more effective. A baseline assessment of the Concilium revealed a lack of membership roles and responsibilities, low decision-making capacity of Concilium members, and unclear rules and procedures for discussing DR-TB cases. All of this led to delays in treatment and prescribing inappropriate regimens. For a TB patient, it is crucial to start effective treatment as soon as possible in order to hold a chance of being cured.

Cure Tuberculosis reformed the structure of the Concilium by expanding membership to include rayon TB doctors, who rotate every 1.5 months as Chair of the Concilium. This enables all rayon doctors to participate in decision-making and build their capacity. The project also established clear guidelines for presenting cases at the Concilium, including obtaining all necessary clinical tests and lab results beforehand. The Chui Oblast Concilium also switched to more frequent meetings in order to facilitate more regular monitoring of TB cases. Cure Tuberculosis also gave the Chui Concilium access to the Laboratory Data Management Information System (LDMIS), previously developed with USAID support. Thanks to the LDMIS, Concilium members now have access to patients' test results in real time. The Ministry of Health (MOH) approved the Chui Oblast DR-TB Concilium's new rules and procedures with Order No. 79 of the Ministry of Health (MOH) on February 29, 2020.

Before the restructuring, the Concilium only met on a monthly basis and discussed 76 DR-TB cases during the last quarter of 2019. After the restructuring, in the first quarter of 2020 (January-March), the Concilium met on a weekly basis and discussed 249 cases – a more than three-fold increase. Overall, during the first quarter, the Concilium held a total of 497 discussions about individual DR-TB cases, both for treatment initiation purposes and for regular monitoring of treatment and adverse events.

Ilgiz Abdyrasulov, Secretary of the Chui Oblast DR-TB Concilium, is pleased with the changes to the work of the Concilium.

*“According to the new [Ministry of Health] Order, all rayon TB specialists are full members of the Concilium. The new format has encouraged the active participation of all rayon TB doctors and added a training element [to the Concilium]. Regular training seminars during Concilium meetings for TB doctors improve their qualifications,”* says Abdyrasulov.

*“Now, we can send reports through the electronic option, we have a group and we can contact any specialist and ask a question, for example, when there is an adverse reaction that we do not know about, and they can explain. Previously [we could do this] only by phone, but now we can use an online consultation with specialists in the Concilium. Unexpected adverse reactions do occur and we can seek advice,”* explains TB specialist Bidzhanova from the Chui Oblast DR-TB Concilium.

Cure Tuberculosis also focuses on building physicians’ expertise in DR-TB treatment. Project specialists developed an advanced curriculum in DR-TB management, which was approved by the post-graduate institute. The specialized training contains 4 practical modules on TB diagnosis, treatment, case management, and prevention, and can be accomplished in six months. It is mandatory for all Concilium members to meet the required standards.

When the COVID-19 epidemic emerged in late March and the Kyrgyz Government introduced a state of emergency in Bishkek and some parts of the country, restrictions on movement made it difficult for TB specialists to attend weekly Concilium meetings. Cure Tuberculosis immediately responded by proposing videoconferencing. Project specialists developed an MOH order on provision of TB services under emergency conditions, which allowed for online Concilium meetings. The project provided technical assistance to the Chui Concilium to transition all their proceedings online. On March 30, the first online Concilium meeting took place, connecting health care workers from the Chui Oblast TB Center and rayon TB specialists.

*“All rayons can participate in the Concilium remotely via video-conferencing. They can remotely see test results and X-ray images of patients. [During the lockdown], Concilium meetings were held regularly, fully or partially online with the help of Skype, WhatsApp, e-mail, and the LDMIS. Digitalization of the work of the Concilium was a positive outcome in the [COVID-19] emergency,”* says Ilgiz Abdyrasulov, Secretary of the Chui Oblast DR-TB Concilium.

Thanks to online meetings, in the second quarter of 2020 (April to May), not only did the work of the Concilium not cease -- the Concilium was able to conduct even more case reviews than during the previous quarter, with a total of 514 discussions of individual DR-TB cases. The volume of discussions decreased slightly during the third quarter at the height of the COVID-19 epidemic due to many doctors being tasked with treating COVID-19 and unable to attend Concilium meetings. However, the rotation system still allowed other rayon doctors to participate in place of the Deputy Chair, as necessary, and the work of the Concilium was able to continue. By September 30, despite the COVID-19 crisis, the Chui DR-TB Concilium managed to hold 901 discussions of DR-TB cases over the 6-month period since the beginning of the epidemic.

The new structure of the Concilium and training opportunities for Concilium members have strengthened the capacity and confidence of Concilium members. The new guidelines for presenting cases at the Concilium, coupled with the help of digital technologies, have allowed Concilium members to share data online and hold fruitful discussions leading timely treatment decisions. The encouraging experience of the Chui Oblast Concilium will be replicated in Year 2 in Jalal-Abad, Talas, and Naryn Oblasts to standardize the work of the regional Concilia and ensure the quality of treatment and monitoring of adverse events.

## Annex 3: Implementation of LDMIS and EMR in health care facilities

The LDMIS system is implemented in a total of 48 laboratories (September 30, 2020):

- 27 TB service laboratories (NTC – 2; OTCs – 13; TB hospitals – 12);
- 9 primary-level laboratories (FMCs);
- 12 SES laboratories (COVID-19 module for LDMIS).

The full list of LDMIS sites is presented below:

### National Tuberculosis Center

1. National Reference Laboratory
2. Clinical laboratory

### Oblast Tuberculosis Centers

1. Batken Oblast Tuberculosis Center
  - a. Bacteriological laboratory
  - b. Clinical laboratory
2. Bauer Jalal-Abad Oblast Tuberculosis Center
  - a. Bacteriological laboratory
  - b. Clinical laboratory
3. Issyk-Kul Oblast Tuberculosis Center
  - a. Bacteriological laboratory
  - b. Clinical laboratory
4. Naryn Oblast Tuberculosis Center
  - a. Bacteriological laboratory
5. Osh Oblast Tuberculosis Center
  - a. Bacteriological laboratory
  - b. Clinical laboratory
6. Chui Oblast Tuberculosis Center
  - a. Bacteriological laboratory
  - b. Clinical laboratory
7. Talas Oblast Tuberculosis Center
  - a. Bacteriological laboratory
  - b. Clinical laboratory

### TB Hospitals

1. Osh Oblast Children's Tuberculosis Hospital
  - a. Bacteriological laboratory
  - b. Clinical laboratory
2. Kemin Tuberculosis Hospital
  - a. Bacteriological laboratory
  - b. Clinical laboratory
3. Jeti-Oguz National Rehabilitation Center
  - a. Bacteriological laboratory
  - b. Clinical laboratory
4. National Rehabilitation Center for Children in Cholpon-Ata
  - a. Bacteriological laboratory
  - b. Clinical laboratory
5. Kara-Balta National Tuberculosis Hospital
  - a. Bacteriological laboratory
  - b. Clinical laboratory

6. City Tuberculosis Hospital (Bishkek)
  - a. Bacteriological laboratory
  - b. Clinical laboratory

#### **PHC-level Laboratories**

1. Jaiyl rayon FMC
2. Aksy rayon FMC
3. Balykchy FMC
4. Nookat FMC “Medigos”
5. Tokmok FMC
6. Moskva rayon FMC
7. Sokuluk rayon FMC
8. Suzak rayon FMC
9. Yssyk-Ata FMC

#### **DDP&SSES laboratories testing for COVID-19**

1. DDP&SSES
2. Osh Oblast Center for Disease Prevention and State Sanitary and Epidemiological Surveillance (CDP&SSES)
3. Talas Oblast CDP&SSES
4. Naryn Oblast CDP&SSES
5. Batken Oblast CDP&SSES
6. Issyk-Kul Oblast CDP&SSES
7. Jalal-Abad Oblast CDP&SSES (mobile laboratory)
8. Jaiyl Rayon CDP&SSES
9. Issyk-Ata Rayon CDP&SSES
10. Bishkek City Center for State Sanitary and Epidemiological Surveillance
11. Republican Center for Quarantine and Especially Dangerous Infections (RCQESDI)
12. Republican AIDs Center

The EMR is implemented in 14 TB facilities in Year 1:

#### **1. National Tuberculosis Center**

##### **Oblast Tuberculosis Centers**

2. Chui Oblast Tuberculosis Center
3. Talas Oblast Tuberculosis Center
4. Issyk-Kul Oblast Tuberculosis Center
5. Naryn Oblast Tuberculosis Center
6. Bauer Jalal-Abad Oblast Tuberculosis Center
7. Osh Oblast Tuberculosis Center
8. Batken Oblast Tuberculosis Center

##### **TB Hospitals**

9. Osh Oblast Children's Tuberculosis Hospital
10. Kemin Tuberculosis Hospital
11. Jeti-Oguz National Rehabilitation Center
12. National Rehabilitation Center for Children in Cholpon-Ata
13. Kara-Balta National Tuberculosis Hospital
14. City Tuberculosis Hospital in Bishkek



## Annex 4. Regulatory documents developed and adopted in Year I

No.	Title	Short description	Project role
1	Decree of the Government of the Kyrgyz Republic “On Amendments to the Program of State Guarantees for Providing Citizens of the Kyrgyz Republic with Medical and Sanitary Care,” December 2019	The volume and types of medical services to increase social protection of the population are determined and reflected in the State Guarantees Program. In the approved document, the MHIF was instructed to provide targeted funds for the transportation of biomaterials and TB drugs to the NTC and OTC. This document allows the MHIF to pay for the transportation services out of the state budget.	Provided technical assistance to draft justification for the Decree and carry out calculations of standards
2	Order of the Ministry of Health of the Kyrgyz Republic No. 1079 “On the implementation of information systems in tuberculosis organizations” of December 27, 2019	This document allows the implementation of MIS software products in health care organizations throughout the country.	Cure Tuberculosis developed the MIS software products and carried out their implementation. In order to enable implementation, Cure Tuberculosis conducted a challenging policy dialogue between the MOH and NTP in order to advocate for the MOH to take over responsibility of TB MIS software for the NTP, including providing funding for internet and maintenance costs.
3	Law of the Kyrgyz Republic No. 9 “On the budget of the Mandatory Health Insurance Fund under the Government of the Kyrgyz Republic for 2020 and forecast for 2021-2022” of January 21, 2020	The Budget Law is approved annually by the Parliament of the Kyrgyz Republic and includes financing of the main priority areas in the health care system. The 2020 Law sets out the basic standards for financing tuberculosis services: payments in primary health care, payment for coordination, transportation, etc.	Cure Tuberculosis developed financing standards including per capita financing for Oblast TB Centers, financing for the transportation system. Cure Tuberculosis provided technical assistance to the MHIF to amend financial regulations and incorporate these financing standards into their budget. The MHIF Budget Law served to institutionalize the financing standards developed by Cure Tuberculosis and help transfer funding of services to the state budget for sustainability of the transportation system.
4	Order of the Ministry of Health of the Kyrgyz Republic No. 79 “On conducting a pilot project	The document approves a new format for holding Concilia on the basis of the Chui OTC	Developed a regulation on the pilot Concilium in the Chui OTC, drafted the Order and had it

	to improve the activities of the Chui DR-TB Concilium” of February 12, 2020	(temporary regulation on the Chui Oblast DR-TB Concilium).	agreed with the Ministry of Health. Provided technical assistance for the implementation of this pilot
5	Order of the Ministry of Health of the Kyrgyz Republic No. 142 “On the optimization of activities of the TB department of the Tokmok Territorial Hospital” of March 10, 2020	Closure of the TB department of the Tokmok Territorial Hospital, which saved the budget several million soms. The saved funds were used to cover the financial risks of health care facilities.	The MOH decided to close the Tokmok TB department due to long-standing issues with infrastructure, infection control and lack of adherence to hospitalization guidelines, which presented a risk to the rest of the TB system. Cure Tuberculosis prepared the justification for the Ministry of Health for closing the department, made financial calculations, and helped develop guidelines to transition the patients from Tokmok to outpatient facilities or to Kara-Balta hospital. Held discussions with the head of the territorial hospital. Drafted the Order for the Ministry of Health.
6	Order of the Ministry of Health of the Kyrgyz Republic No.171 “On piloting the Improvement of Contact Tracing project” of March 20, 2020	The document approves the instruction (guidelines) for tracing persons who had contact with a TB patient within the framework of the pilot project. The guidelines establish the algorithm of actions for identifying and following up contacts by medical workers, determines the criteria and categories of index cases. The document also approves the registration form – an index case investigation card, and instructions for filling it out.	Provided technical assistance to develop the regulation and implement the pilot project
7	Order of the Ministry of Health of the Kyrgyz Republic No. 187 and Order of the MHIF under the Government of the Kyrgyz Republic No. 113 “On measures to improve the coordination of healthcare activities at the regional and rayon levels in the implementation of tuberculosis measures in the relevant territory” of March 24, 2020	Oblast TB Centers had been funded on a treated case basis, which prevented other tasks and functions such as monitoring and evaluation. In this connection, a per capita standard has been developed and approved, which allows performing coordination functions. This document approved the coordination functions for the OTCs and the NTC and the procedure for spending the allocated funds.	Provided technical assistance to develop the regulation and implement in the Oblast Tuberculosis Centers

8	Order of the Ministry of Health of the Kyrgyz Republic No. 186 and Order of the MHIF under the Government of the Kyrgyz Republic No. 114 “On amendments to orders on transportation and biomaterials in Chui and Talas Oblasts” of March 24, 2020	A model agreement for the supply of biomaterials and TB drugs between the OTCs and the MHIF and the Transport Agent provides for the interaction procedure and sets out payment terms and conditions. A methodology for calculating the standards for financing the transportation of biomaterials and TB drugs has been developed.	Developed the model agreement, drafted the Order
9	Order of the Ministry of Health of the Kyrgyz Republic No. 225 “On measures to provide tuberculosis care in an emergency and state of emergency in the Kyrgyz Republic” of April 8, 2020	The coronavirus situation in the country had led to limited access to health services, making it difficult for TB patients to receive daily doses of TB drugs. According to the approved regulations, the control of treatment had to be carried out at FMCs (DOT) and through community-based supporters. To ensure continuity of treatment of TB patients, this document allowed a 14-day supply of TB drugs for TB patients during the emergency and the state of emergency, allowed for remote DOT including instructions for conducting video-controlled treatment and patient support through community-based treatment supporters. This order also allowed for transition of Concilium meetings online.	Provided technical assistance in the development of video DOT guidelines. Drafted the Order and agreed it with the Ministry of Health. Provided technical assistance to transition the Chui Oblast Concilium online based on this order.
10	Curriculum and a plan of short-term distance learning cycle “Topical issues of phthisiopulmonology,” approved by KSMIR&FT on September 10, 2020	A modular training program for tuberculosis doctors and Concilium members on modern DR-TB management. Will be offered to Concilium members as a six-month mandatory certification course.	Developed the advanced curriculum on DR-TB management and had it approved and institutionalized through the Kyrgyz State Medical Institute for Retraining and Further Training as part of the mandatory curriculum for TB specialists.
11	Order of the Ministry of Health of the Kyrgyz Republic No. 759 “On approval of clinical guidelines/protocols in the Kyrgyz Republic” of September 25, 2020	The document approved DR-TB guidelines, which had been developed in accordance with the latest international standards.	Provided technical assistance to develop clinical guidelines and assisted with all of the steps needed for internal and external review of the document, advocated for its approval with the Expert Council of the Ministry of Health

12	Order of the Ministry of Health of the Kyrgyz Republic No. 749 “On approval of standards for the provision of social services for tuberculosis within the framework of the state social order” of October 2, 2020	As part of the implementation of the state social order, the standards of services for NGOs in tuberculosis were developed and approved with clear criteria for NGOs.	Provided technical assistance in amending the standards for the state social order. Prepared a draft document for approval
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## Annex 5: Background on COVID-19 epidemic

In Year 1, the COVID-19 epidemic emerged as a critical issue that affected the health care system and the national TB program. Cure Tuberculosis had to adjust its activities to respond to the newly posed challenges and the urgent need to help the TB service to continue to provide care for patients with TB and strengthen infection control to prevent health care workers and patients alike from contracting the novel coronavirus infection.

The detection of the first cases in the Kyrgyz Republic in March 2020 was followed by an immediate declaration of a state of emergency and restrictions on movement in Bishkek and some other parts of the country. The health system mobilized all its resources to stop the spread of the virus. It became evident almost instantly that the country was not prepared to effectively respond to the epidemic. The allocation of funds and human resources to fight COVID-19 was done at the expense of other areas in health, which needed uninterrupted support and funding. The inflow of money, medical equipment, personal protective equipment, lab diagnostics and oxygen, technical assistance, and guidance poured in from abroad, as well as from local private financiers and volunteers who provided financial assistance and otherwise helped the health system. The distribution of received funds, equipment and PPE among health care organizations was done erratically, with accusations of corruption and misappropriation of funds from watchdog organizations and social activists. The health system failed to analyze the needs of HCOs, channeling funds and equipment to some and leaving the needs of others unmet. Inconsistent decisions demonstrated a lack of understanding of the situation and a lack of a coordinated plan of action.

As of September 30, 2020, the total number of cases registered in Kyrgyzstan was 46,669 (U07.1 and U07.2)<sup>4</sup>, with 1,064 deaths (2.2%) and 42,879 recovered (91.8%). The total number of medical staff diagnosed with COVID-19 was 3,255 cases, of whom 3,008 recovered. The case fatality rate was 2.3%, and the mortality rate – 161.3 deaths per 1 million population.

The actual death toll from COVID-19 might be higher than the number of confirmed deaths due to limited testing and problems in the attribution of the cause of death. The limited testing is the main reason the number of confirmed cases is likely lower than the number of actual cases. The difference in reporting of confirmed deaths was caused by differences in methodology and failure to develop a unified global approach

### COVID-19 EPIDEMIC TIMELINE – KEY EVENTS

- January 30: WHO declared the novel coronavirus outbreak a public health emergency of international concern (PHEIC)
- March 7: The number of confirmed COVID-19 cases surpassed 100,000 globally
- March 18: First three cases registered in the Kyrgyz Republic
- March 22: Emergency situation declared (still in effect)
- March 24: State of emergency declared in Bishkek, Osh and Jalal-Abad (lasted until May 10)
- Mid-June: Resurgence of cases and new government restrictions
- July 16: MOH included community-acquired pneumonia to the total count of COVID-19 cases
- July 18: The death toll reached its peak with 727 cases
- August 18: MOH reconsidered causes of deaths for seven-month period

<sup>4</sup> U07.1 — Laboratory confirmed COVID-19 (with the use of PCR technology).

U07.2 — COVID-19, confirmed by clinical and epidemiological symptoms (community-acquired pneumonia).

for all countries. The Kyrgyz Republic had to decide to count hospital deaths only or to include deaths at home; count COVID-19 as the cause of death or just a trigger if it provoked the acute form of a chronic disease with lethal outcome. There were also delays in reporting.

## LEGAL PROVISIONS

The state of emergency and restrictions on movement and mass gatherings were imposed and enacted by:

- MOH Order No. 132 of March 2 “On a temporary ban on holding international conferences, seminars and other events”
- Government Decree No. 146 of March 12 “On a temporary restriction on cultural, sports and other public events”
- Government Decree No. 163 of March 17 “On measures to prevent the threat of the incidence and spread of coronavirus infection (COVID-19) in the territory of the Kyrgyz Republic”
- Government Decree No. 93-r of March 22 “On the introduction of an emergency on the territory of the Kyrgyz Republic from March 22, 2020”
- Presidential Decree No. 55 of March 24 “On the state of emergency in Bishkek”

The peak of infection occurred in the week of July 13-19. The number of newly registered cases reached over 1,260 per day, and deaths including community-acquired pneumonia rose to over 80 a day. The Government reported that it had changed the algorithms for treating coronavirus, increased the number of mobile groups, and provided additional beds to receive patients with pneumonia. The Government decided not to introduce a new lockdown and strict quarantine measures.

The sharp increase in July was also due to the change of methodology. The Ministry of Health, under public pressure, included community-acquired pneumonia to the total count of cases of COVID-19 for a unified approach to the treatment of manifestations of coronavirus infection (MOH Order stipulating community-acquired pneumonia without PCR confirmation but with clinical manifestations of viral etiology belongs to the U07.2 code). Thus, cases of community-acquired pneumonia are statistically considered a manifestation of COVID-19, and death from community-acquired pneumonia is considered death from COVID-19.

In August, the MOH reported that they had reconsidered the causes of deaths in the first seven months of 2020 according to the newly received recommendations from WHO, “Medical Certificate, Coding the Causes of Death by The International Classification of Diseases and Reporting on Fatality Associated with COVID-19” of June 7, 2020, and in 437 cases (29%), the cause of death was other than COVID-19. The statistics on lethal cases for seven months of 2019 and 2020 had been analyzed and revised.

From mid-August, the epidemiological situation associated with COVID-19 improved with fewer cases and deaths registered every day. The Government expects a new wave of coronavirus infection with the change of weather and a typical decrease in immunity of the population to cold-related diseases, like seasonal flu and acute respiratory illnesses.

Table 14. Key country statistics as of September 30, 2020

Indicator	Cases
<b>Total number of confirmed cases (U07.1 and U07.2)</b>	46,669
<b>Number of new cases (last 24 hours)</b>	147
<b>Number of recovered cases</b>	42,879
<b>Number of recovered cases (last 24 hours)</b>	118
<b>Number of deaths</b>	1,064
<b>Case fatality rate</b>	2.3%

(Source: National COVID-19 Coordination Unit)

The incidence of U07.2 (community-acquired pneumonia) is 35% higher in the total count of cases (19,829 laboratory-confirmed cases, 26,840 clinically and epidemiologically confirmed cases). In the death toll from COVID-19, laboratory-confirmed cases total 267 and clinically and epidemiologically confirmed total 797.

To prepare for the second wave of COVID-19, the Government decided to build Matreserv (material reserves) Fund by October 1 with a strategic stock of medicine for 15 thousand patients (several drugs) and provide health care facilities with a 3-month supply of PPE, medicine, disinfectants, etc. The health care workers need to build capacity and receive training in hygiene and infection control, new clinical protocols and guidelines, SOPs, provision of correct information on coronavirus and treatment of patients with COVID-19. Many HCWs require psychological help and rehabilitation.

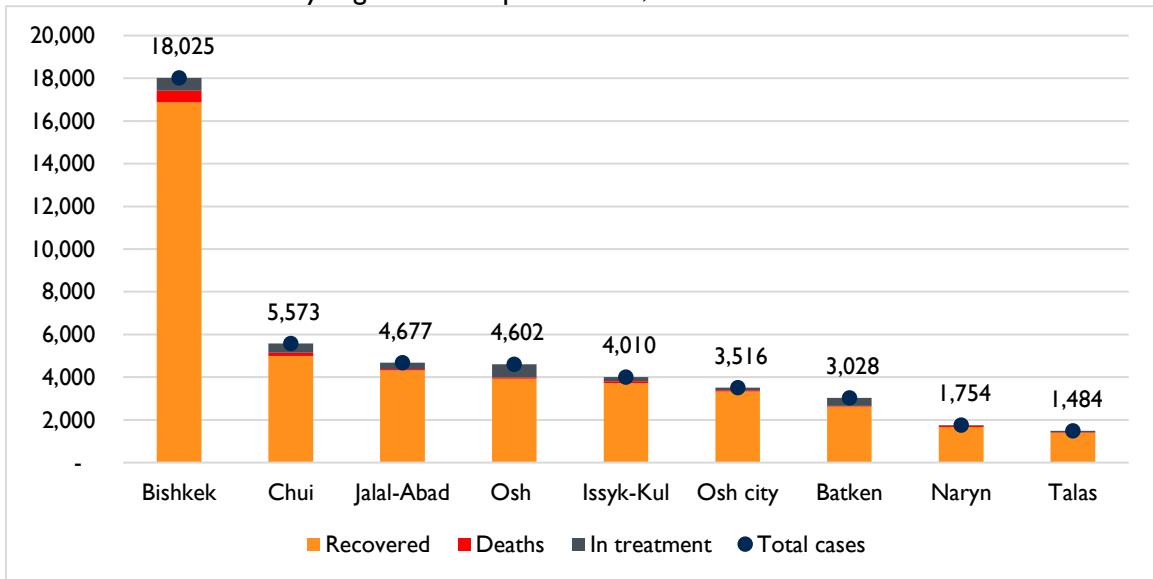
The Kyrgyz Government (Order No. 264-r of July 27, 2020) allocated an additional 30 million soms from the national budget to the MOH and 400 million to the MHIF for compensation to medical staff working in high-risk areas. The MOH paid one-time monetary compensation of 200 thousand soms to 144 employees of health organizations and 1 million soms to the families of 21 deceased health care workers each (September 18). The MOH also prepared an order on the allocation of an additional 100 million soms for compensation payments to HCWs.

Table 15. COVID-19 cases by region as of September 30, 2020

Region	Total cases	Cases of health care workers	Number of recovered	Number of deaths
<b>Bishkek</b>	18,025	1,010	16,882	539
<b>Chui</b>	5,573	576	4,999	142
<b>Jalal-Abad</b>	4,677	261	4,315	61
<b>Osh</b>	4,602	296	3,931	57
<b>Issyk-Kul</b>	4,010	169	3,723	82
<b>Osh city</b>	3,516	450	3,328	65
<b>Batken</b>	3,028	292	2,630	27
<b>Naryn</b>	1,754	156	1,671	62
<b>Talas</b>	1,484	45	1,400	29
<b>Total</b>	<b>46,669</b>	<b>3,255</b>	<b>42,879</b>	<b>1,064</b>

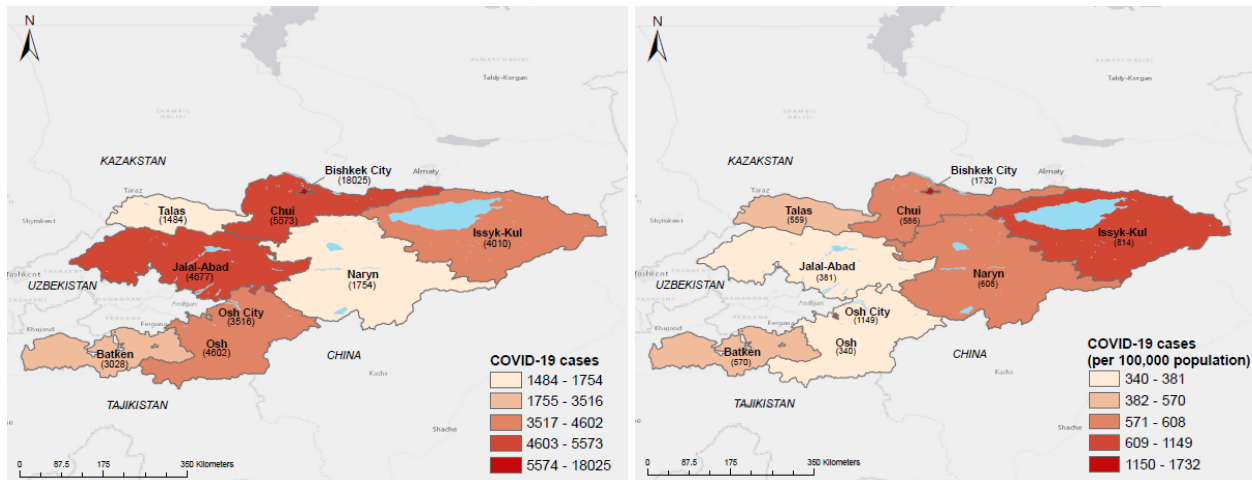
(Source: Ministry of Health)

Figure 34. COVID-19 cases by region as of September 30, 2020



(Source: Ministry of Health)

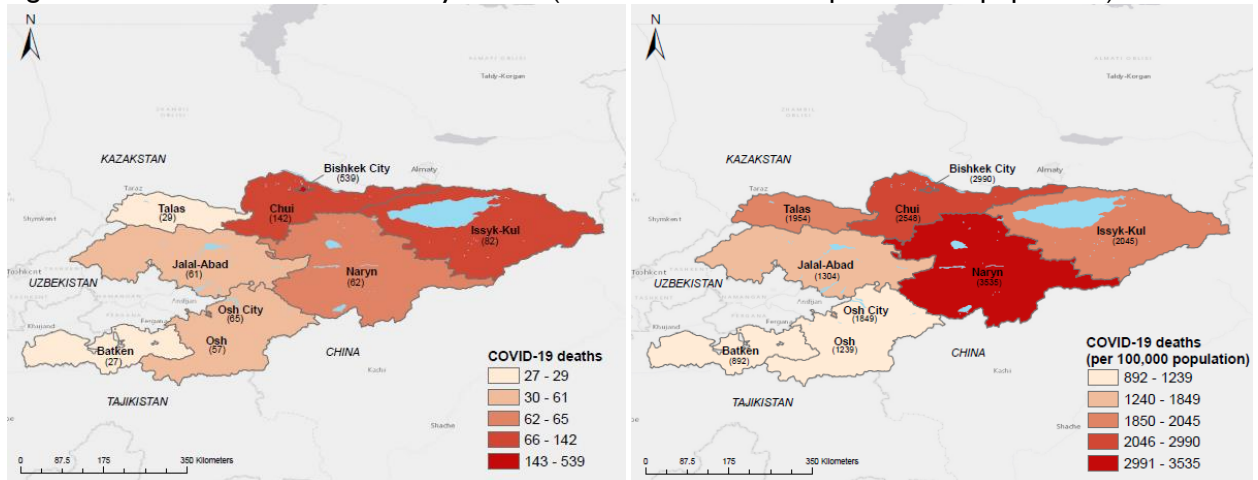
Figure 35. Total COVID-19 cases by Oblast (absolute numbers and per 100,000 population)



(Sources: COVID-19 data: Ministry of Health, 2020; Administrative boundaries: Database of Global Administrative Areas, 2018)

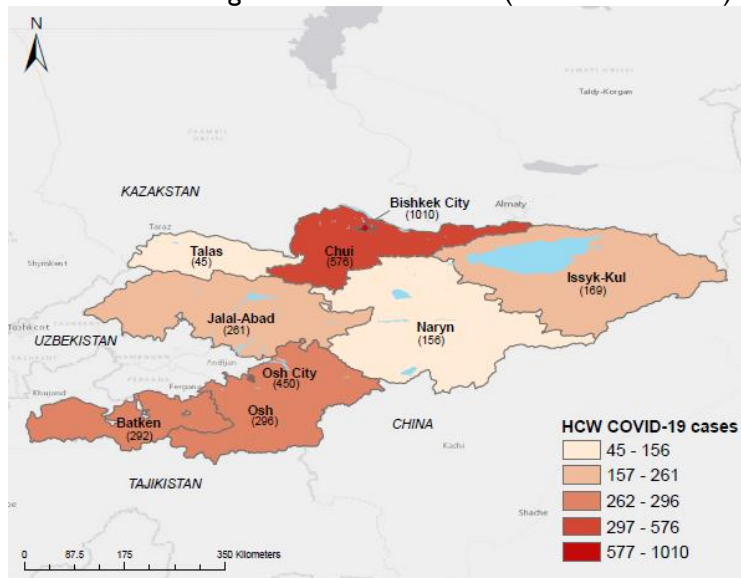


Figure 36. Total COVID-19 deaths by Oblast (absolute numbers and per 100,000 population)



(Sources: COVID-19 data: Ministry of Health, 2020; Administrative boundaries: Database of Global Administrative Areas, 2018)

Figure 37. Total COVID-19 cases among Health care workers (absolute numbers)



(Sources: COVID-19 data: Ministry of Health, 2020; Administrative boundaries: Database of Global Administrative Areas, 2018)

## Annex 6: Calendar of Events

Quarter I of Year 2: October – December 2020

Date / Time	Venue	Event description	Key Audience / Participants
November 2020	Bishkek	Second round of cascade training for national QMS managers on revised and updated QMS Guidelines	NRL staff
November 2020 (TBD)	Bishkek	Training for Project sub-grantees on counseling TB patients on adherence to treatment, side effects, benefits of outpatient treatment, household compliance with TB IC measures, psychological counseling, engagement of community-based treatment supporters	AVHC, HAKR, TB People, Red Crescent
November 2020	Chui and Talas Oblasts	Round tables on cooperation and strengthening coordination in searching for and following up on TB patients (an NRCS activity)	Representatives of local state administrations, TB facilities, PHC, CSOs, and other stakeholders
November 2020 (TBD)	Bishkek	Training on TB issues and key messages to encourage clients to seek TB screening	Shelters for homeless in Chui Oblast
November 2020	Chui Oblast	Training on cohort review and analysis for Chui Oblast DR-TB Concilium members	Chui Oblast DR-TB Concilium members
November – December 2020	Online	Training on implementation of QMS and revision of SOPs for TB labs at PHC level	TB lab specialists in Naryn and Jalal-Abad Oblasts
November – December 2020	Chui, Talas, Naryn, Jalal-Abad Oblasts	Rayon-level workshops on cooperation and coordination of efforts in informing the population about TB in order to reduce stigma and discrimination of TB patients and create enabling environment for TB screening and treatment (an AVHC activity)	Representatives of LSGs, PHC managers and TB doctors, FGP/FAP, Rayon Health Committees, HPU specialists and VHC, and other stakeholders
November – December 2020	Online	Introduction of new updated Oblast DR-TB Concilium's Regulation	Naryn, Jalal-Abad, Batken, Talas Oblast DR-TB Concilium members
November – December 2020	Bishkek, Osh	Training on DR-TB CPGs recommendations, including pediatric TB and TB/HIV recommendations	TB specialists from Chui, Naryn, Jalal-Abad, Batken, Talas Oblasts
December 2020 (TBD)	Online	Introduction session on FAST Approach based on lessons learned, barriers and opportunities from previous FAST implementation experience	NTP, Chui, Naryn, Jalal-Abad, Batken, Talas Oblasts' HCO managers

December 2020 (TBD)	Bishkek	Training for journalists on TB issues with introduction of behavioral journalism approaches in reporting on TB to reduce stigma and discrimination	Local mass media (TV, radio, news websites, leading newspapers)
December 4, 2020 (TBC)	Kara-Balta	Workshops on cooperation and coordination of efforts when accompanying TB patients at high risk of treatment interruption by VHC members in pilot Jaiyl rayon of Chui Oblast	PHC managers, TB doctors, FGP/FAP, VHC, NRCS, and other stakeholders
December 7-12, 2020	Naryn Oblast	Training on TB case management approach	Naryn Oblast PHC HCWs
December 17, 2020 (TBC)	Bishkek	Round table on restructuring and optimization of OTBCs in Chui, Naryn, Talas, Batken, and Jalal-Abad Oblasts	MOH, MHIF leadership, Chui, Naryn, Jalal-Abad, Batken, Talas Oblast TB Centers

## Annex 7: Media Clippings

Topic	Date	USAID Mentioned	Source	Link	Heading
<b>Prevention and treatment of TB under COVID-19</b>	3 Jul 2020	No	OTRC Birinchi radio		
#	3 Jul 2020	No	Birinchi radio Facebook	<a href="https://www.facebook.com/IRadiokg/videos/687797445286382">https://www.facebook.com/IRadiokg/videos/687797445286382</a>	
<b>Implementation of LDMIS in state-run laboratories to work with COVID-19</b>	10 Jul 2020	Yes	AKIpress	<a href="http://zdorovie.akipress.org/news:1631240?from=portal&amp;place=last&amp;b=1">http://zdorovie.akipress.org/news:1631240?from=portal&amp;place=last&amp;b=1</a>	Laboratory data management information system launched in 10 state laboratories to record laboratory tests for COVID-19, - Goskomsvyaz
#	11 Jul 2020	Yes	OTRC Ala-Too 24		
#	11 Jul 2020	Yes	Ala-Too 24 YouTube channel	<a href="https://www.youtube.com/watch?v=rVvd0FZOUF4&amp;feature=emb_logo">https://www.youtube.com/watch?v=rVvd0FZOUF4&amp;feature=emb_logo</a>	Digital technologies to fight COVID-19 (RUS)
#	11 Jul 2020	Yes	KTRK Website	<a href="http://ktrk.kg/ru/post/42719/ru">http://ktrk.kg/ru/post/42719/ru</a>	Digital technologies in fighting against COVID-19
#	12 Jul 2020	No	OTRC Ala-Too 24		
#	12 Jul 2020	No	Ala-Too 24 YouTube channel	<a href="https://www.youtube.com/watch?time_continue=3082&amp;v=GjiTOZKfaCE&amp;feature=emb_logo">https://www.youtube.com/watch?time_continue=3082&amp;v=GjiTOZKfaCE&amp;feature=emb_logo</a>	Digital technologies to fight COVID-19 (KYR)
#	12 Jul 2020	No	KTRK Website	<a href="http://ktrk.kg/kg/media/video/17817">http://ktrk.kg/kg/media/video/17817</a>	
#	26 Aug 2020	Yes	SCITC Website	<a href="http://ict.gov.kg/index.php?r=site%2Fpress&amp;pid=629&amp;cid=1">http://ict.gov.kg/index.php?r=site%2Fpress&amp;pid=629&amp;cid=1</a>	Implementation of LDMIS in state laboratories to work with COVID-19. Cure Tuberculosis Project
#	26 Aug 2020	Yes	SCITC Website	<a href="http://ict.gov.kg/index.php?r=site%2Fpress&amp;pid=630&amp;cid=1">http://ict.gov.kg/index.php?r=site%2Fpress&amp;pid=630&amp;cid=1</a>	#
<b>Humanitarian aid to COVID-19</b>	27 Jul 2020	Yes	NTP Website	<a href="https://tbcenter.kg/%d0%b2%d0%b8%d0%b4%d0%b5%d0%be/">https://tbcenter.kg/%d0%b2%d0%b8%d0%b4%d0%b5%d0%be/</a>	Humanitarian aid to NTC medical staff

ward of NTC from Project staff					
#	27 Jul 2020	Yes	EITR		
#	27 Jul 2020	Yes	EITR Facebook	<a href="https://www.facebook.com/elkanaly/videos/277319900230549/">https://www.facebook.com/elkanaly/videos/277319900230549/</a>	Humanitarian aid to NTC medical staff (RUS)
#	27 Jul 2020	Yes	EITR YouTube channel	<a href="https://www.youtube.com/watch?v=O8XqbiiqVWk0&amp;feature=youtu.be">https://www.youtube.com/watch?v=O8XqbiiqVWk0&amp;feature=youtu.be</a>	#
#	28 Jul 2020	Yes	EITR		
#	28 Jul 2020	Yes	EITR Facebook	<a href="https://www.facebook.com/elkanaly/videos/319907822517435">https://www.facebook.com/elkanaly/videos/319907822517435</a>	Humanitarian aid to NTC medical staff (KYR)
#	28 Jul 2020	Yes	EITR YouTube channel	<a href="https://www.youtube.com/watch?v=1lrEXp0RTPe&amp;feature=youtu.be">https://www.youtube.com/watch?v=1lrEXp0RTPe&amp;feature=youtu.be</a>	#
#	28 Jul 2020	Yes	Komsomo Iskaya Pravda	<a href="https://www.kp.kg/daily/27136/4260478/">https://www.kp.kg/daily/27136/4260478/</a>	In Bishkek, newlyweds went to red zone instead of honeymoon
#	27 Jul 2020	Yes	Kabar	<a href="http://kabar.kg/news/sotr-udniki-proekta-usaid-peredali-sizy-medikam-natctcentra-ftiziatirii/">http://kabar.kg/news/sotr-udniki-proekta-usaid-peredali-sizy-medikam-natctcentra-ftiziatirii/</a>	USAID project staff donated PPE to doctors of NTC
#	27 Jul 2020	Yes	STV		
#	27 Jul 2020	Yes	Altynai Jumalieva YouTube channel	<a href="https://www.youtube.com/watch?v=xFOVbLpXyU&amp;feature=youtu.be">https://www.youtube.com/watch?v=xFOVbLpXyU&amp;feature=youtu.be</a>	Work in red zone of NTC with second half
#	28 Jul 2020	Yes	STV		
#	28 Jul 2020	Yes	Avtandil Baktybekov YouTube channel	<a href="https://www.youtube.com/watch?v=2lw4SiXYsrk&amp;feature=youtu.be">https://www.youtube.com/watch?v=2lw4SiXYsrk&amp;feature=youtu.be</a>	Couple working in red zone
#	28 Jul 2020	Yes	<a href="https://24.kg/obschestvo/160895_medovyy_mesyats_vkrasnoy_zone_suprugi-mediki_budut_lechit_zarajennyih_COVID-19/">24.kg</a>	<a href="https://24.kg/obschestvo/160895_medovyy_mesyats_vkrasnoy_zone_suprugi-mediki_budut_lechit_zarajennyih_COVID-19/">https://24.kg/obschestvo/160895_medovyy_mesyats_vkrasnoy_zone_suprugi-mediki_budut_lechit_zarajennyih_COVID-19/</a>	Honeymoon in red zone. Doctor spouses to treat infected with COVID-19
#	28 Jul 2020	Yes	Azattyk	<a href="https://www.azattyk.org/a/30751599.html">https://www.azattyk.org/a/30751599.html</a>	Cure Tuberculosis Project helps doctors fighting coronavirus

<b>Social support to TB patients (SBC video)</b>	28 Jul 2020	No	EITR		
#	28 Jul 2020	No	EITR Facebook	<a href="https://www.facebook.com/elkanaly/videos/650444435585638/">https://www.facebook.com/elkanaly/videos/650444435585638/</a>	(RUS)
#	28 Jul 2020	No	EITR YouTube channel	<a href="https://www.youtube.com/watch?v=ultwXc4mZVA&amp;feature=youtu.be">https://www.youtube.com/watch?v=ultwXc4mZVA&amp;feature=youtu.be</a>	
#	28 Jul 2020	No	EITR		
#	28 Jul 2020	No	EITR Facebook	<a href="https://www.facebook.com/elkanaly/videos/1358379081033160/">https://www.facebook.com/elkanaly/videos/1358379081033160/</a>	(KYR)
#	28 Jul 2020	No	EITR YouTube channel	<a href="https://www.youtube.com/watch?v=P8NQQgmoUko&amp;feature=youtu.be">https://www.youtube.com/watch?v=P8NQQgmoUko&amp;feature=youtu.be</a>	
#	27 Aug 2020	No	STV		
#	27 Aug 2020	No	STV YouTube channel	<a href="https://www.youtube.com/watch?v=1wOosVYJL9A&amp;t=4s">https://www.youtube.com/watch?v=1wOosVYJL9A&amp;t=4s</a>	(KYR)
#	27 Aug 2020	No	STV YouTube channel	<a href="https://www.youtube.com/watch?v=Q-XfaCV6yo4&amp;t=8s">https://www.youtube.com/watch?v=Q-XfaCV6yo4&amp;t=8s</a>	(RUS)
<b>COVID-19 and Tuberculosis: Similarities and Differences</b>	5 Aug 2020	No	AKIpress	<a href="https://zdorovie.akipress.org/news:1637221/?from=covid-19&amp;place=mainnewslst">https://zdorovie.akipress.org/news:1637221/?from=covid-19&amp;place=mainnewslst</a>	COVID-19 and Tuberculosis: similarities and differences
<b>Closure of special COVID-19 ward at NTC</b>	4 Sep 2020	No	EITR		
#	4 Sep 2020	No	EITR YouTube channel	<a href="https://www.youtube.com/watch?v=cVkEMta-AMU&amp;feature=youtu.be">https://www.youtube.com/watch?v=cVkEMta-AMU&amp;feature=youtu.be</a>	(KYR)
#	5 Sep 2020	No	EITR		
#	5 Sep 2020	No	EITR YouTube channel	<a href="https://www.youtube.com/watch?v=U4MhUPjzDPM&amp;feature=youtu.be">https://www.youtube.com/watch?v=U4MhUPjzDPM&amp;feature=youtu.be</a>	(RUS)
#	7 Sep 2020	No	OTRC Birinchi radio		
#	7 Sep 2020	No	NTP Website	<a href="https://tbcenter.kg/blog/2020/09/07/%d0%b7%d0%b0%d0%ba%d1%80%d1%8b%d1%82%d0%b8%d0%b5-covid-%d0%be%d1%82%d0%b4%d0%b5%d0%bb%d0%b5%d0%bd%d0%b8%d1%8f-%d0%b2-">https://tbcenter.kg/blog/2020/09/07/%d0%b7%d0%b0%d0%ba%d1%80%d1%8b%d1%82%d0%b8%d0%b5-covid-%d0%be%d1%82%d0%b4%d0%b5%d0%bb%d0%b5%d0%bd%d0%b8%d1%8f-%d0%b2-</a>	Closure of COVID-19 ward at NTC

				<a href="#">%d0%bd%d1%86%d1%84 /</a>	
#	7 Sep 2020	No	MOH Website	<a href="http://www.med.kg/ru/novosti/2734-zakrytie-covid-otdeleniya-v-ntsf.html">http://www.med.kg/ru/novosti/2734-zakrytie-covid-otdeleniya-v-ntsf.html</a>	#
#	7 Sep 2020	No	MOH YouTube channel	<a href="https://www.youtube.com/watch?v=yV8-Q54FEFM&amp;feature=emb_logo">https://www.youtube.com/watch?v=yV8-Q54FEFM&amp;feature=emb_logo</a>	#
#	7 Sep 2020	No	AKIpress	<a href="http://zdorovie.akipress.org/news:1644303">http://zdorovie.akipress.org/news:1644303</a>	#
#	7 Sep 2020	No	Azattyk	<a href="https://www.azattyk.org/a/30824621.html">https://www.azattyk.org/a/30824621.html</a>	NTC cured its last patient with coronavirus
#	7 Sep 2020	No	Elgezit	<a href="https://elgezit.kg/2020/09/07/bolshe-nedeli-borolis-za-ego-zhizn-a-teper-vypisyvaem-v-horoshem-zdravii-iz-ntsf-torzhestvenno-vypisali-poslednih-patsientov/">https://elgezit.kg/2020/09/07/bolshe-nedeli-borolis-za-ego-zhizn-a-teper-vypisyvaem-v-horoshem-zdravii-iz-ntsf-torzhestvenno-vypisali-poslednih-patsientov/</a>	We fought for his life for more than a week, and now we are discharging him in good health, - last COVID-19 patients discharged from NTC
#	7 Sep 2020	No	Vecherniy Bishkek		NTC discharged all patients and closed special department
#	7 Sep 2020	No	Vecherniy Bishkek	<a href="https://www.vb.kg/doc/391748_naccentr_ftiziatrui_vypisal_vseh_pacientov_i_zakryl_specotdelenie.html">https://www.vb.kg/doc/391748_naccentr_ftiziatrui_vypisal_vseh_pacientov_i_zakryl_specotdelenie.html</a>	#
#	7 Sep 2020	No	Kabar	<a href="http://kabar.kg/news/iz-spetsotdeleniia-v-natctcentre-ftiziatrui-vypisany-poslednie-pacienty-s-covid-19/">http://kabar.kg/news/iz-spetsotdeleniia-v-natctcentre-ftiziatrui-vypisany-poslednie-pacienty-s-covid-19/</a>	Last patients with COVID-19 were discharged from special department at NTC
#	7 Sep 2020	No	FOR	<a href="https://for.kg/news-665370-ru.html">https://for.kg/news-665370-ru.html</a>	COVID department at NTC to be closed in Kyrgyzstan
#	7 Sep 2020	No	Vesti	<a href="https://vesti.kg/obshchestvo/item/74867-virus-prodolzhaet-otstupat-v-natstsentre-ftiziatrui-vypisali-poslednikh-patsientov-izlechivshikhsya-ot-covid-19.html">https://vesti.kg/obshchestvo/item/74867-virus-prodolzhaet-otstupat-v-natstsentre-ftiziatrui-vypisali-poslednikh-patsientov-izlechivshikhsya-ot-covid-19.html</a>	Virus continues to retreat. National Tuberculosis Center discharged last patients recovered from COVID-19
#	7 Sep 2020	No	Slon	<a href="https://slon.kg/2020/09/07/iz-speczotdeleniya-v-naczccentre-ftiziatrui-vypisany-poslednie-pacienty-s-covid-19/">https://slon.kg/2020/09/07/iz-speczotdeleniya-v-naczccentre-ftiziatrui-vypisany-poslednie-pacienty-s-covid-19/</a>	Last patients with COVID-19 were discharged from special department at NTC

#	14 Sep 2020	No	OTRC Zamana		
#	14 Sep 2020	No	Zamana Facebook	<a href="https://www.facebook.com/Zamanakg/videos/238121870949024/">https://www.facebook.com/Zamanakg/videos/238121870949024/</a>	Last patient with COVID-19 at NTC recovered
#	17 Sep 2020	No	STV		
#	17 Sep 2020	No	STV YouTube channel	<a href="https://www.youtube.com/watch?v=Vw-4vQ77QZl&amp;t=5s">https://www.youtube.com/watch?v=Vw-4vQ77QZl&amp;t=5s</a>	Last patients with coronavirus at NTC recovered and returned home (RUS)
#	17 Sep 2020	No	STV		
#	17 Sep 2020	No	STV YouTube channel	<a href="https://www.youtube.com/watch?v=GsnZNnaHVRY&amp;t=19s">https://www.youtube.com/watch?v=GsnZNnaHVRY&amp;t=19s</a>	Last patients with coronavirus at NTC recovered and returned home (KYR)
<b>Patient adherence to treatment and HCW teamwork (SBC video)</b>	5 Sep 2020	No	EITR		
#	5 Sep 2020	No	EITR YouTube channel	<a href="https://www.youtube.com/watch?v=opPbZ2-qnKk&amp;feature=youtu.be">https://www.youtube.com/watch?v=opPbZ2-qnKk&amp;feature=youtu.be</a>	
#	20 Sep 2020	No	OTRC Zamana		
#	21 Sep 2020	No	Zamana Facebook	<a href="https://www.facebook.com/Zamanakg/videos/1052210785221321">https://www.facebook.com/Zamanakg/videos/1052210785221321</a>	
#	9 Sep 2020	No	STV		
#	24 Sep 2020	No	STV YouTube channel	<a href="https://www.youtube.com/watch?v=cbjflnyAFB0&amp;t=1s">https://www.youtube.com/watch?v=cbjflnyAFB0&amp;t=1s</a>	
<b>Rights of TB patients</b>	7 Sep 2020	No	AKIpress	<a href="https://zdorovie.akipress.org/news:1646939?place=share-fab">https://zdorovie.akipress.org/news:1646939?place=share-fab</a>	Free health care. What are the rights of TB patient assigned to FGP at place of residence?
#	17 Sep 2020	No	Kabar	<a href="http://kabar.kg/news/fom-s-napomnil-patciientams-tuberkulezom-ob-ikh-pravakh/">http://kabar.kg/news/fom-s-napomnil-patciientams-tuberkulezom-ob-ikh-pravakh/</a>	MHIF reminded patients with TB about their rights
<b>TB reform in context of COVID-19 pandemic</b>	26 Sep 2020	Yes	EITR		



#	26 Sep 2020	Yes	EITR YouTube channel	<a href="https://www.youtube.com/watch?v=B0_nN9mVwKc&amp;feature=youtu.be">https://www.youtube.com/watch?v=B0_nN9mVwKc&amp;feature=youtu.be</a>	Measures to reform tuberculosis service in Kyrgyzstan (RUS)
#	26 Sep 2020	Yes	EITR		
#	26 Sep 2020	Yes	EITR YouTube channel	<a href="https://www.youtube.com/watch?v=_jgXGjOR2Ig&amp;feature=youtu.be">https://www.youtube.com/watch?v=_jgXGjOR2Ig&amp;feature=youtu.be</a>	Measures to reform tuberculosis service in Kyrgyzstan (KYR)
#	28 Sep 2020	Yes	OTRC Birinchi radio		
#	28 Sep 2020	Yes	STV		
#	28 Sep 2020	Yes	STV YouTube channel	<a href="https://www.youtube.com/watch?v=AEMXeIgytg&amp;feature=youtu.be">https://www.youtube.com/watch?v=AEMXeIgytg&amp;feature=youtu.be</a>	Measures to reform tuberculosis service of Kyrgyz Republic during COVID-19 pandemic (RUS)
#	28 Sep 2020	Yes	STV		
#	28 Sep 2020	Yes	STV YouTube channel	<a href="https://www.youtube.com/watch?v=I6HMG0TuZY0&amp;feature=youtu.be">https://www.youtube.com/watch?v=I6HMG0TuZY0&amp;feature=youtu.be</a>	Measures introduced by USAID-supported TB service in Kyrgyzstan (KYR)
#	30 Sep 2020	No	OTRC Zamana		
#	30 Sep 2020	No	Zamana Facebook	<a href="https://www.facebook.com/watch/?v=337694017486101">https://www.facebook.com/watch/?v=337694017486101</a>	Patients with TB were monitored during pandemic
<b>SBC Strategy: Discussion of National Policy on SBC in TB</b>	30 Sep 2020	Yes	MOH Website	<a href="http://med.kg/ru/novosti/2954-obsuzhdenie-natsionalnoj-politiki-po-sotsialnym-i-povedencheskim-izmeneniyam-v-otnoshenii-problemy-tuberkuleza.html">http://med.kg/ru/novosti/2954-obsuzhdenie-natsionalnoj-politiki-po-sotsialnym-i-povedencheskim-izmeneniyam-v-otnoshenii-problemy-tuberkuleza.html</a>	National policy on social and behavioral changes in tuberculosis