USAID Cure Tuberculosis Project

Year 2 Annual Report
October 1, 2020 – September 30, 2021

Annual Report
October 30, 2021

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Cover photo:
A National Reference Laboratory (NRL) technician performs TB diagnostic tests. (Credit: Aibek Chakiev)

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Acronym List

ABC/VEN	Always, Better and Control & Vital, Essential and Non-essential
ACSM	Advocacy, Communication, and Social Mobilization
aDSM	Active TB Drug Safety Monitoring and Management
AE	Adverse Event
AOR	Agreement Officer Representative
AVHC	Association of Village Health Committees
CBTS	Community Based Treatment Support/er
CDP&SSES	Center for Disease Prevention & State Sanitary Epidemiological Surveillance
CG	Clinical Guidelines
CM	Case Management
COP	Chief of Party
COVID-19	Coronavirus disease caused by SARS-CoV-2
CP	Clinical Protocol
CSO	Civil Society Organization
DDP&SSES	Department of Disease Prevention & State Sanitary Epidemiological Surveillance
DDS&ME	Department of Drug Supplies & Medical Equipment
DM	Drug Management
DOT	Directly Observed Treatment
DR	Drug-Resistant
DR-TB	Drug-Resistant Tuberculosis
DS-TB	Drug-Sensitive Tuberculosis
DST	Drug Susceptibility Testing
EAEU	Eurasian Economic Union
EML	Essential Medicines List
EMR	Electronic Medical Record
EQA	External Quality Assessment
F&A	Finance and Administration
FAP	Feldsher and Accoucheur Point (rural primary health post)
FAST	Finding Actively, Separating, and Treating
FGP	Family Group Practice
FLD	First-line TB Drug
FMC	Family Medical Center
FY	Financial Year
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
GMP	Good Manufacturing Practice
GOKR	Government of the Kyrgyz Republic
GPC	General Practice Center
HAKR	Hospital Association of the Kyrgyz Republic
HCO	Health Care Organization
HCW	Health Care Worker
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HO	Health Organization
HPU	Health Promotion Unit
HSS	Health System Strengthening
IC	Index Case
IEM	Information and Educational Materials
IGRA	Interferon Gamma Release Assay
IPC	Infection Prevention and Control

IT	Information Technology
JSI	JSI Research & Training Institute, Inc.
KAP	Knowledge, Attitudes, and Practices
KR	Kyrgyz Republic
KSMIPT&CE	Kyrgyz State Medical Institute of Post-Graduate Training & Continuous Education
LDMIS	Laboratory Data Management Information System
LLC	Limited Liability Company
LMIS	Logistics Management Information System
LPA	Line Probe Assay
LSG	Local Self-Government
LTBI	Latent Tuberculosis Infection
LTFU	Lost to Follow-Up
M&E	Monitoring and Evaluation
MDR	Multi-Drug Resistant
MDR-TB	Multi-Drug-Resistant Tuberculosis
MELP	Monitoring, Evaluation and Learning Plan
MIS	Medical Information Systems
MHIF	Mandatory Health Insurance Fund
MHSD	Ministry of Health and Social Development
MRA	Medicines Registration Authority
MTB	Mycobacterium tuberculosis
NGO	Non-Government Organization
NLSP	National Tuberculosis Laboratory Strategic Plan
NQCL	National Quality Control and Analytical Laboratory
NRCS	National Red Crescent Society
NRL	National Reference Laboratory
NMRA	National Medicines Registration Authority
NTC	National Tuberculosis Center (National Center for Phthisiology)
NTP	National Tuberculosis Program
OR	Operational Research
OTC	Oblast Tuberculosis Center
PBMEF	Performance-Based Monitoring and Evaluation Framework
PIC/S	Pharmaceutical Inspection Co-operation Scheme
PITT	Performance Indicator Tracking Table
PHC	Primary Health Care
PLHIV	People Living with HIV
PMS	Post Marketing Surveillance
PPSS	Public Procurement of Social Services
PQ	Prequalified
PQP	Prequalification of Medicines Programme
PTB	Pulmonary Tuberculosis
PV	Pharmacovigilance
PY	Project Year
QA	Quality Assurance
QAS	Quality Assurance System
QC	Quality Control
QI	Quality Improvement
QMS	Quality Management System
QTSA	Quality of TB Services Assessment
RCQESDI	Republican Center for Quarantine and Especially Dangerous Infections

RHPC	Republican Health Promotion Center
Rif	Rifampicin
RM	Road Map
RR	Rifampicin-Resistant
RR/MDR	Rifampicin-Resistant/Multi-Drug Resistant
SAMK	Spiritual Administration of Muslims of Kyrgyzstan
SBC	Social and Behavior Change
SCITC	State Committee on Information Technologies and Communications
SES	Sanitary and Epidemiological Surveillance
SI	Strategic Information
SLD	Second-line TB Drug
SMM	Social Media Marketing
SOP	Standard Operating Procedure
SP	Sub-Purpose
SRA	Stringent Regulatory Authority
SSP	Sub-sub Purpose
SSES	State Sanitary and Epidemiological Surveillance
TA	Technical Assistance
TAT	Turn-around Time
TB	Tuberculosis
TB DIAH	Tuberculosis Data, Impact Assessment, and Communications Hub
TOR	Terms of Reference
TOT	Training of Trainers
TPT	TB Preventive Therapy
TWG	Technical Working Group / Thematic Working Group
URC	University Research Co., LLC
US	United States
USA	United States of America
USAID	United States Agency for International Development
USG	United States Government
USP	United States Pharmacopeia
VHC	Village Health Committee
VOT	Video-Observed Treatment
WG	Working Group
WGS	Whole Genome Sequencing
WHO	World Health Organization
WP	Work Plan
XDR	Extensively Drug-Resistant
XDR-TB	Extensively Drug-Resistant Tuberculosis

USAID Cure Tuberculosis Project

Year 2 Annual Results October 1, 2020 – September 30, 2021

Cure Tuberculosis is a five-year activity (2019-2024) implemented by JSI Research & Training Institute, Inc. (JSI) in partnership with University Research Co., LLC (URC) and United States Pharmacopeia (USP) 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 and Social Development (MHSD) 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 (2020 data)

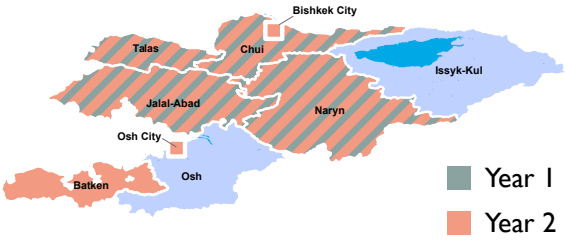
TB notification rate:
53.4 per 100,000

TB mortality rate:
3.9 per 100,000

SUB-GRANTEE ORGANIZATIONS

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

PROJECT ACTIVITY OBLASTS



DIAGNOSIS & CASE DETECTION

- Optimized **TB laboratory networks** and implemented Quality Management System (QMS) in Chui, Naryn, and Talas Oblasts
- Implemented **FAST** (Find Actively, Separate, and Treat) protocol in four general hospitals in Chui Oblast
- Expanded **TB contact investigation** model in Naryn and Batken Oblasts

TREATMENT & CLINICAL MANAGEMENT

- **Reformed DR-TB Concilium model** with cohort analysis piloted in Chui rolled-out in Naryn, Batken, and Talas Oblasts
- **TB case management approach** expanded in Naryn and Batken followed by PHC payment system

INFECTION PREVENTION & CONTROL (IPC)

- **TB IPC training module** developed and **110 Oblast TB Center (OTC) specialists trained**; IPC plans updated in Naryn, Batken, and Talas Oblasts
- **IPC M&E Guidelines** for primary health care (PHC) organizations developed and approved

COMMUNITY ENGAGEMENT & SOCIAL & BEHAVIOR CHANGE (SBC)

- Trained almost **9,000 community and religious leaders** countrywide on TB outreach, TB case detection and stigma
- About **1.5 million people reached** through TB information sessions and public awareness campaigns
- Almost **700 TB patients** received psychosocial support, food and hygienic packages, and/or financial assistance through community mobilization; **179 completed treatment**
- **SBC approaches** developed and implemented to change behavior of TB patients, priority groups, health care workers (HCWs) and communities to increase testing, treatment and social support to TB patients

MEDICAL INFORMATION SYSTEMS (TB MIS)

- Developed and strengthened key **TB MIS** to streamline TB care services:
  - **Laboratory Data Management Information System** (LDMIS) captures and shares laboratory results
  - **Electronic Medical Record** (EMR) stores patient medical history in hospitals
  - **e-TB Register TB-01 Module** centralizes TB case records
- TB MIS being **implemented nationwide** and HCW users trained

USAID Cure Tuberculosis Project
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Cure Tuberculosis Fact Sheet (USAID)
Cure Tuberculosis Project Page (JSI)

SUB-PURPOSE 1

Increased DR-TB case detection

KEY FIGURES (2020 data)

RR/MDR-TB cases notified 889

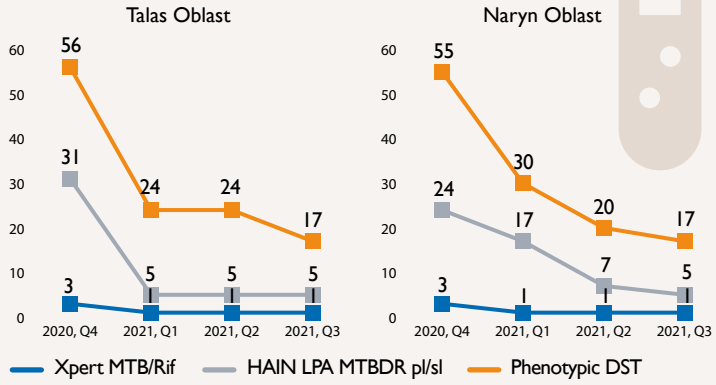
67% Bacteriological diagnosis coverage

77% GeneXpert coverage

LABORATORIES & DIAGNOSTIC NETWORKS

- **TB laboratory network optimization** plans developed in Naryn and Talas Oblasts
- **All 177 QMS standard operating procedures** (SOPs) adapted for TB laboratories at PHC in Chui Oblast
- **Microscopy reporting module** for LDMIS developed
- **Turn-around time** (TAT) for molecular genetic tests decreased: Xpert and phenotypic DST (3 times) and HAIN (6 times), thanks to clear routing, updated procedures, and switch from paper referrals to LDMIS (Fig. 1)

Figure 1. TAT by Oblast and diagnostic method over time (days)



(Source: LDMIS)

MEDICAL INFORMATION SYSTEMS

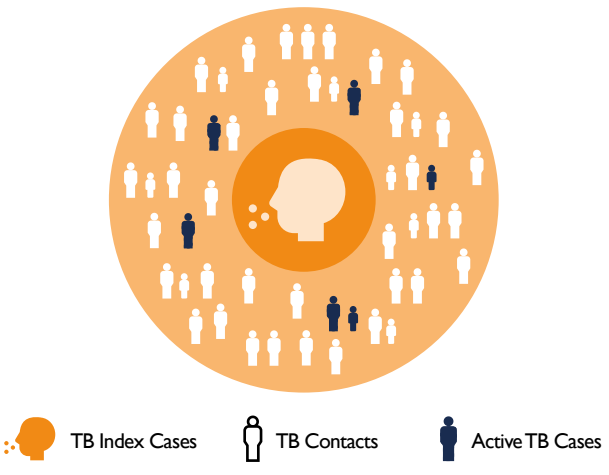
- **LDMIS** installed in 79 new health facilities reaching a total of 103 facilities nationwide
  - Covered **all rayon-level PHC facilities** in Chui, Naryn, and Talas Oblasts, which accelerated TAT
- **Over 1,250,000 records** (of which more than 360,000, or 29% were for TB) entered in LDMIS; 597 HCWs used LDMIS across the country, with 395 new users
- Developed **Transportation of Biomaterials** software, integrated in LDMIS and operationalized in the NRL and TB laboratories in Naryn and Talas Oblasts

COMMUNITY-BASED CASE DETECTION

- **8,694 community and religious leaders** countrywide trained on disseminating TB information, identifying presumptive cases and reducing stigma
- About **1.5 million people reached** with TB information through information sessions and public awareness campaigns
- **57 people with presumptive TB** identified and referred for testing; **six TB cases** confirmed (10%) with the help of screening tools developed for priority groups

FACILITY-BASED CASE DETECTION & CONTACT INVESTIGATION

- **FAST** protocol for general hospitals adapted, instruction and algorithm for active TB case finding developed and implemented in four in-patient facilities in Chui Oblast
- Expanded **TB contact investigation pilot model** in Batken and Naryn Oblasts
  - Conducted contact investigation for 122 index cases; identified 535 TB contacts and **23 active TB cases** among them (4%)



WANT TO KNOW MORE?

- USAID Interventions Reduce Laboratory Turn-around Time for Faster Diagnosis of Tuberculosis
- Cooperation of National Red Crescent Society and Social Shelters for the Homeless in Chui Oblast (Russian)
- Village Health Committee Leader on the Importance of Supporting a TB Patient within the Family (Kyrgyz)
- The Importance of Starting TB Treatment on Time, featuring an elderly TB patient (Kyrgyz)

SUB-PURPOSE 2

More patients cured of DR-TB

KEY FIGURES (2020 data)

99% RR/MDR-TB cases enrolled on treatment

Treatment success rates:

80% DS-TB

62% RR/MDR

52% XDR-TB

DR-TB CLINICAL MANAGEMENT

- **Reformed DR-TB Concilium model** rolled-out in Naryn, Batken, and Talas Oblasts, phased implementation of cohort analysis started (Fig.2) and all 36 DR-TB Concilium members completed modular training for DR-TB management (72 credit hours)
- Developed **standards for TB case management** (CM) in PHC organizations, approved by MHSD and expanded in Naryn, Batken, and Leninsky district of Bishkek
- **2,827 HCWs** from PHC organizations in Naryn, Batken and Chui Oblasts, and Bishkek trained on TB CM tools
- **DR-TB management clinical protocol** finalized

Figure 2. Cohort analysis implementation phases

First stage (2-3 months)	Second stage (6 months)	Third stage
• Introductory training for Concilium members • Familiarization with indicators • Instruction on methodology for calculating indicators • Individual work: calculation of rayon indicators	• Assessment of individual work: reconciliation of indicators with data from TB 02 and 02/DR; comparison of indicators between rayons	• Independent routine calculation of indicators against the approved indicators for cohort analysis – quarterly, annually

DRUG MANAGEMENT & ACTIVE DRUG SAFETY MONITORING (aDSM)

- Developed and approved **Practice Guidelines for TB Drug Management**; 30 regional coordinators and drug management specialists trained
- Developed a **training module on aDSM** with the Kyrgyz State Medical Institute of Post-Graduate Training & Continuous Education (KSMIPT&CE) (40 credit hours); **153 TB doctors** from all regions trained

COMMUNITY-BASED TREATMENT SUPPORT

- Sub-grantees trained on **TB CM tools**
- Provided social support to **419 TB patients** at risk of treatment interruption – **179 completed TB treatment**
- **361 patients in need** received food and hygienic packages worth 1.5 million soms
- Mobilized **360,370 soms for 263 vulnerable TB patients** through community advocacy
- **154 TB patient support groups** conducted with group counseling

MEDICAL INFORMATION SYSTEMS

- Installed **e-TB Register TB-01 Module** in 81 PHC organizations; 191 new users trained and 5,675 TB-01 patient treatment cards in the system
- Implemented the **EMR** in 19 TB hospitals; 594 users and data on 15,608 patient records
- **Verification of successfully treated TB cases** for payment shifted from the Mandatory Health Insurance Fund (MHIF) to OTCs facilitated by the connection of e-TB Register TB-01 Module to Treated TB Case at PHC software in Chui, Talas, Naryn, Osh, Batken, and Jalal-Abad
- Implemented **Pharmacy** information system in five TB facilities in Bishkek and Chui Oblast
- Developed a **connector for X-ray visualization** software to quickly transfer and store X-ray images

Social support includes:

- food and hygiene packages
- patient support groups
- individual counseling on TB treatment and IPC measures
- directly-observed treatment (DOT)

Priority groups:

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

WANT TO KNOW MORE?

- USAID Supports People from Vulnerable Groups to Complete Treatment for Tuberculosis
- An Individual is Responsible for Their Health! (Russian)
- Support of People with TB by Kyzyl-Oktyabr Local Government, Kemin Rayon of Chui Oblast (Russian)
- The Role of Community-Based Treatment Supporters in TB Treatment – A Village Medical Worker (Russian)

SUB-PURPOSE 3

Prevention of DR-TB infections

KEY FIGURES (2020 data)

TB incidence rate among HCWs

136 per 100,000

INFECTION PREVENTION & CONTROL

Completed **the second stage of the TB IPC cycle** (Fig. 3) in three OTCs:

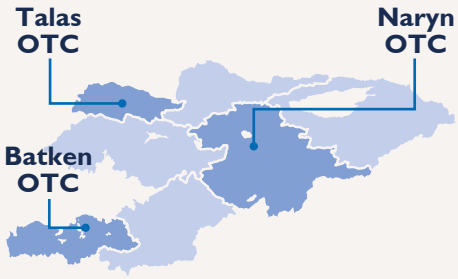
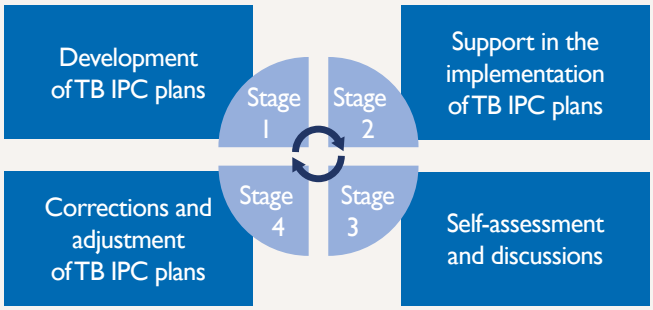


Figure 3. Cycles of TB IPC improvement in health care organizations



TB IPC Training Module developed (24 credit hours)

11 **OTC specialists** from Naryn, Talas, Batken, Chui trained as trainers on TB IPC

99 **OTC HCWs** were trained by OTC trainers on TB IPC

Developed and approved **IPC M&E Guidelines** for PHC organizations

SOCIAL & BEHAVIOR CHANGE

GUIDELINES

Developed guidelines for **SBC approaches** with TB patients, priority groups, and the general population

STRATEGIES

Developed **multiplicative dissemination** strategy through mass media and social media using **behavioral journalism** approach

TRAINING

Developed **SBC training materials for HCWs** to improve counselling and interpersonal communication skills, included in the TB CM training program

16 videos created showing

- real stories of TB patients, their families, HCWs, and communities
- encouraged behaviour around testing, treatment and support of TB patients
- advocacy of local celebrities around key TB messaging

WANT TO KNOW MORE?

- USAID Builds Multiplicative Approach for Social and Behavior Change Communication
- TB Treatment Must Be Completed! (Kyrgyz)
- For People with TB, Support from Others is Important! – An Elderly Woman's Story (Kyrgyz/Russian)
- Community Support for People with TB, featuring the Naryn OTC Director (Russian)
- A Responsive Health Care Worker is Key for Treatment Success! (Kyrgyz/Russian)
- How Can We Make TB Treatment More Patient-Friendly? (Russian)

SUB-PURPOSE 4

Improved enabling environment

KEY FIGURES

Financing resources committed to TB services at PHC level (2020 data): **5.1%**

Year 2 **2,690 individuals trained in components of the WHO End TB Strategy**

FINANCING FOR TB SERVICES

- **PHC payment system** for successfully treated TB cases expanded in Naryn and Batken Oblasts
- Facilitated the **transfer of financing** of the transportation system in Naryn Oblast to the state budget
- Revised **base prices for lab tests** required for DR-TB cases in public health facilities to enable private lab contracting
- January – September 2021

transported through the transportation system in Chui and Talas Oblasts, and four rayons of Naryn Oblast

  - Around **400,000 soms** paid from MHIF budget for these services

DATA FOR DECISION-MAKING

- Achieved **99.6% accessibility of TB MIS systems** in Year 2 through maintenance support to the NTP
- Procured **82 sets of all-in-one computers** and multifunctional devices for **63 facilities** nationwide to facilitate TB MIS implementation

Year 2 **1,132 HCWs** use TB MIS routinely

POLICIES

- Led the development of **National Program Tuberculosis-VI** for 2022-2026
- Regulations of the Batken, Osh, Talas, and Chui OTCs updated with **expanded functions and tasks**
- Shared the **experience and achievements of the NTP in TB financing** and introducing the TB CM approach at PHC at the 5th International Conference on Integrated Control of Tuberculosis in Central Asia
  - 60 participants from Kyrgyzstan and 150 participants from other countries
- Strengthened **national M&E systems** in cooperation with TB DIAH by revising M&E guidelines and tools and revising NTP recording and reporting forms

9 **Governance documents in TB** were developed and adopted

STIGMA & DISCRIMINATION

- Developed a **joint workplan for SBC communication** for 2021 in collaboration with the Republican Health Promotion Center (RHPC), NTP, and other stakeholders to harmonize TB information and reduce stigma and discrimination
- Distributed TB information through **285 TV, radio, online and print materials**
- Helped with the **NTP website**, YouTube channel and social media **content management**
- Increased reach through **10 social media pages** of NTP, MHSD, and sub-grantees: **2,225 posts** on Facebook, Instagram

WANT TO KNOW MORE?

- Transfer of Hospital Beds from Project C.U.R.E. and Cure Tuberculosis to the NTP (Russian/English)
- Payment System at PHC Based on TB CM Approach (Russian)
- Financing of TB Hospitals Based on the Treated Case: Example of Kara-Balta TB Hospital (Russian)
- Women on Treatment Need Stronger Family Support! (Kyrgyz/Russian)

Cross-cutting issues

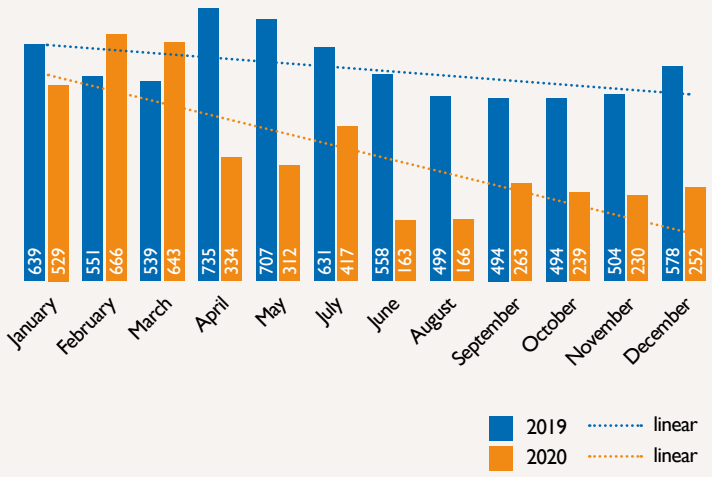
COVID–19 & TUBERCULOSIS

- **COVID–19 epidemic** continued to affect all aspects of Project work, TB services and the health system
- **TB notification rate** decreased by 32% in 2020 due to COVID-19 (Fig.4)
- **Remote treatment adherence support** strategies implemented in response to COVID-19 now institutionalized through **TB CM approach**: take-home drug supply, expanded community-based treatment support (CBTS), video observed treatment (VOT)
- COVID–19 module developed as part of QTSA measured impact of COVID-19 on TB services. Results show:
  - **Significant disruption** across all areas: case detection, treatment, infection control and health system resources diverted, but also
  - Nationwide **uptake of remote treatment adherence support**, which mitigated impact on TB services and made services more patient-oriented
- **LDMIS/COVID–19 module** developed to capture COVID-19 results recognized by government as major contribution to national COVID-19 response
- **Combined diagnostic algorithm** for COVID-19 and TB piloted as emergency response to decreased detection of TB cases; 152 people with presumptive TB detected with 13 TB cases confirmed (9%)

COVID–19 cases (through October 1, 2021):

- 178,608 total cases
- 6,833 cases among HCWs
- 173,305 people recovered
- 2,067 deaths

Figure 4. TB notifications (all cases) in 2019 and 2020



(Source: NTP)

STRATEGIC INFORMATION & MONITORING & EVALUATION (M&E)

- Conducted large-scale **Quality of TB Services Assessment** (QTSA) in 27 rayons in all seven oblasts
- Conducted **operational research** on the payment system for successfully treated TB cases at PHC
- Realigned **Project M&E plan** to USAID performance-based monitoring and evaluation framework, and strengthened **M&E capacity** of Project sub-grantees
- **Four presentations** accepted at 52nd Union World Conference on Lung Health on impact of COVID-19 on TB services, COVID-19 programmatic interventions, and SBC formative research results

GENDER

- **13,198 people** participated in Project trainings and workshops from health facilities, civil society and communities; **six times more women** participants than men
- **Gender–based approach** embedded in SBC, targeted case finding and case management strategies

CHALLENGES & SOLUTIONS

- **Structural reforms in government** and leadership changes in key partner organizations required relationship building efforts
- **National law inventory initiative** threatens TB regulations; requires Project advocacy to preserve key provisions

SUSTAINABILITY

- **TB financing methods** developed in Year 1 institutionalized trough MHIF budget law and preserved despite COVID-19 financial demands
  - TB transportation system and PHC payment system becoming more sustainable through **state financing** and expanding to more oblasts
- Gradual **nationwide roll–out of reformed OTCs and DR–TB Concilia** to improve effectiveness of TB services and case management
- Institutionalized **national training curricula** through KSMIPT&CE
- Continued to **roll–out nationwide TB MIS** critical for evidence-based use of data

WANT TO KNOW MORE?

- USAID Builds Information Systems to Assist the Kyrgyz Government's Response to COVID–19
- Four Reasons Why the Kyrgyz TB Information System Worked for COVID–19
- Using COVID to Spur TB Program Innovations in the Kyrgyz Republic: Ainura Ibraimova shares her reflections
- How Has the COVID–19 Pandemic Affected the TB Situation in Kyrgyzstan? (Russian)
- A Patient's Story of TB Treatment Experience during COVID–19 Lockdown (Kyrgyz/English)

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 works 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-Purpose1: Increased DR-TB case detection

Sub-Purpose 1 Key Achievements:

SSP1.1: Strengthened laboratory services and diagnostic networks:

1. Developed a plan of **optimization of TB laboratory networks** in Naryn and Talas Oblasts, including a procedure for sending sputum samples from primary health care (PHC) facilities to the TB laboratories of Oblast TB Centers (OTCs) for Xpert testing and to the National Reference Laboratory (NRL) for culture and drug susceptibility testing (DST);
2. Began development of a **National Strategic Plan for the Development of TB Laboratories (2022-2026)** based on a situation analysis of the TB lab system;
3. Adapted a complete set of **177 standard operating procedures (SOPs) of the quality management system (QMS) in** TB laboratories at PHC of Chui Oblast, which aim to ensure priority use of Xpert testing for TB diagnosis and mandatory provision of samples to the NRL for culture and DST;
4. Developed a **reporting module on microscopy** based on Laboratory Data Management Information System (LDMIS) data, which allows real-time monitoring of the number of microscopic examinations with disaggregation by oblasts, rayons, facilities, implemented in the NRL and all seven OTCs, and Bishkek City TB Center;
5. The **introduction of LDMIS at PHC** in Naryn and Talas Oblasts, together with newly revised procedures for lab test referral and the transportation system in place, **reduced turn-around time (TAT)** for key molecular genetic tests **three to six-fold**;
6. Piloted a **combined TB/COVID-19 diagnostic algorithm** which detected 13 TB cases out of 152 people with presumptive TB (9%);
7. The LDMIS was installed in 79 new health facilities; more than **1,250,000 records** (of which more than 360,000, or 29% were for TB) were entered in LDMIS, with **395 new users**;
8. Developed a **Transportation of Biomaterials Software** to optimize the functioning of the transportation system; integrated with LDMIS and installed in the NRL and TB labs of Naryn and Talas Oblasts.

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

1. Expanded **TB contact investigation** pilot model in Batken and Naryn Oblasts according to Ministry of Health and Social Development (MHSD) Order No. 513 of May 7, 2021; contact investigation conducted for 122 index cases with 535 contacts and 23 TB cases identified (4%);
2. Adapted the **FAST protocol for general hospitals**, developed an instruction and algorithm for active TB case finding (approved by MHSD Order No. 514 of May 7, 2021) and started implementation in four in-patient facilities in Chui Oblast;
3. **8,434 community leaders** nationwide trained on community outreach among priority groups to implement TB-related social and behavior change (SBC) approaches through Project sub-grantees and Health Promotion Unit (HPU) specialists;
4. Trained **260 religious leaders** on TB to spread awareness, identify presumptive cases and reduce stigma and discrimination;
5. **Reached about 1.5 million people** with TB information through information sessions and public awareness campaigns.
6. **57 people with presumptive TB** identified through community-based case detection activities and screening among priority groups; 6 TB cases confirmed (10%).

SSP1.1: Strengthened laboratory services and diagnostic networks

TB Laboratory Optimization

In Year 2, Cure Tuberculosis provided technical support to the National Tuberculosis Program (NTP) to continue the **optimization of the national TB laboratory network**. Project specialists helped develop optimization plans for the TB laboratories in Naryn and Talas Oblasts. The optimization plans took into account the geographic location of each rayon, the laboratory hierarchy and the availability of Xpert platforms and transportation system services in the area, and accounted for the capacity of qualified and trained laboratory personnel. The optimization of the TB network resulted in discontinuing microscopy functions in two PHC labs in Naryn Oblast and in four PHC labs in Talas Oblast and shifting microscopy testing for those labs to the Oblast TB Center (OTC) labs instead.

In order to ensure testing with Xpert as a first-line test per the updated diagnostic algorithm, the Project helped to develop a procedure for sending sputum samples from PHC facilities to the OTCs in Naryn and Talas Oblasts. Each oblast has one Xpert platform based in the OTC. The new procedure provides for the transportation of all sputum samples from all rayons to the OTC via the sputum transportation system. The OTC coordinates the further transportation of these samples to the NRL for culture and DST (Figures 1-2). When samples are sent to the OTC laboratory, patient data are entered into LDMIS.

Figure 1. Routing of sputum samples for Xpert testing, culture and DST from PHC facilities in Naryn Oblast

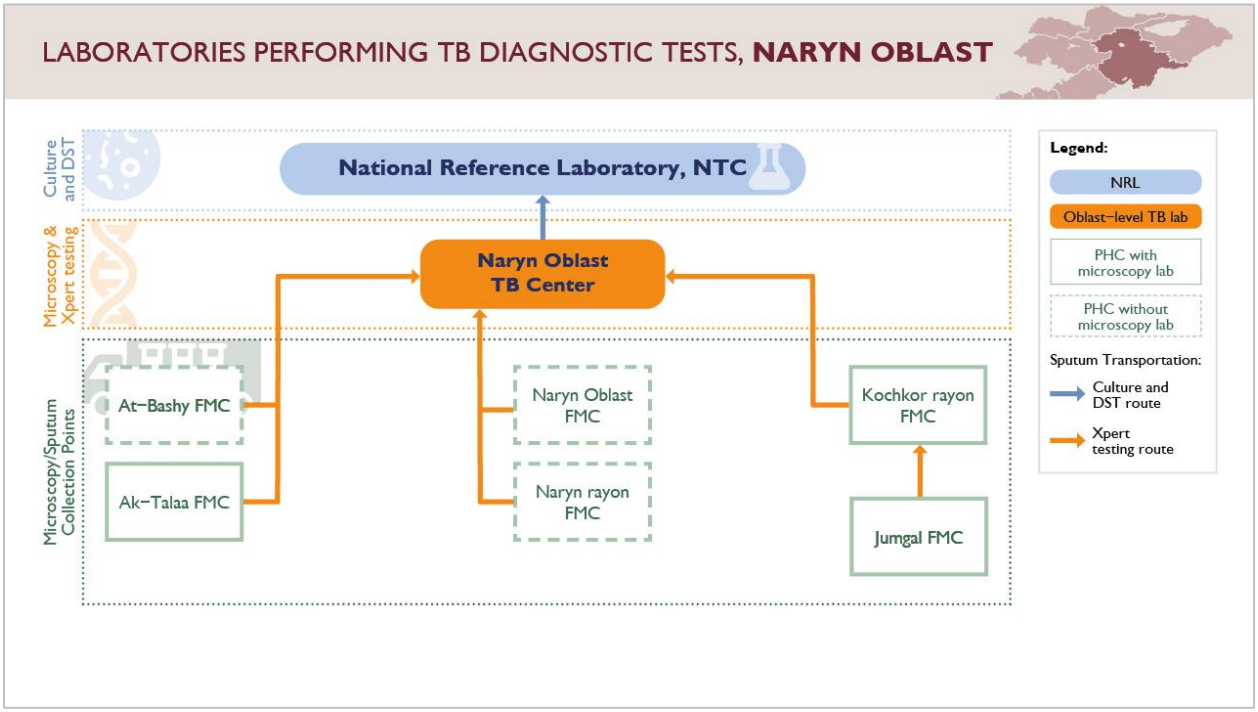
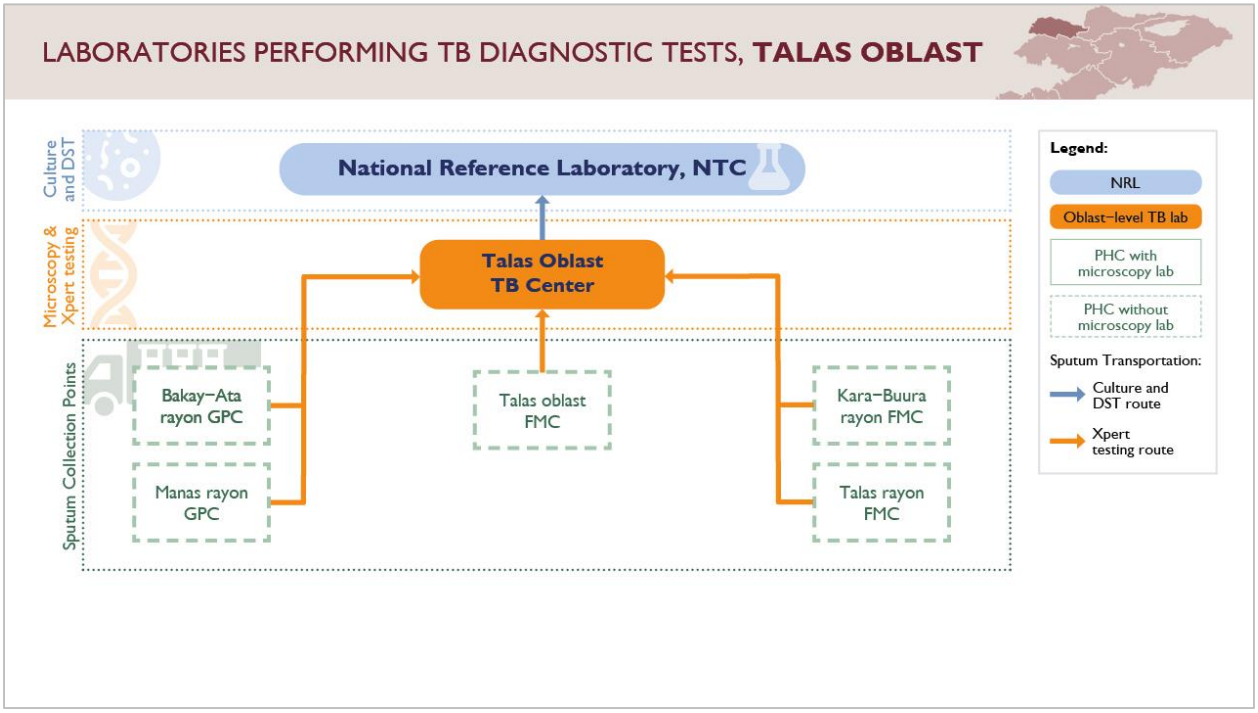


Figure 2. Routing of sputum samples for Xpert testing, culture and DST from PHC facilities in Talas Oblast

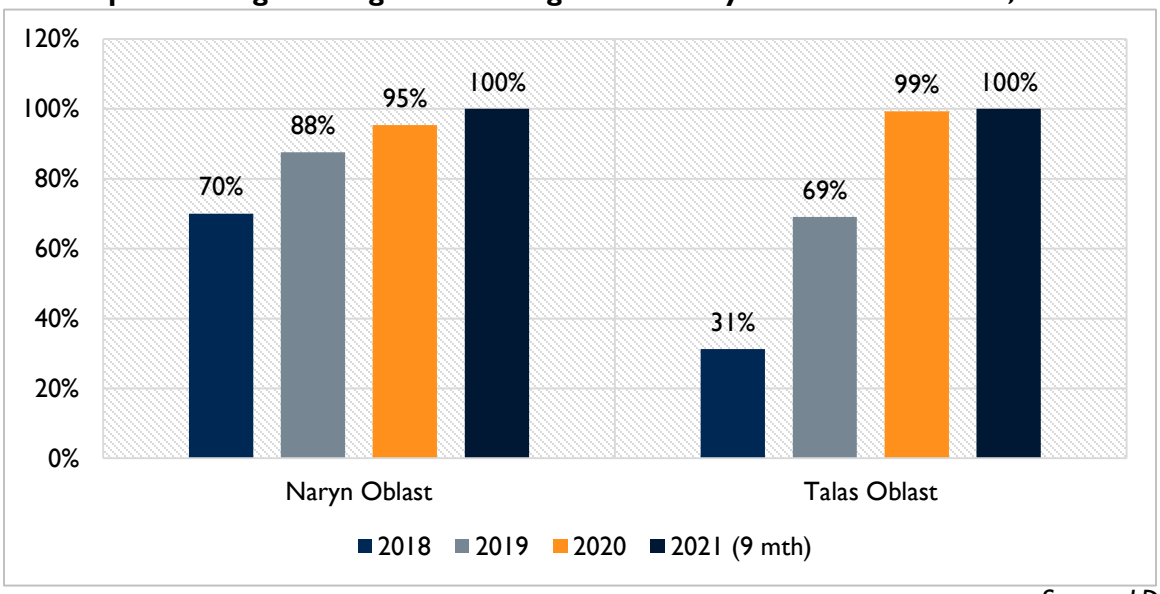


In Year 2, Cure Tuberculosis offered technical assistance (TA) to the NTP in the development of a **National Strategic Plan for the Development of TB Laboratories** (NLSP) for 2022-2026. The Project conducted a situation analysis of the TB laboratory system to inform the development of the NLSP. The Project adapted and validated two checklists [ATLAS (JSI) and SLIPTA (GLI)] for the situation analysis and used these checklists to collect data from 36 TB laboratories at different levels in all seven oblasts, Bishkek and Osh cities as well as the NRL, and entered the data into a database for analysis. In Year 3, Cure Tuberculosis will analyze gathered data and finalize the development of the NLSP.

Quality Management System

In Year 2, the Cure Tuberculosis Project assisted in the **adaptation and implementation of 177 SOPs** in four PHC laboratories in Chui Oblast based on the updated TB diagnostic algorithm. These form the complete set of SOPs required according to ISO-15189 Quality Management System (QMS) standards for all first-level labs performing microscopy and Xpert testing. In addition, the Project revised and implemented SOPs in TB laboratories in the Talas and Naryn OTCs, which function as oblast-level laboratories. The adapted and revised SOPs aim to ensure priority Xpert testing of received sputum samples for TB diagnosis, and mandatory referral of these samples to the NRL for i) HAIN testing in order to promptly initiate TB treatment; ii) culture and DST to determine full drug susceptibility before the start of TB treatment. Through the adapted SOPs, the Project streamlined the procedure for laboratory testing for TB diagnosis, ultimately improving the coverage of bacteriological confirmation of TB cases in Naryn and Talas Oblasts (Figure 3).

Figure 3. Xpert testing coverage for TB diagnosis in Naryn and Talas Oblasts, 2018-2021



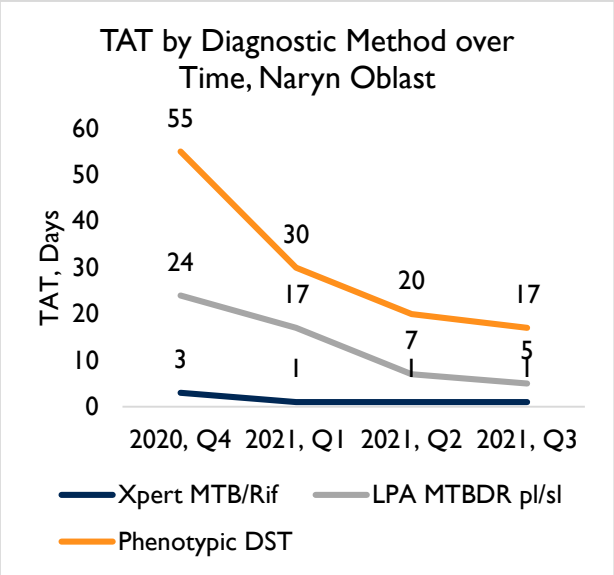
Source: LDMIS

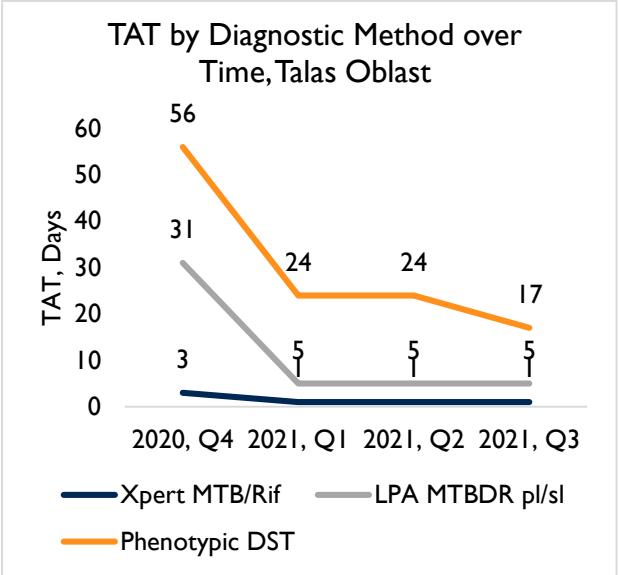
Diagnostic Algorithm and Laboratory Indicators

In Year 2, Cure Tuberculosis began development of a **reporting module** based on data uploaded to LDMIS. By the end of PY2, a microscopy component of the reporting module had been finalized, which allowed real-time monitoring of the number of microscopic tests conducted at the national level and disaggregated by regions, rayons, facilities. The module has been implemented in the NRL, in the seven oblast-level TB laboratories, and in the laboratory of the Bishkek City TB Center.

In Year 2, Cure Tuberculosis implemented the Laboratory Data Management Information System (LDMIS) in all PHC facilities and OTCs in Naryn and Talas Oblast, which allowed full transition to electronic information sharing between the PHC, OTC, and NRL in both regions. Now laboratory specialists and clinicians in Naryn and Talas Oblasts can immediately share TB laboratory data through the information system, reducing the test turn-around time for faster diagnosis and treatment. The criteria for calculating turn-around time and recording and reporting forms developed in Year 1 were integrated into the LDMIS to allow for calculation of these indicators. Thanks to these initiatives, **the turn-around time (TAT) decreased 3 times for Xpert and phenotypic DST and 6 times for HAIN LPA tests** (Figures 4 and 5). Further details on this achievement are in the Success Story in Annex 2.

Figures 4 and 5. Laboratory test TAT (Xpert MTB/Rif, LPA MTBDR pl/sl, phenotypic DST) in Naryn and Talas Oblasts, Q4, 2020 – Q3, 2021 (days)





Source: LDMIS

In Year 2, Cure Tuberculosis helped the NRL to develop and pilot a **combined testing algorithm for COVID-19 and TB** in Leninsky rayon of Bishkek as an emergency response to the restrictions associated with the COVID-19 epidemic in Kyrgyzstan and the decreased detection of TB cases. After 9 months of implementation through the mobile testing brigades, 13 people were diagnosed with TB out of 152 people identified with presumptive TB (9%) and were put on treatment. This indicator is within the WHO standards for TB case detection. In September, when the NRL stopped COVID-19 testing, the pilot was terminated and the data are being reviewed.

Laboratory Data Management Information System (LDMIS)

The Project continued the implementation of the **TB LDMIS** in health care organizations. In total in Year 2, the LDMIS software was installed in 79 new facilities; the full list is presented in Annex 3. The Project conducted on-the-job training for laboratory specialists and nurses online and in-person throughout the year, demonstrating the advantages of the system and how to correctly use it.

As of September 30, LDMIS was implemented in 103 health facilities offering TB services nationwide (representing 59% of the total need – 175):

- 20 TB service facilities (NTC; seven OTCs; 12 TB hospitals);
- 83 health facilities (PHC and others), including 79 new facilities performing TB lab services;
- 395 new user accounts created in LDMIS across the country (Table 1).

Table 1. Number of LDMIS user accounts among health care workers (HCWs) by the end of each quarter in PY2

Date	Number of user accounts
December 31 (2020)	227
March 31 (2021)	270
June 30 (2021)	358
September 30 (2021)	597

The LDMIS software is interoperable with other Medical Information System (MIS) components, the EMR and e-TB Register.

The Cure Tuberculosis Project developed the **Transportation of Biomaterials software** to optimize the logistics and routing of biological samples and tests sent through the transportation system. The software supports the automation and tracking of the transfer of biological samples for testing to a TB laboratory, tracking of the shelf life of biomaterials, calculation of the shipping costs and test capabilities, and monitoring of the transportation process with regard to temperature control, delivery time, and completeness of delivery in accordance with a delivery note. The software is integrated in LDMIS and operationalized in the NRL and TB laboratories in Naryn and Talas Oblasts.

SSP1.2: PHC and community-based detection and contact tracing expanded

Contact Investigation

In Year 2, Cure Tuberculosis restarted the TB contact investigation pilot in Sokuluk and Kemin rayons of Chui Oblast, which was suspended because of the COVID-19 epidemic in the country in 2020. The Project also geographically expanded the pilot TB contact investigation model to Naryn and Batken Oblasts (MHSD Order No. 513 of May 7, 2021). In order to strengthen epidemiological investigation, which is a decisive step in TB contact investigation, Cure Tuberculosis engaged epidemiologists with experience in TB contact investigation as consultants. Since May 2021, consultants started contact investigation of newly identified index cases (IC) and ICs notified but not covered by epidemiological investigation in the period from January to May 2021 in pilot regions.

The pilot TB contact investigation model includes new tasks, such as:

- A mandatory face-to-face meeting with the IC to collect additional key information, such as the start of the disease, possible infection factors, symptoms, people with whom the patient had close and long-term contact, employment history and place of work. This information is not included in TB-01, but is important for determining the potentially infectious period;
- A mandatory visit to the place of permanent residence and place of work of the IC to assess the living/working conditions that pose of risk of TB transmission to family members and other people living and working with the IC;
- Building a list of TB contacts based on the results of the personal meeting, visits to the place of residence/work of the IC, and their priority assessment (high, medium, low) for the transfer to PHC for observation and examination.

As part of the pilot implementation of the enhanced TB contact investigation model, Cure Tuberculosis specialists conducted a series of trainings for family medicine specialists on the standards for observation and examination of TB contacts, printed individual checklists for TB contacts and all recording and reporting forms, and instructed family medicine specialists on how to fill them out for all contacts.

According to preliminary data, in the period from January to September 2021, in Kemin and Sokuluk rayons of Chui Oblast, and Naryn and Batken Oblasts (Table 2):

- Epidemiological investigation was conducted of 122 ICs (51% of all ICs) identified in the period from January 1, 2021;
- 535 TB contacts were identified (average of 4.4 TB contacts per IC), examined and put under observation of PHC specialists;
- Among the identified TB contacts, 23 were diagnosed with active TB (representing 4.2% of all TB contacts) and all 23 started TB treatment;
- Among 43 children under five eligible for TB preventive treatment (TPT), five children received preventive treatment with isoniazid.

Table 2. Preliminary data on TB contact investigation implementation in Naryn an Batken Oblasts and Sokuluk and Kemin rayons of Chui Oblast

	2020	**2021**
Total number of TB contacts identified	2,015	535
Average number of TB contacts per IC	2.6	4.4
Active TB among contacts	25	23
Proportion among identified TB contacts	1.2%	4.2%

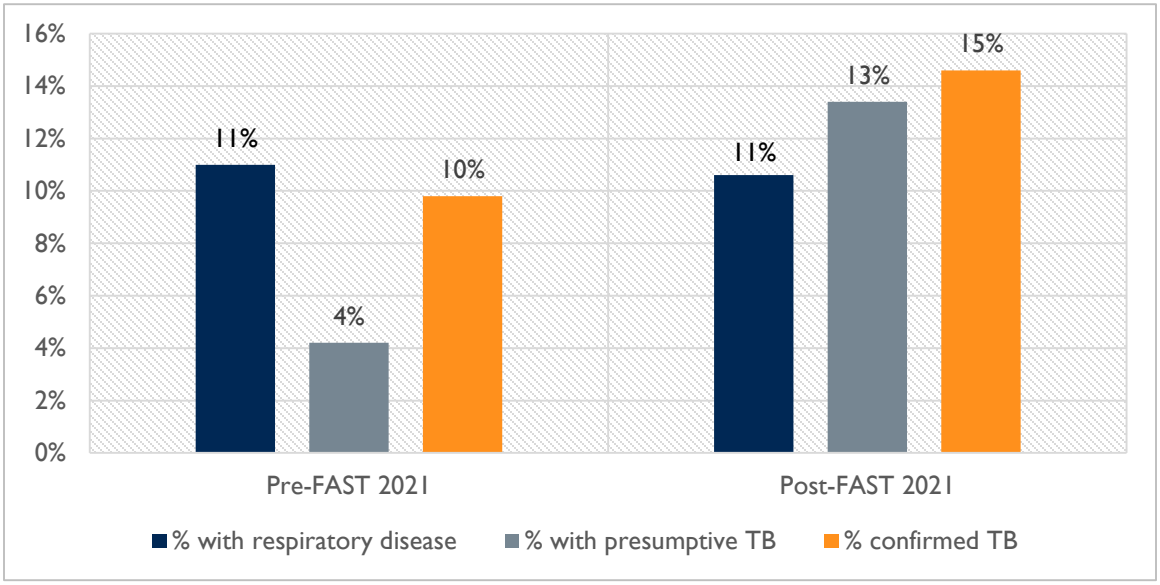
In Year 3, the Project will continue the implementation of the TB contact investigation model in the pilot regions and strengthen work with PHC on the examination of TB contacts and preventive treatment. The Project will develop a sustainable mechanism of TB contact investigation activities and pilot it in Naryn Oblast. Also in Year 3, the National Red Crescent Society (NRCS), with support from Cure Tuberculosis, will allocate funds for X-ray examination of TB contacts.

Facility-based Active TB Case Finding

In Year 2, the Cure Tuberculosis Project began the implementation of **active TB case finding** in general hospitals based on the principles of the FAST strategy (Find Actively, Separate and Treat) in in-patient facilities of Sokuluk, Jayil, Yssyk-Ata rayons and the city of Tokmok in Chui Oblast. With support from URC, Cure Tuberculosis adapted the FAST protocol for general hospitals and developed an instruction and algorithm for active TB case finding (MHSD Order No. 514 of May 7, 2021). The Project developed a training module, and 60 HCWs from the four pilot facilities were trained on active TB case finding among admitted patients. The Project developed SOPs for collecting and transporting sputum samples for TB diagnosis, a routing and schedule for transporting samples for Xpert testing, a questionnaire on TB symptoms for hospital admission departments, which must be attached to the patient's medical history, and internal protocols for the isolation of patients with presumptive TB before confirmation or ruling out of TB.

Since May 2021, the four general hospitals in Sokuluk, Jayil, Yssyk-Ata rayons and Tokmok have been applying the FAST protocol. The preliminary analysis of the pilot FAST implementation shows that the Cure Tuberculosis intervention helped to improve awareness of TB among HCWs of the in-patient facilities which is evidenced by the increased number of sputum samples sent for Xpert testing. Under the assumption that TB remains undiagnosed among some patients, the cascade analysis results below suggest that the initial FAST implementation in five months may have improved screening coverage (evidenced by the increased % of presumptive cases identified among those with respiratory disease presenting at health facilities) and case detection (evidenced by the increased % of confirmed TB among those with presumptive TB) (Figure 6).

Figure 6. Preliminary cascade analysis in four pilot FAST facilities, 2021



In Year 3, Cure Tuberculosis will roll out the implementation of FAST in all four rayon general hospitals in Naryn Oblast, two general hospitals in Bishkek, and in Kara-Sui rayon in Osh Oblast. In parallel, the Project will work on integrating FAST into the current infection prevention and control guidelines in health facilities to prevent the entry of infectious disease and the nosocomial infection of patients.

Community-based awareness raising and case detection

Awareness Raising

The Cure Tuberculosis Project continued to raise public awareness of TB to improve **case detection at the community level** and to reduce stigma and discrimination against TB patients, their families, and people affected by TB. In February and March 2021, Cure Tuberculosis, in collaboration with the Republican Health Promotion Center (RHPC), conducted a series of trainings for Project sub-grantees and HPU specialists in pilot regions Chui, Naryn, Talas, Jalal-Abad and the city of Bishkek on the results of the SBC formative research and SBC approaches in TB to apply in work with the population and priority groups.

In turn, the **Association of Village Health Committees (AVHC) trained 8,434 community leaders** (1,241 men and 7,193 women), who then reached 104,807 people (45,035 men and 59,772 women) from the general population with information sessions. WhatsApp groups, which VHCs created to reach out to the rural population (168,149 people), helped disseminate general information about TB, videos with real stories of people affected by TB and links to posts about TB on the social media pages of the AVHC.

Picture 1. Information work of VHC members at an informal meeting of fellow villagers

The **National Red Crescent Society (NRCS)** selected and trained **36 volunteers** from well-known and respected community leaders and TB survivors to advocate for early diagnosis and treatment of TB among the population, covering a total of 25,076 people (9,500 men and 15,576 women).

Picture 2. NRCS volunteer hands out booklets with key information on TB after an information session

TB People, in collaboration with the Spiritual Administration of Muslims of Kyrgyzstan (SAMK), trained **260 religious leaders** in Chui, Talas, Jalal-Abad, Naryn, and Batken Oblasts to develop their skills in effective dissemination of information on TB among the population to motivate health care-seeking and social support of people with TB. SAMK and TB People held 15 information sessions in madrassas and Koran institutes for 560 students, of whom 330 were men and 230 were women.

World TB Day Activities

The Project collaborated with the RHPC TB Working Group (WG), national and international partners, and Civil Society Organizations (CSOs) working in TB to develop a joint action plan dedicated to World TB Day on March 24 (approved by MHSD Order No. 269 of March 9, 2021). The joint plan aimed to coordinate activities and disseminate harmonized information on TB.

Over 1.3 million people learned more about TB through informational and sports activities and social media campaigns held by Cure Tuberculosis through sub-grantees and partners to commemorate World TB Day. Throughout the month of March, people affected by or involved with TB shared their stories to raise awareness about the disease, debunk myths and fight stigma and discrimination. The conversation about TB gained momentum online and in-person across the country through health care professionals, patronage nurses, village health committees, religious leaders, volunteers, and community-based supporters. The month of events and activities culminated in bike rides, marches, sports activities, a drawing contest for children with TB, and informational sessions in public places in which 17,496 people participated in total (NRCS – 14,128, AVHC – 1,773, TB People – 287 people). A detailed roundup of this campaign is described on the JSI website.

Community-based Active TB case finding

In September 2021, the **AVHC** held 32 meetings with the management of the General Practice Centers (GPCs), TB, HPU and PHC specialists, representatives of local self-government (LSG) and members of VHCs (a total of 1,716 people) to discuss active TB case finding among the priority groups of the rural population (migrants, unemployed, people who misuse alcohol or other psychoactive substances, people who have been incarcerated, people who are homeless, etc.) and helping people with presumptive TB in need, including TB contacts, to get tested for TB. It was decided that help and support for testing of people with presumptive TB will be provided by local administrations and VHCs at the request of PHC medical workers, and VHC members will conduct screening among the high-priority groups living in rural areas. People with presumptive TB will be referred to PHC facilities for examination.

NRCS volunteers conducted outreach work with risk groups (at markets, bus stations, labor exchanges, social shelters, places of residence of internal migrants) to find persons with presumptive TB. In total, during the reporting year, 33 people (21 men and 12 women) with TB symptoms were referred to PHC for examination, and **five people were diagnosed with TB** (four men and one woman).

The NRCS concluded **cooperative agreements** with three social shelters in Chui Oblast, according to which NRCS patronage nurses will share information on TB with the clients of the shelters, conduct TB screening to identify persons with presumptive TB, assist shelter residents with symptoms of TB in testing for TB, take them under patronage, and provide humanitarian assistance to shelters.

With the technical support of the Project, the NRCS developed tools for screening in shelters for the homeless and conducted training for the staff of shelters for the homeless in Bishkek and Chui Oblast. The NRCS plans to start screening in shelters for the homeless in Quarter 1 of Year 3, as the shelters are usually empty in warm months and fill up with the onset of cold weather.

TB People conducted screening to identify people with TB symptoms in settlement colonies No. 38 (Kemin, Chui Oblast) and No. 26 (Moldovanovka, Chui Oblast) of the State Penitentiary Service. Cure Tuberculosis rendered technical support to TB People to develop screening tools, including a questionnaire, screening procedures, and safety requirements for staff conducting screening. Based on recommendations from the WHO Consolidated Guidelines on Tuberculosis 2021, Module 2: Systematic

screening for tuberculosis disease, on the need for radiographic screening for TB in settlement colonies, as a risk group for tuberculosis, the screening protocol includes X-ray for TB screening among persons serving sentences in settlement colonies.

TB People screened 179 people in the settlement colonies and recommended 24 persons with presumptive TB to undergo TB examination at PHC, of whom one was diagnosed. Cure Tuberculosis is planning to hold meetings with the medical department of the State Penitentiary Service to receive their buy-in for TB screening in other penal colonies.

Pictures 3 and 4. Fluorographic examination of persons serving sentences in settlement colony No. 26

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. Finalized the **DR-TB management clinical protocol** and submitted to the MHSD for approval;
2. Rolled out the **reformed DR-TB Concilium model** in Naryn, Batken, and Talas Oblasts approved by MHSD Order No. 255 of March 5, 2021;
3. All 36 DR-TB Concilium members in Naryn, Batken, and Talas Oblasts completed **modular training for DR-TB management** program (72 credit hours);
4. Began phased implementation of **cohort analysis** in Naryn, and Talas Oblasts and conducted training on cohort analysis for TB specialists;
5. Developed **Practice Guidelines on TB Drug Management** (DM) approved by MHSD Order No. 449 of April 20, 2021 and trained 30 TB DM specialists and pharmacists (16 credit hours);
6. Conducted **situation analysis of quality assurance (QA) system** for the TB drug supply chain and made recommendations for improvement, which informed PY3 priorities;
7. Conducted a **situation analysis of the TB medicines registration process** and provided recommendations for the National Medicines Registration Authority (NMRA) in strengthening its capacity to support an uninterrupted supply of high-quality TB medicines;
8. Developed a five-day **training module on aDSM** (40 credit hours) and trained 153 TB specialists from all regions;
9. Installed the **e-TB register TB-01 Module** in 81 PHC facilities and trained 191 new users; 5,675 TB-01 patient treatment cards (3,242 men; 2,433 women) entered in the system;
10. Developed **X-ray image visualization connector** software for the optimization of storage, transfer and processing of X-ray images used for TB diagnosis and treatment;
11. Ensured stable functioning of the **EMR in TB hospitals** and trained 151 new users; 15,608 (9,288 men; 6,320 women) medical records entered in the database;
12. Implemented the **Pharmacy information system** in five TB service facilities.

SSP 2.2: Treatment completion rate increased

1. Developed standards for **TB case management** (CM) in PHC organizations approved by MHSD Order No. 202 of February 17, 2021;
2. **Expanded TB CM** together with the PHC payment system for successfully treated TB cases in Naryn, Batken Oblasts and Leninsky district of Bishkek; **trained 2,827 HCWs** from PHC organizations (rayon TB doctors, family doctors, FGP/FAPs nurses);
3. Implemented the **TB Treated Case at the PHC level** software in Chui, Talas, Osh, Batken and Jalal-Abad Oblasts for the verification of completed cases in PHC organizations;
4. The NRCS provided **social support to 361 TB patients**, including psychosocial counseling in Chui, Talas, and Batken Oblasts, gave out **1,317 vouchers worth 1,580,000 soms** to purchase food and non-food products; **158 TB patients completed treatment** under NRCS patronage, and **eight returned to treatment**;
5. TB People provided **social support to 58 TB patients** who have been incarcerated, **18 completed TB treatment**;
6. The AVHC, through fundraising and advocacy among local governments and VHCs, mobilized **360,370 soms in financial assistance for 263 TB patients** from socially vulnerable groups.

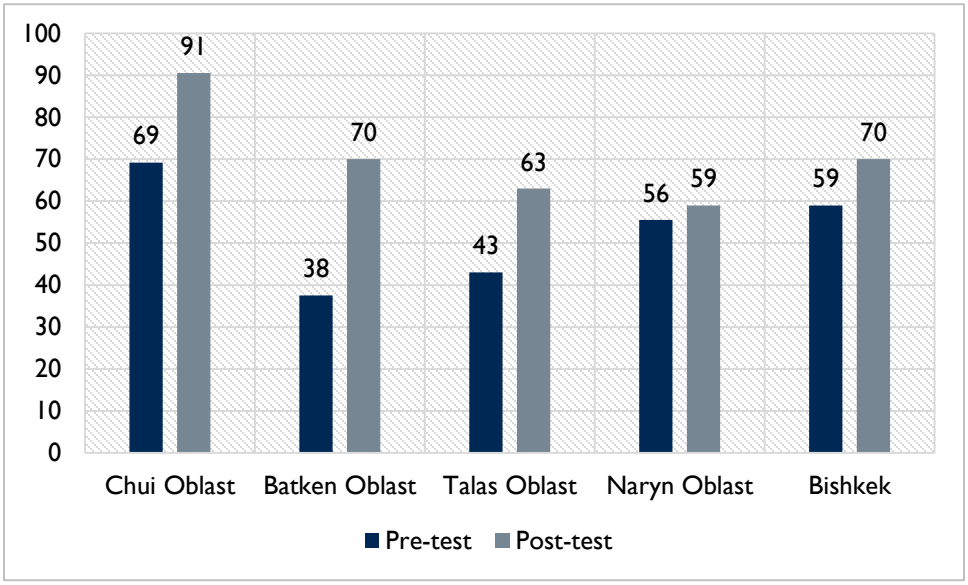
SSP 2.1: All patients treated with appropriate treatment regimens of quality-assured drugs

Clinical Guidelines on DR-TB Management

In Year 2, Cure Tuberculosis facilitated the development of a **DR-TB management clinical protocol** (CP) based on the DR-TB Management Clinical Practice Guidelines approved in September 2020. The Project engaged an expert, conducted a two-day training for the members of the established WG on CP development, approved by the Ministry of Health in 2020. By September 2021, the DR-TB management clinical protocol had been finalized for further approval by the MHSD. The updated Clinical Protocol on DR-TB Management will prioritize Xpert testing for TB diagnostics, facilitate transition to fully-oral DR-TB treatment, and recommend reduction of the length of DR-TB treatment to nine months for children up to 15 years old.

The Cure Tuberculosis Project conducted a one-day **on-the-job training** on DR-TB management for 63 oblast and rayon level TB specialists in Chui (16), Naryn (5), Talas (5), and Batken (14) Oblasts, and Bishkek (23). Training results showed that there are still gaps in the knowledge of TB specialists in DR-TB management (Figure 7), especially in pediatric TB management.

Figure 7. Level of knowledge of oblast and rayon level TB specialists on DR-TB management before and after training (%)



In Year 3, Cure Tuberculosis will help the NTP to develop an advanced training module on DR-TB management for oblast and rayon level TB specialists and will conduct training designed as a two-day in-depth discussion and exchange of experience across regions in applying the new recommendations.

In Year 2, Cure Tuberculosis also provided support to the NTP to develop an outline and structure of new **Clinical Practice Guidelines on Pediatric TB**. The previous version was adopted in 2014 and has not been aligned with the updated DR-TB Management Clinical Practice Guidelines approved in September 2020 and the latest international recommendations on TB diagnostics and treatment. In Year 3, the Project will continue TA and engage international experts (through URC) at the final stage for external review.

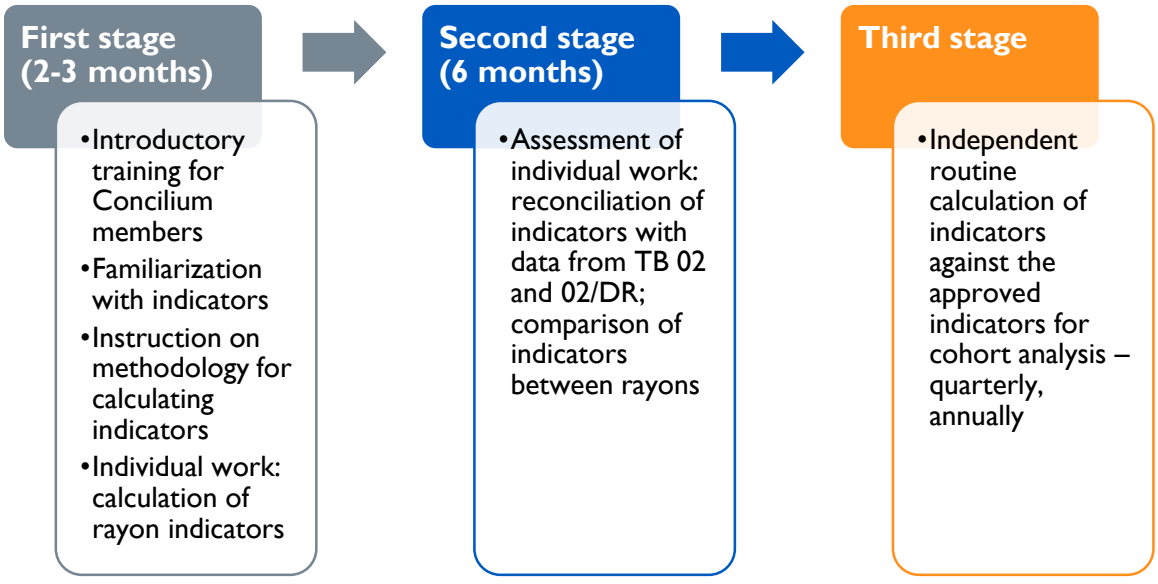
Reform of Oblast DR-TB Concilia

The Cure Tuberculosis Project continued the geographic **roll-out of the reformed DR-TB Concilium** which was piloted in Chui Oblast in Year 1. In Year 2, the new DR-TB Concilium model was implemented in Naryn, Talas, and Batken Oblasts (MHSD Order No. 255 of March 5, 2021). Project specialists instructed the new membership of the Concilia in these regions on the established Concilium functions and tasks and helped to develop a rotation schedule for the deputy chair of the Concilium in each region. Cure Tuberculosis Project specialists trained rayon TB doctors on how to use the online platform. The Project developed guidelines and templates for the presentation of patients to the DR-TB Concilium according to the purpose of presentation and instructed TB Concilium members on the format for presenting TB patients to the Concilium. The templates helped to optimize the Concilium work, increase the capacity of attending physicians and minimize non-evidence-based decision-making.

In Year 2, **all 36 DR-TB Concilium members** in Chui, Naryn, Talas, and Batken Oblasts completed the modular advanced training program for DR-TB management (72 credit hours), which was developed with Cure Tuberculosis technical assistance and approved by the Kyrgyz State Medical Institute of Post-Graduate Training and Continuous Education (KSMIPT&CE).

In Year 2, the Cure Tuberculosis Project began the phased implementation of **cohort analysis** in Chui, Naryn, and Talas Oblasts, using practical analysis of real data that rayon TB doctors and Concilium members submit quarterly and yearly to the NTP (Figure 8). Project specialists, with the participation of the NTP and the USAID DR-TB Clinical Advisor, conducted a series of orientation training on cohort analysis for TB doctors in Chui, Naryn, and Talas Oblasts. The training participants learned key TB program indicators which are collected at the oblast level and then presented to the NTP.

Figure 8. Three stages of cohort analysis implementation



Starting from October 2021, rayon TB specialists will use the cohort analysis approach on a routine basis. The Project will use cohort data to assess the success of the programmatic implementation of DR-TB management.

In Year 3, the Cure Tuberculosis Project will continue the geographic roll-out of the reformed DR-TB Concilium in Osh Oblast and Bishkek city. New membership of the Concilia will be trained on the established Concilium functions and tasks and on how to use the online platform. In parallel, the Project will continue the phased implementation of cohort analysis in Chui, Naryn, and Talas Oblasts and begin the implementation of cohort analysis in Batken and Osh Oblasts and in Bishkek.

Since January 2021, with the support of Cure Tuberculosis, the NTP has begun nationwide implementation of the **electronic TB-01 Module** of the e-TB Register. The TB-01 Module automates the entry of the TB-01 form (TB patient treatment card). Cure Tuberculosis showed TB doctors the advantages of the e-TB Register TB-01 Module in routine work, for presenting TB patients at Concilium meetings, and referring TB patients from TB hospitals to PHC facilities. The NTP plans to fully transition from paper-based TB-01 forms to the e-TB Register in the work of DR-TB Concilia.

Quality Assured TB Drugs

Since 2018, USAID has promoted the registration of World Health Organization (WHO) pre-qualified (PQ) TB drugs in the Kyrgyz Republic to enable the country to procure quality TB drugs from the state budget. Currently, 15 WHO-PQ or Stringent regulatory authority (SRA) approved TB medicines have been registered in the country. In Year 2, in collaboration with USP, Cure Tuberculosis prepared a situation analysis report on the **TB medicines registration** process in the Kyrgyz Republic focusing on both the national and Eurasian Economic Union (EAEU) medicines registration procedures which came into force in 2021. The report provided recommendations for strengthening the NMRA's capacity to support an uninterrupted supply of high-quality TB medicines.

Cure Tuberculosis, in collaboration with USP, conducted a country assessment of the **quality assurance system for NTP's TB drug supply chain.** The assessment findings include key achievements of the Kyrgyz government in:

- *Procurement of TB medicines:* 1) Transitioned from Global Fund support to state budget financing of the procurement of first-line TB drugs; 2) Began transitioning to co-financing the procurement of second-line drugs in 2018, starting at 20% with gradual takeover; 3) Essential Medicines List (EML) includes TB medicines recommended by WHO for treatment of TB;
- *Quality control of TB medicines:* 1) Product samples are submitted for quality control testing at the stage of registration for compliance with the regulatory quality certification document; 2) The two laboratories for quality testing are accredited in the National Accreditation System of the Kyrgyz Republic for compliance with the ISO/IEC 17025 requirements; 3) The current warehouse is mostly safe and secure and follows the cleaning and sanitation protocols.

The findings also included areas for improvement as recommended:

- *Sourcing & Procurement:* Introduce a (mandatory) prequalification round and develop a questionnaire to obtain information necessary to evaluate manufacturers/suppliers and develop an NTC/NTP Procurement and Supply Management manual;
- *Storage & Distribution:* Include the costs for warehousing and distribution in the state budget and conduct a thorough assessment of the lower-level storage facilities for further improvement;
- *Post Marketing Surveillance:* Develop quality control (QC) testing/sampling throughout the supply chain and improve the current capacity of the NMRA (both in terms of facilities and HR); and as a first step, develop a detailed QC testing plan for TB drugs;
- *Management support:* Consider development of a robust Logistics Management Information System (LMIS) and its integration with a Warehouse Management System and other tools (Electronic TB Surveillance System), increase capacity of the NTP through creating a

Management Unit or strengthening of the function of supply chain specialists, and develop corresponding SOPs.

The findings and specific recommendations of the situation analysis on the TB medicines registration process and country assessment of the quality assurance system for NTP's TB drug supply chain serve as the basis for the Cure Tuberculosis PY3 work plan priorities, such as QA standards training for National Quality Control and Analytical Laboratory (NQCL) staff, and development of SOPs on QA standards for TB medicines. The results of the situation analysis strengthened the findings of the supply chain assessment and informed the above PY3 priorities.

TB Drug Management

Cure Tuberculosis provided technical assistance to develop **Practice Guidelines on TB Drug Management** (DM) and ensured the document was approved by MHSD Order No. 449 of April 20, 2021. USP together with Cure Tuberculosis conducted a virtual coaching session on TB medicines quality assurance at each stage of the supply chain for the NTP TB drug management coordinators (central level) and training for TB drug management specialists and pharmacists of the NTP and oblast levels (30 specialists trained in total). In Year 3, Cure Tuberculosis, together with USP, will support the NTP in the implementation of TB drug management SOPs and develop training modules on TB DM for oblast-level TB drug management specialists.

Active Drug Safety Monitoring

In Year 2, Cure Tuberculosis conducted an assessment of the current **active drug safety monitoring (aDSM) system** in the Kyrgyz Republic. Among key findings, the situation analysis revealed that currently there are four points of entry of pharmacovigilance (PV) related data and the number of reports produced by the NTP and NMRA does not match. No regular data reconciliation by the NTP and NMRA takes place. The existing adverse event (AE) section of the TB-01 form requires revision. In Year 3, Cure Tuberculosis will review and update the AE-related section of the paper-based TB-01 form, and corresponding changes will be made in the electronic TB-01 module.

Cure Tuberculosis developed a five-day **training module on aDSM** which was approved by the KSMIPT&CE (40 credit hours). Project staff and the NTP conducted training for **153 central and** oblast **level TB specialists** on aDSM**.** Knowledge improvement after the training reached 32% on average according to pre- and post-test results of training participants.

e-TB Register

In Year 2, the Cure Tuberculosis MIS team continued national implementation of the **TB-01 Module of the e-TB Register** (Clinical module of TB surveillance system reengineered in Year 1):

- Installed the e-TB Register TB-01 Module in 81 PHC facilities (the full list is presented in Annex 3) and trained 191 new users to work with the software;
- 5,675 TB-01 forms for patients who were on treatment as of January 1, 2021, and onwards were entered into the database, including 43% female TB patients and 57% male TB cases.

The e-TB Register software automates the entry of TB-01 forms and covers the course of treatment from registration to completion of treatment of TB patients. The system makes it possible to automate treatment monitoring of patients with TB, to structure and display data on the state of the TB control system, and to monitor the state of the epidemic in the country.

The Cure Tuberculosis Project started the development of a **Reporting Data Module** software for the automatic generation of 18 additional official TB reporting forms, including nine DS-TB forms (TB-02, TB-03, TB-04, TB-05, TB-06, TB-07, TB-08, TB-09, TB-10) and nine DR-TB forms (TB-02У, TB-03У, TB-04У, TB-05У, TB-06У, TB-07У, TB-08У, TB-09У, TB-10У), which are currently processed and filled in manually. When fully developed, the Reporting Data Module and the TB-01 Module will together constitute the e-TB Register. The system is integrated with other Medical Information Systems (TB MIS).

SSP 2.2: Treatment completion rate increased

TB Case Management

In Year 2, the Cure Tuberculosis Project helped the NTP to develop standards for **TB case management** (CM) in PHC facilities approved by MHSD Order No. 202 of February 17, 2021, which also set forth tasks for the implementation of the TB CM approach in PHC facilities to improve treatment outcomes for DR-TB patients:

- Organize business processes and allocate resources in PHC facilities for the implementation of the TB CM standards;
- Train PHC staff in TB CM tools;
- Discuss and coordinate the interaction algorithm between PHC staff involved in TB care and civil society organizations (CSO) in the treatment of TB patients;
- In the OTCs, implement tools for monitoring and evaluating the effectiveness and safety of TB treatment and verification of cases that have completed treatment in PHC facilities.

The TB case management approach includes assessing the needs of a patient with TB, selecting an appropriate directly observed treatment (DOT) model (community-based treatment support (CBTS), video-observed treatment (VOT)), providing psychosocial support during treatment, following up on adherence to treatment, and, if necessary, engaging CSOs to ensure successful treatment completion. The TB CM standards for PHC facilities include:

- Tools for monitoring patient adherence to treatment;
- Questionnaire to assess social needs and the need for inclusion in a social support program;
- Scale for assessing anxiety and depression;
- Questionnaire for early detection of AEs;
- Algorithm of actions of PHC staff in identifying and managing AEs;
- List of laboratory and instrumental methods of diagnosis required in the course of treatment of TB patients;
- Guidelines for engaging community-based supporters and providing VOT.

Starting from March 2021, Cure Tuberculosis rolled out the TB CM approach in Naryn and Batken Oblasts and Leninsky district of Bishkek. Project specialists, together with HAKR and KSMIPT&CE, conducted **cascade trainings on TB case management** tools for HCWs in the Project pilot facilities. In total, 2,827 HCWs from PHC facilities (rayon TB doctors, family doctors and FGP/FAP nurses) and CSO representatives in Naryn, Batken, and Chui Oblasts and Leninsky district of Bishkek participated in the training on TB CM tools:

- Laboratory and instrumental methods of diagnosis required in the process of TB treatment;
- How to identify and manage AEs in the course of TB treatment;
- How to carry out alternative DOT (CBTS, VOT);
- How to improve adherence of TB patients to treatment and how to determine the risks of treatment interruption, taking into account gender aspects;

- How the provision of psychological and social support to TB patients helps to ensure adherence to treatment, taking into account gender aspects;
- CSOs' role in providing TB services, such as taking non-adherent patients under patronage, counseling patients and their families, providing psychosocial support, finding and returning lost-to-follow-up patients to treatment and convincing those who refused treatment to begin treatment, providing CBTS services, etc.

Cure Tuberculosis and HAKR specialists conducted **visits to PHC facilities** in Naryn, Batken, Chui, and Jalal-Abad Oblasts and Leninsky district of Bishkek to analyze the availability of laboratory and instrumental methods of diagnosis for clinical monitoring of TB treatment and drugs for AE relief. Based on the analysis, internal plans for TB CM implementation in each PHC facility in these regions were developed with the aim to improve treatment outcomes for DR-TB patients. These plans included:

- Identifying and assigning responsible persons among HCWs involved in TB case management in FGPs and FAPs and expanding their functional responsibilities to identify and manage AEs from taking TB drugs, educating patients on TB treatment, conducting VOT with CBTS involvement, assessing social needs, and monitoring patients' adherence to TB treatment;
- Assigning responsible persons among the heads of clinical departments to apply for the procurement of drugs for AE relief, reagents and consumables for carrying out necessary laboratory tests for TB patients on outpatient treatment, and, if necessary, for concluding agreements with private laboratories or laboratories of other health care facilities;
- Mandatory internal monitoring and evaluation of all necessary processes and resources for TB CM at the outpatient level;
- Identifying and assigning responsible persons to ensure effective interaction with the transportation agent in the delivery of sputum samples to the appropriate laboratories and TB drugs from OTCs.

In Year 2, the Cure Tuberculosis Project facilitated the implementation of **tools for monitoring and evaluating TB CM** and the effectiveness and safety of TB treatment and verification of cases that have completed treatment in PHC facilities. The Project assisted the OTCs in Talas and Chui Oblasts with verification of completed cases at PHC that are submitted for payment to the Mandatory Health Insurance Fund (MHIF).

In Year 2, to ensure the completeness of information on TB cases, the **PHC payment system for successfully treated TB cases** was linked to the e-TB Register TB-01 Module. This allowed quality verification and timely payments from the MHIF. The electronic verification process aims to ensure that the submitted cases have in fact successfully completed TB treatment and that the information submitted corresponds to available information in online systems, including the e-TB Register TB-01 Module, LDMIS and the newly-developed TB Treated Case at PHC Level. Thanks to the connection of the e-TB register TB-01 Module to the Treated Case at PHC software and Project support, the verification of successfully treated TB cases for payment was able to shift from the MHIF to OTCs in Chui, Talas, Naryn, Osh, Batken, and Jalal-Abad.

In Year 3, Cure Tuberculosis will continue to work with the MHIF, NTC, and OTC specialists involved in the process of verification to increase the capacity and knowledge of the correct use of the e-TB Register TB-01 Module and TB Treated Case at PHC Level software.

In Year 2, Cure Tuberculosis conducted an **operational research study** on the implementation of the payment system for successfully treated cases at PHC based on verification of a sample from the 2018 treatment cohort in Chui and Jalal-Abad Oblasts. The study aimed to uncover any systemic issues with implementation in order to inform the development and improvement of verification criteria for

successfully treated cases (see M&E section for detail). According to preliminary data, TB cases and treatment outcomes are most often correctly categorized and submitted to the MHIF in compliance with payment criteria; however, the results also demonstrated significant problems with adherence to the diagnostic algorithm, monitoring of treatment effectiveness and filling in recording and reporting forms, which caused difficulties with verification and need to be accounted for in the system of payment for successfully treated TB cases. The research study will be finalized in Year 3 and the results will provide the basis for systematic changes in the TB management system.

In Year 3, Cure Tuberculosis will expand the TB CM approach in Bishkek and Osh city, in parallel with the implementation of the PHC payment system for successfully treated TB cases. The Project, together with KSMIPT&CE, will develop a training module on TB CM for PHC HCWs and CSO representatives to ensure the sustainable implementation of the TB CM approach. The Project will also conduct training for health care managers in the Project's pilot sites on the effective implementation of TB CM.

TB MIS Implementation

Cure Tuberculosis continued to support the **Electronic Medical Record** (EMR) in TB hospitals addressing users' requests for further improvement. As of September 30, 2021, the EMR had 594 users, with 151 new trained users. The number of medical records in the database was 15,608 (9,288 men, 6,320 women). MIS specialists ensured stable and uninterrupted functioning of the EMR in hospitals and held regular consultations with users.

In Year 2, the Project continued to implement the **Pharmacy** information system based on recommendations for improvement from users. Work is underway to automate the business processes of health care facilities for inventory management, movement, and consumption of medicines and medical devices within a facility from the pharmacy warehouse to the head nurse and then to the sentry nurse. The Pharmacy information system was implemented in five TB service organizations:

1. National Tuberculosis Center
2. City Tuberculosis Center
3. City TB Hospital
4. Republican TB Hospital in Kara-Balta
5. Chui Oblast TB Center

Cure Tuberculosis continued to work on the development of an **X-ray image visualization connector** software for the optimization of storage, transfer and processing of X-ray images. The X-ray image visualization connector allows connection of diagnostic equipment and centralized storage of images. The X-ray image visualization connector software will enable registering referrals to X-ray examinations, either manually or automatically downloading them from the TB MIS, and also provide functionality for importing images from diagnostic equipment and special X-ray image DICOM protocol digitizing equipment. With the X-ray image visualization connector, high-quality images of the X-rays will be able to be shared electronically during Concilium discussions, and linked to a patient's EMR and TB-01 form in the e-TB register so that they can form an integral part of diagnostic decision-making. The implementation of the X-ray image visualization connector software and a digital archive will save the Government time and money, which is now spent on consumables (film and chemical reagents) and the maintenance of large flammable X-ray film archives. The testing and piloting of the software will launch in November 2021.

Community-based Treatment Support

In Year 2, Project sub-grantees NRCS, AVHC, and TB People provided care and patronage services to TB patients within the TB CM approach.

In Year 2, the **NRCS provided social support to 361 patients** with treatment adherence problems in Chui, Talas, and Batken Oblasts, of whom 236 were men (65%) and 125 were women (35%), and 54 had drug-sensitive (15%) and 307 drug-resistant forms (85%) of TB. All patients received individual psychosocial counselling, 16 received DOT at home from visiting patronage nurses as community-based treatment supporters, and 15 received individual online counselling from a psychologist, with one referred to a psychiatrist at Republican Mental Health Center. All 361 disadvantaged patients received 1,317 vouchers worth 1,580,000 soms through project funds and with the help of patronage nurses redeemed these vouchers to buy food and non-food essentials at local stores (Pictures 5, 6 and 7).

Out of these, **179 completed patronage** (158 completed treatment, six died of reasons other than TB (cardiovascular or kidney disease, cancer, an accident), and 15 were withdrawn from treatment by a Concilium decision due to health reasons (often, renal failure)). Eight out of 51 patients referred by TB doctors in Chui, Talas, and Batken Oblasts to the NRCS social support program (43 lost to follow-up and eight patients who refused to start treatment) were found and returned to treatment (16%), nine were removed from the program (18%) due to moving to Russia for permanent residence (six men and three women), and the 34 remaining (67%) are being searched for and/or persuaded to start their treatment.

Picture 5. NRCS patronage nurse conducts patient needs assessment for TB patient to provide personalized psychosocial support to ensure completion of treatment

Pictures 6 and 7. TB patients use vouchers to buy groceries and essentials at a Globus supermarket

To improve patient adherence to treatment, the NRCS holds support groups with the assistance of patronage nurses, an FMC TB nurse, and former TB patient volunteers. A total of **154 support group meetings** were held in Year 2, with the participation of 361 TB patients. In addition, the WhatsApp groups are a daily support channel and source of information which connect patronage nurses and their patients in real-time.

Since January 2020, based on a cooperation agreement signed between **TB People** and the State Service for the Execution of Punishment (SSEP), TB People has been helping TB patients released from prison to reach medical facilities in the civil sector to continue and complete TB treatment. In Year 2, TB People provided **social support to 58 patients** who were formerly incarcerated in Chui Oblast and Bishkek of whom 55 were men (95%) and three were women (5%), and 25 had DS-TB (43%) and 33 patients had DR-TB (57%). Seven received DOT at home from visiting TB People social workers as community-based treatment supporters. Out of these 58, 18 completed their treatment and three people died of reasons other than TB (car accident, alcohol intoxication). At the end of Year 2, 25 remained under the social support of TB People.

AVHC developed an algorithm to support TB patients at high risk of treatment interruption by members of VHC within the TB CM approach. AVHC advocacy mobilized 360,370 soms of financial assistance, through local governments, VHCs, and fundraising committees (initiated by VHCs), in coordination with primary health care workers, to **263 TB patients** from the most vulnerable groups to increase their motivation to complete treatment.

Sub-Purpose 3: Prevention of DR-TB infections

Sub-Purpose 3 Key Achievements:

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

1. Launched a four-stage cycle to improve the **TB infection prevention and control** (TB IPC) **measures** in the Oblast TB Centers in Talas, Batken, and Naryn Oblasts, which successfully completed the second stage of the cycle;
2. Developed a **training module on TB IPC** in health facility settings and conducted a cascade training for 11 OTC specialists from Naryn, Talas, Batken, Chui OTCs, who then trained 99 medical workers in their respective OTCs;
3. Developed guidelines on **monitoring and evaluating IPC in PHC** facilities approved by MHSD Order No. 430 of April 15, 2021;
4. Drafted clinical guidelines for **latent TB infection** (LTBI) to be approved by the MHSD by the end of the year.

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

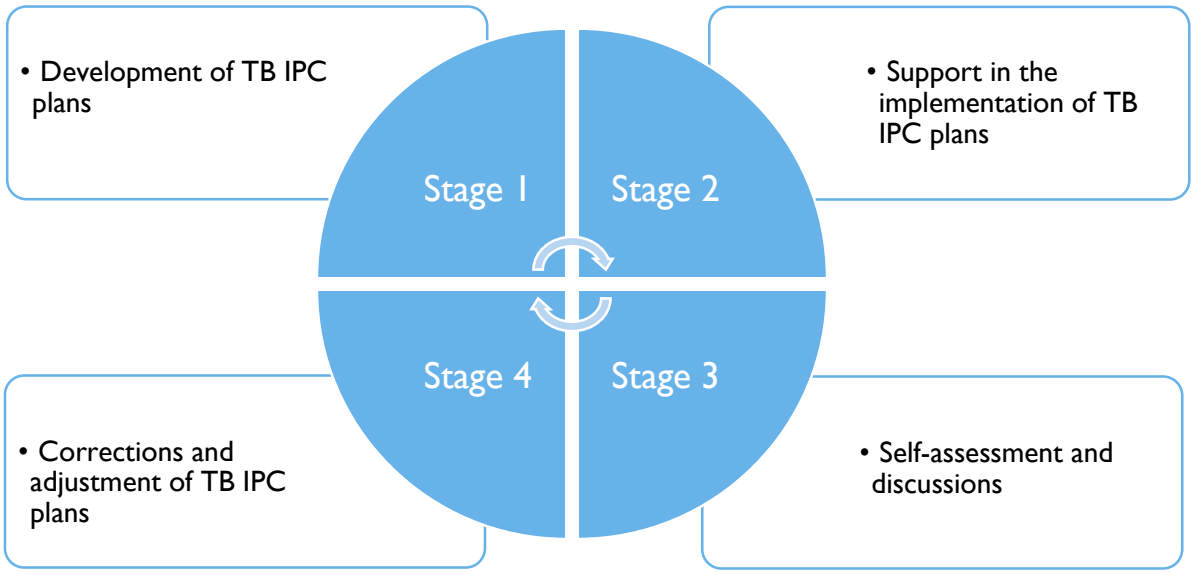
1. Developed **SBC approaches** and agreed on their implementation within the RHPC Work Plan for 2021;
2. Developed **guidelines for the implementation of SBC approaches** in work with the population, priority groups, and TB patients;
3. Developed **training materials for HCWs** on improving counselling skills and interpersonal communication to improve TB patient treatment adherence, included in the TB CM training;
4. Prepared **11 SBC videos** with real stories of people affected by TB showcasing encouraged behaviors and motivating behavior change among priority groups and **five videos** with local celebrities voicing key TB messages. All videos were broadcast multiple times on TV and social media.

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

In Year 2, the Project launched a process consisting of cycles to improve **TB IPC measures** in the Oblast TB Centers in Chui, Talas, Batken, and Naryn Oblasts. The cycles include (Figure 9):

- Development of annual TB IPC plans based on the results and recommendations of the baseline assessment;
- Support in the implementation of TB IPC plans, training, assistance in the development of internal algorithms, standards, and requirements for TB IPC measures;
- Self-assessment by health care facilities followed by discussion of the results;
- Monitoring and evaluation of TB IPC plan implementation with any necessary modifications.

Figure 9. Illustration of cycles aimed to improve TB IPC measures in health care organizations



At the first stage of the TB IPC improvement cycle, Cure Tuberculosis helped Naryn, Talas, and Batken OTCs to develop **TB IPC plans** for 2021 based on an in-depth situation analysis conducted. At the second stage, Cure Tuberculosis specialists provided technical support to the specified OTCs in the implementation of TB IPC plans, improvement of IPC measures in OTCs to ensure a safe working environment and limit risks of infection for HCWs and cross-infection of TB patients. By June-July 2021, the Naryn, Talas, and Batken OTCs had successfully completed the second stage (Table 3).

Table 3. Completed IPC measures of the second stage of the TB IPC improvement cycle

IC Measures	Naryn OTC	Talas OTC	Batken OTC
Environmental control • Germicidal lamps in units and wards function properly • All wards of the unit have natural ventilation • Experts responsible for the assessment and monitoring of environmental control measures trained in use of the equipment (radiometer and vaneometer) • Specialists responsible for the assessment and monitoring of environmental control measures trained to carry out calculations to determine the effectiveness of UV lamps • Specialists responsible for the assessment and monitoring of environmental control measures trained to carry out calculations to determine the effectiveness of natural ventilation	+	+	+
Administrative • Patients admitted to the OTC are placed taking into account the spectrum of M. tuberculosis resistance and sputum smear microscopy results • There is a screening algorithm to identify presumptive TB among HCWs (which includes frequency of screening, assignment of responsible persons, assessment of chest fluorographic examination results, development of registration forms)	+	+	+

• There are internal guidelines/requirements developed to ensure the prevention of cross-infection of TB patients when visiting the diagnosis testing rooms, the catering unit, the bathroom and other common areas			

In Year 3, the Project plans to conduct activities within the third stage of the IPC improvement cycle in Naryn, Batken and Talas Oblasts, in particular the strengthening of the quality committees, a structure responsible for IPC measures in the OTCs. The Project will also begin in Year 3 the TB IPC improvement cycle in the Osh OTC.

In 2021, Bishkek completed the construction of a new TB hospital with support from KfW. Cure Tuberculosis will provide technical assistance in IPC measures implementation in the new facility.

Thanks to Cure Tuberculosis Project assistance in 2020, the NTC and OTCs were more prepared for the COVID-19 epidemic in the country compared to other health care facilities re-purposed to treat patients with COVID-19. According MHSD data, the NTC had the lowest incidence of COVID-19 among health care workers who worked in red zones (21%), compared to up to 64% in other facilities.

In Year 2, Cure Tuberculosis provided technical assistance to the NTP and SES in developing a **training module on TB infection prevention and control (TB IPC)** in health facility settings. With the technical support of the Project, a cascade training was conducted on the new TB IPC training module. Eleven IPC specialists from the Naryn, Talas, Batken, and Chui OTCs received were trained as trainers on IPC at the Kara-Balta TB Hospital, which for the last 10 years with the support of USAID has been effectively applying administrative and management IPC measures and ensuring high standards for treatment of MDR/XDR-TB patients. On average, the participants' knowledge increased by 12%, from 82% pre-test to 94% post-test results.

These trained IPC specialists, together with Cure Tuberculosis and KSMIPT&CE, conducted training for 99 medical workers of their respective OTCs on the TB IPC system and the current regulatory acts in the field of TB IPC, use of personal protective equipment (PPE), hand hygiene, and medical waste management. The participants were also trained on the selection of respirators (fit-testing), recording and reporting forms, using vaneometers and radiometers for assessing and monitoring ventilation, and effectiveness of ultraviolet bactericidal (UVB) lamps. The TB IPC training module was integrated into the curriculum of the KSMIPT&CE for continuous advanced training of health care workers. In Year 3, Cure Tuberculosis will continue the IPC training module for the Osh OTC and the new Bishkek TB hospital.

In Year 2, the Cure Tuberculosis Project helped in the development of guidelines on **monitoring and evaluating IPC in PHC facilities**, which were approved by MHSD Order No. 430 of April 15, 2021. The document combined two IC guidelines developed for PHC: one on TB IC (Order of the Ministry of Health No. 1131 of December 13, 2017) and one on general IC principles (Order of the Ministry of Health No. 214 of March 28, 2016). The combined guidelines eliminate the difficulty in monitoring and contradictions that existed previously from having two separate guidelines. In Year 3, Cure Tuberculosis will support the MHSD in the implementation of the updated Guidelines on monitoring and evaluating IPC in PHC organizations to strengthen IPC measures for airborne infections in Project pilot oblasts.

In Year 2, Cure Tuberculosis provided technical assistance to the NTP in the development of clinical guidelines on **LTBI management** in the Kyrgyz Republic. The Project conducted training for members of a working group established on the methodology for developing clinical guidelines and protocols, and together with the WG, reviewed guidelines and recommendations for LTBI. The clinical practice guidelines on LTBI management will include WHO recommendations published in 2020. The new CG

on LTBI will also integrate recommendations on TB preventive treatment (TPT) among all age categories and risk groups (children and adolescents, people living with HIV (PLHIV), HCWs). Previously, these recommendations had been included as a section in different clinical protocols, not supported by uniform recommendations for TPT requirements and standards. In addition, the new clinical guidelines will include recommendations for use of the IGRA test (QuantiFERON) in the diagnosis of LTBI and new TPT regimens. The drafts of the main sections of the clinical guidelines on LTBI management have been finalized. In Year 3, the CG will be finalized for further agreement and approval by the Ministry of Health and Social Development.

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

In Year 2, the Cure Tuberculosis Project continued to adhere to a comprehensive approach, taking into account the results of the SBC formative research and the Project's SBC strategy, in collaboration with national partners, sub-grantees and other stakeholders in TB.

At-risk Population and TB Patients

Cure Tuberculosis actively collaborated with the RHPC in the development and implementation of SBC approaches in TB:

- The RHPC included SBC activities in its Work Plan for 2021 (approved by MHSD Order No. 101 of January 18, 2021), which facilitated planning coordinated activities with the involvement of HPU specialists at the PHC level as part of training and coordinating the work of VHCs;
- Developed training materials for training of sub-grantees and HPU specialists, including information on the impact of the COVID-19 pandemic on TB in the world and in the Kyrgyz Republic;
- Developed **guidelines for the implementation of SBC approaches** and interpersonal communication in work with the population, priority groups, and TB patients to reduce stigma and discrimination and create an enabling environment for early detection and treatment of people with TB;
- Printed handouts for the population, manuals for volunteers and brochures for TB patients and their families. All materials are distributed among national partners and sub-grantees according to their applications;
- Developed and distributed a series of **11 videos using a behavioral journalism approach** showcasing real stories of TB patients, their families, HCWs and communities encouraging behaviors around testing, treatment and support of TB patients, and **five videos of local celebrities** addressing their followers, TB patients and others with key TB messages.

Health Care Workers

Cure Tuberculosis developed **training materials for HCWs** on improving counselling skills and interpersonal communication skills to improve adherence of TB patients to treatment (Picture 8) and to determine the risks of treatment interruption, taking into account the multiple barriers to care faced by people with TB as well as gender aspects, with subsequent inclusion in the TB CM training program.

Picture 8. Cure Tuberculosis works to improve the quality of TB counseling for TB patients to help them complete treatment

In addition, the Project developed informational materials and stories with demonstration of model behaviors of health facility managers, health workers, and CBTSs in organizing TB diagnosis and treatment of patients. All information materials were widely disseminated on TV, radio, social media, and through national partners, sub-grantees, and VHC and NRCS WhatsApp groups using a **multiplicative information dissemination** strategy (see SSP 4.4 for details).

Sub-Purpose 4: Improved enabling environment

Sub-Purpose 4 Key Achievements:

SSP 4.1: Improved financing for TB services

1. Cure Tuberculosis advocacy and technical assistance to the MHIF helped **preserve the budget for TB services in 2021** and increased the budget by 12% compared to 2020 despite the demands of COVID-19;
2. Facilitated the transfer of the financing of the **transportation system** in four rayons of Naryn Oblast to the state budget;
3. Revised the **base prices of laboratory tests** required for DR-TB cases in public health facilities to enable contracting of private or other labs for expanded testing (MHSD Order No. 515 of June 5, 2021);
4. Expanded the **PHC payment system** for the successful completion of TB treatment in Naryn and Batken Oblasts and Leninsky district of Bishkek since September 1, 2021;

SSP 4.2: Improved data for decision-making

1. Revised **recording and reporting forms** for the NTP, which together with instructions will be approved by the MHSD;
2. Designed and implemented **TB MIS systems** to automate the routine work of health care workers: EMR, LDMIS, e-TB Register TB-01 Module, and the Treated TB Case Payment at PHC software;
3. Procured **82 equipment packages** of "all-in-one" integrated computers, multifunctional devices to 63 organizations of the NTP and PHC nationwide based on their needs to support the work of the TB MIS software programs;
4. Ensured **99.6% accessibility of TB MIS** in Year 2 through technical support to the NTP (EMR, e-TB Register TB-01 Module, LDMIS, Treated TB Case Payment at PHC, Pharmacy);
5. In Year 2, **1,132 HCWs routinely use TB MIS**.

SSP 4.3: Improved policies

1. Led the development of the **National Program Tuberculosis-VI** for 2022 -2026;
2. Updated the **Regulations of the OTCs** of Batken, Osh, Talas, and Chui Oblasts including OTC expanded functions and tasks;
3. Shared the experience and **achievements of the NTP in TB financing** and introducing the TB CM approach at PHC at the 5th International Conference on Integrated Control of Tuberculosis in Centra Asia; developed and broadcast **three videos** on Kyrgyz TB financing reform;
4. **Nine governance documents** in TB were developed, approved and implemented in Year 2;
5. In Year 2, **2,90 people were trained in elements of the WHO End TB Strategy**.

SSP 4.4: Reduced stigma and discrimination

1. In cooperation with all partners and sub-grantees, developed a **joint Work Plan for SBC Communication** for 2021 and a Plan of Activities for World TB Day 2021 (MHSD Order No. 269 of March 9, 2021);
2. Distributed **285 TB-related information materials** through 82 TV stories, 25 radio spots, two printing materials, 67 online publications, and 109 video reports posted on the social pages of TV and radio companies;

3. Conducted training on **social media marketing** for partners and sub-grantees and assist the NTP with content management of the NTP website and YouTube channel;
4. Achieved **significant reach with TB and TB/COVID-19 messages** through social media: 2,255 messages on five Facebook and five Instagram pages of the MHSD, NTP, NRCS, AVHC, and TB People.

SSP 4.1: Improved financing for TB services

In 2020, Cure Tuberculosis specialists provided technical assistance to the MHIF to secure the budget for TB services for 2021. Thanks to Project advocacy, the funding standards for 2021 remained the same as in 2020 and were signed into the MHIF budget law for 2021. Despite the competing financial demands caused by COVID-19, the 2021 **budget for TB services was preserved** and increased by 12% from 2020 to cover expanded coordination functions.

In 2021, the MHIF allocated 724.1 million soms for the provision of TB services. By September 2021, 389.2 million soms had been used, which is 54% of the budget allocation:

- 342.2 million soms for treated cases in TB hospitals (88%), of which 6.6 million soms for treatment of COVID-19 cases in re-purposed TB hospitals;
- 6.2 million soms (2%) for the payment of successfully treated TB cases at the PHC level in pilot regions;
- 2.0 million soms (1%) for the performance of the coordination function by OTCs;
- 0.4 million soms (0.1%) for the transportation system services in Chui and Talas Oblasts;
- 38.4 million soms (10%) for payroll increase.

In Year 1, the Cure Tuberculosis Project provided technical support to develop a per capita standard (1.6 soms) to finance the **OTC coordination and management functions**. In Year 2, the Project regularly met with the heads of the OTCs of the pilot regions to ensure the effective use of the allocated funds. At end of 2020, an average of 10% of the allocated funds were spent; by the end of 9 months of 2021, the Naryn OTC had used 55%, the Talas OTC – 67% through strengthening M&E function, trainings for PHC facilities, technical support to PHC on the implementation of the TB CM approach and tools in the regions. One of the reasons of the low execution of allocated budget was the low capacity of OTC management and staff and the absence of tools to perform their coordination and management functions. In PY3, Cure Tuberculosis will continue to strengthen the capacity of OTC leadership to effectively manage funds allocated from the MHIF for the coordination and management functions.

With the technical support of the Cure Tuberculosis Project, the **PHC payment system for successfully treated TB cases** has been expanded to Naryn and Batken Oblasts and Leninsky district of Bishkek since September 1, 2021 (MHSD Order No. 1177 of August 26, 2021). The role of DR-TB Concilia was extended to conduct the verification of successful completion of TB treatment. Cure Tuberculosis helped to develop:

- A regulation on the payment procedure at PHC for successful completion of TB treatment with application of the TB CM approach;
- A reformatted notification form on successful completion of TB treatment at PHC, based on the e-TB Register TB-01 Module;
- A procedure for verification of successful completion of TB treated cases at PHC (OTC).

In Year 2, the Cure Tuberculosis Project helped to transfer the financing of the **system of sputum transportation** from rayon level to the OTC in Naryn Oblast to state budget financing. Four remote rayons of Naryn Oblast had been excluded from the transportation system funded by the Global Fund to Fight AIDS, Tuberculosis and Malaria (GF) since June 2020 due to logistics issues and climate and geographical challenges of the region faced by the transportation agent. Thanks to Cure Tuberculosis technical support, in April 2021, a local carrier was contracted to transport samples from the four rayon-level medical centers to the NOTC, and these transportation services have been included in the transportation system financing from the state budget. Now, Naryn Oblast is fully covered with mixed transportation system financing through the GF and the Kyrgyz state budget. From January to September 2021, 4,617 biological samples and 1,315 kilograms of drugs were transported through the transportation system in Chui and Talas Oblasts and four rayons of Naryn Oblast; around 400,000 soms were paid from the MHIF budget for these services.

Cure Tuberculosis monitoring activities in pilot regions demonstrated weak transportation system services of delivering sputum from FGPs/FAPs to rayon level TB laboratories. Next year, the Project will engage HAKR to strengthen the sputum transportation system in pilot oblasts from FGP and FAP levels to rayon level laboratories (PHC) aiming to increase the quantity and quality of diagnostic samples from PHC facilities. This measure is also identified as one of the priority measures of the NTP to restore the detection and diagnosis of TB at PHC, after the sharp decline caused by COVID-19.

In Year 2, Cure Tuberculosis provided technical assistance to revise the **base prices of laboratory tests** required for DR-TB cases on short-term and individual courses of treatment in health care facilities operating in the Single Payer System (MHSD Order No. 515 of June 5, 2021). This will allow health organizations to conclude contracts with private laboratories offering a wider range of laboratory tests. The previous Order on base prices was developed for the period until 2019, and health care organizations could not renew the previously concluded contracts. Cure Tuberculosis Project specialists instructed the heads of the OTCs and PHC organizations in the pilot regions on the rules and procedures for concluding contracts with organizations providing laboratory services based on the updated base prices to provide DR-TB patients with required and free lab tests.

In Year 2, Cure Tuberculosis initiated implementation of the **ABC/VEN analysis** tool in the NTC, Bishkek TB Hospital, and Naryn, Talas, and Batken OTCs for rational use of facility budget for the procurement of drugs. Monitoring results demonstrated that the procurement budget is used ineffectively and the existing regulation and practices are outdated and require revision. In Year 3, the Project will update the ABC/VEN regulation and ensure mandatory use of the ABC/VEN tool for correct procurement of drugs.

SSP 4.2: Improved data for decision-making

National M&E System and Data Quality Strengthening

The Project continued optimization of the oblast tuberculosis centers (OTCs) to strengthen the role of the OTCs in monitoring and evaluating the quality of TB services in PHC facilities and the responsibility in implementing the national TB program at the oblast level. During the meetings with the OTC leadership, the Project introduced the roadmap for restructuring and optimizing the TB service and explained the Cure Tuberculosis goals and how the Project work is aligned with TB service optimization.

The new data management concept puts forward electronic recording, reporting and exchange of information with the help of **e-TB Register**. The full implementation will provide quality of entry data

entry, give quick access to data, and form a TB database for transition to exclusively electronic exchange of information and business processes.

To accelerate the implementation of the e-TB register TB-01 Module, Cure Tuberculosis conducted monitoring visits to Chui, Jalal-Abad, and Osh Oblasts and trained OTC staff working with the e-TB register TB-01 Module, sending electronic laboratory test referrals to LDMIS, and updating the EMR system. Doctors and nurses from rayon FMCs of Chui Oblast also participated in practical exercises and received consultations on data entry into the e-TB register.

In Year 2, the Project provided technical assistance to revise **recording and reporting forms** for the NTP. The full digitalization of TB service processes will help to avoid excessive or duplicative forms or to create new forms (for example the AE recording form) to respond to TB CM and TB contact investigation priorities. The full package of updated recording and reporting forms will be sent to MHSD for approval.

This year, Cure Tuberculosis coordinated joint activities with TB DIAH to develop a **National TB M&E Plan** with a list of national TB indicators. TB DIAH will support the NTP in developing TB surveillance systems and improving data use, building capacity to report on the country's TB Roadmap indicators, strengthening M&E skills, and developing and promoting online data resources. In Year 3, the Project will continue national M&E system strengthening in collaboration with TB DIAH.

Cure Tuberculosis coordinated joint activities with TB DIAH for the coming months and postponed M&E training activities until Y3, since TB DIAH is planning to develop an M&E training package for Training of Trainers and further training of NTP specialists at national, regional and district levels. This activity will be implemented jointly with Cure Tuberculosis and will include building capacity on surveillance, M&E, collection and analysis of key national TB indicators and process indicators.

TB MIS

In Year 2, Cure Tuberculosis continued to design, fine-tune, and implement software that facilitates the routine work of health care workers in TB. Currently, most HCWs prefer to use the TB MIS software instead of paper-based forms.

The following **TB MIS software** products have been developed and are implemented nationwide with the financial and technical support of USAID:

- Electronic Medical Record (EMR) for TB hospitals (p. 33);
- Laboratory Data Management Information System (LDMIS) (p.19);
- e-TB Register TB-01 Module (p. 30);
- Financing of Treated TB Cases at PHC Level software (p. 32).

In order to expand the functionality and create linkages within TB MIS, the following modules and software products are being developed and implemented (as described in SSP 2.2):

- Relationship/interoperability with PHC information system software to perform the coordination function and verification of successfully treated TB cases sent to the MHIF for payment;
- Pharmacy information system (p. 33);
- Transportation of Biomaterials software (p. 20);
- e-TB Register Reporting Module for the automatic generation of additional reporting forms (together with the TB-01 Module, this will constitute the e-TB Register) (p. 31);
- X-ray image visualization connector (p. 33); and

- Knowledge Management System (see below).

In Year 2, the MIS team worked to develop a **Knowledge Management System**, a specialized information system for medical workers and educators for access to medical resources and specialized information, including all clinical, methodological, regulatory and legal literature. The Knowledge Management System is integrated with other TB MIS products, so that users of the e-TB register, EMR and LDMIS can receive real-time notifications for updates from relevant sources to consult and use up-to-date information and resources in TB CM and to improve quality of services. The system is now being fine-tuned and populated.

The stable functioning of TB MIS is ensured in all implementation sites through Project technical support. The MIS team specialists provided consultations and additional and refresher training for users. The Cure Tuberculosis Project conducted an assessment of the current needs of the NTP for technical support and maintenance and outsourced maintenance services to ensure flawless operation of all systems and government-approved accessibility of the software products all over the country, as well as maintenance of all the connections and configuration of GeneXpert equipment and GxAlert systems. Throughout the year, **99.6% accessibility of TB MIS was ensured**.

To expand the system, **82 equipment packages** of "all-in-one" integrated computers and multifunctional devices were presented by the Project to the NRL, OTCs, and PHC laboratories nationwide. The equipment was distributed on a needs basis to ensure the flawless operation of the TB MIS software. In total, **63 facilities** from the NTP (NRL, 2 OTCs) and PHC (60 FMCs) received equipment to work with TB MIS. Technical equipment will increase the data integrity and the transition of health care to digital operation.

As of the end of Year 2, **1,132 health care workers routinely use TB MIS**, an overachievement of 184% against the yearly target.

SSP 4.3: Improved policies

Since April 2021, the NTP has initiated the development of the new strategy **National Program Tuberculosis-VI for 2022-2026**. The Cure Tuberculosis Project played a leading role in facilitating the development of the document and provided both strategic and logistical support to a working group created by MHSD Order of No. 201 of February 17, 2021. The WG, chaired by the NTP director, included all stakeholders in TB (the nongovernmental sector, representatives of health organizations of various levels (AIDS service, PHC, the penitentiary sector, patients, international organizations, and others). The Project engaged independent policy experts to facilitate the process of drafting the strategic document. The main strategic directions of Tuberculosis-VI took into account the shortcomings of the previous TB programs. Thanks to Project advocacy, attention was given to strengthening the management function of the NTP, along with the inclusion of all priority areas of diagnosis, prevention, and treatment. Latent TB, a priority of the Global End TB Strategy 2030, was included as a new section of the Tuberculosis-VI strategy, which will outline necessary measures to formulate an LTBI policy. The Project also proposed to include an SBC component in the National Program Tuberculosis-VI, which represents the first time SBC activities are included in the national TB strategy. Currently, a draft of the National Program Tuberculosis-VI is being discussed by all stakeholders. By the end of the year, the draft will be sent to the MHSD for further coordination and approval by the Government.

Cure Tuberculosis updated the **OTC Regulations** of Batken, Osh, Talas, and Chui Oblasts (MHSD Orders No. 1206, 1207, 1208, 1209 of September 2, 2021) based on a situation analysis conducted in

Year 2 in the pilot regions. One of the key provisions of the updated Regulations is the formation of a TB program management unit in the OTC structure. These units will be formed on the basis of the M&E departments of the OTCs to ensure the implementation of the expanded functions and tasks of the OTCs in the system of providing TB care at the oblast level. In Year 3, Cure Tuberculosis will develop regulations on the TB program management departments in the OTC structure, assist in the formation of a staffing table for these departments and develop tools for the effective implementation of the expanded functions of the OTCs in the TB care system at the oblast level.

This year, the Cure Tuberculosis Project participated in the **5th International Conference on Integrated Tuberculosis Control in Central Asia**, which took place on September 16-17, 20, 2021 in Tashkent, Uzbekistan. Cure Tuberculosis offered technical support to prepare a one-day session on Experience of the Kyrgyz Republic in Financing TB Services. The session focused on the achievements of the Kyrgyz Republic in the field of TB financing reforms and its experience of introducing the new TB CM approach at the PHC level. Cure Tuberculosis developed **three videos on TB financing** reforms in the Kyrgyz Republic which were broadcast during the event. The session was held in-person for more than 60 participants from Kyrgyzstan and online for more than 150 participants from other participating countries (Kazakhstan, Uzbekistan, Tajikistan, Turkmenistan).

The Cure Tuberculosis Project took part in the discussion of services under the public procurement of social services (PPSS). The Project specialists proposed a list of TB services, which was approved in the new program for the PPSS in the health care system.

In pursuance of Presidential Decree No. 26 on the **Inventory of the Legislation** of the Kyrgyz Republic of February 8, 2021, a working group was created under the MHSD to inventory health legislation. It is planned to revise the Law on Public Health and include norms of several laws currently in force in the health care system (the protection of the population from tuberculosis, the prevention of iodine deficiency diseases, the immunization against infectious diseases, and HIV/AIDS in the Kyrgyz Republic), which then will be abolished. This initiative poses a severe threat to key regulations in TB. In response, Cure Tuberculosis developed provisions on TB services in line with the latest international recommendations and standards and submitted a draft to the expert group under the MHSD for consideration.

In 2021, the NTP finalized a country **proposal to the Global Fund to Fight AIDS, Tuberculosis and Malaria for 2021-2023** in the amount of $26,019,855. Procurement of second-line TB drugs accounted for 80% of grant funds, with 20% for laboratory maintenance, support of the transportation system in five regions of the country, monitoring visits, ensuring supply and storage conditions of TB drugs, and motivational payments. Cure Tuberculosis Project staff participated in the technical working groups to develop the concept note and proposed several important priorities for inclusion, including detection of LTBI and preventive treatment of LTBI (3HP) (including procurement of reagents and drugs) and optimization of the projected treatment numbers for MDR/XDR patients based on international recommendations. The new grant covers TB drugs and reagents for 1,612 RR/MDR-TB patients in 2021 and 1,832 in 2022 and 2023. Financing in line with the concept note started in March 2021.

The Project organized **information support** to the TB service reforms facilitated by Cure Tuberculosis. This information support included TV, Radio and Internet publications on the launch of the National Program Tuberculosis-VI development; and publications on the training on the updated WHO guidelines for TB diagnosis and treatment, clinical monitoring and safety management of TB drugs.

In Year 2, the Cure Tuberculosis Project developed **nine governance documents** on TB which were approved and adopted. These include important government and MHSD orders on TB financing and restructuring, expanded implementation of important pilots on DR-TB Concilium reform, contact investigation, TB infection prevention and control, TB MIS, and clinical guidelines. This represents a 100% achievement against the target for this year. The full list of regulatory documents is included in Annex 4.

In terms of capacity and health systems strengthening, in total in Year 2, **2,690 people were trained in elements of the WHO End TB Strategy**, representing a nearly 900% overachievement of the yearly target. Full details are available in Annex 1.

SSP 4.4: Reduced stigma and discrimination

In Year 2, the Project continued to widely inform the population and priority groups on TB issues. Project sub-grantees carried out outreach work among the population through information sessions, conversations, and meetings (see SSP 1.2 for more detail). Cure Tuberculosis provided technical support to the RHPC and coordinated the dissemination of harmonized information on TB using **common SBC approaches**, tools and channels of communication to ensure the effective and efficient use of partner resources and capacity: a joint Work Plan for SBC Communication for 2021was developed for the RHPC, NTP, PHC, sub-grantees and other TB partners (approved by MHSD Order No. 269 of March 9, 2021).

Dissemination of Information

In Year 2, Cure Tuberculosis continued to actively cooperate with **the media**:

- In February 2021, the Project held a training for local media representatives to improve their knowledge of TB and capacity to produce high-quality coverage of TB issues using behavioral journalism.
- Cure Tuberculosis Project, together with the MHSD and NTP, announced a media contest for best coverage of tuberculosis using behavioral journalism from March 1 to September 30, 2021. Cure Tuberculosis received 20 entries from local journalists. The results will be announced in October 2021 and the award ceremony will be on November 2, 2021, to align with the Day of Information and Press of Kyrgyzstan.

Through a multiplicative dissemination approach, the Project uses multiple forms and channels of communication to disseminate information in a regular fashion in order to reinforce key messaging. In Year 2, **285 information materials** about TB were distributed and broadcast on TV – 82; Radio – 25; print media – 2; Internet – 67 (29 on Internet news agencies and 38 through profile websites of the MHSD, NTC, MHIF); and social media – 109 video reports were posted on the social pages of TV companies. The Project organized multiple TV broadcasts of 13 SBC videos demonstrating models of encouraged behavior (1,672 times), with subsequent posting on TV companies' social media pages.

The Project's SBC videos were also published on the **social media** pages of partners and sub-grantees to reach out to a wider audience and priority groups and create a conducive information environment. In Year 2, Project partners and sub-grantees posted **2,255 messages** to disseminate information on TB on 10 platforms: five Facebook and five Instagram pages of the MHSD, NTC, NRCS, AVHC, and TB People (Table 4).

Table 4. Social media metrics for Q4 and Year 2

Partner	Social media	Posts		Followers		Engagement, people		Reach, people	
		Q4	Year 2	Q4	Year 2	Q4	Year 2	Q4	Year 2
NTP	Facebook	66	308	1,831	1,831	2,069	8,311	1,402,139	2,912,645
	Instagram	50	292	1,195	1,195	788	5,336	640,000	2,050,259
MHSD	Facebook	66	246	1,586	1,586	12,687	361,504	249,337	7,781,017
	Instagram	50	230	939	939	1,983	23,395	35,800	134,482
AVHC	Facebook	31	215	2,527	2,527	3,012	29,340	98,109	578,541
	Instagram	31	215	1,048	1,048	1,374	5,117	44,000	103,666
TB People	Facebook	30	170	529	529	179	1,734	1,950	21,295
	Instagram	25	116	72	72	196	688	138	450
NRCS	Facebook	10	53	9,359	9,359	3,393	32,535	66,016	557,509
	Instagram	5	46	19,500	19,500	11,800	111,844	30,400	301,468

In addition, Cure Tuberculosis designed an illustrated template for branding all posts prepared by the Project's SBC specialists, with the USAID and JSI logos and key messages from the Project SBC Strategy (Pictures 9 and 10).

Pictures 9 and 10. Sample graphics posted on social media sites with key messages from the SBC Strategy

In Year 2, Cure Tuberculosis conducted a training on **social media marketing** (SMM) for the Project's partners and sub-grantees to increase the efficiency of disseminating information about TB through social media. Thanks to Project support, the performance of the NTP's social pages on Facebook and Instagram in Year 2 increased, compared to Year 1 (Figures 10 and 11) evidenced by larger numbers of posts, followers, reach, and engagement.

Figure 10. Number of followers of NTP Facebook and Instagram accounts

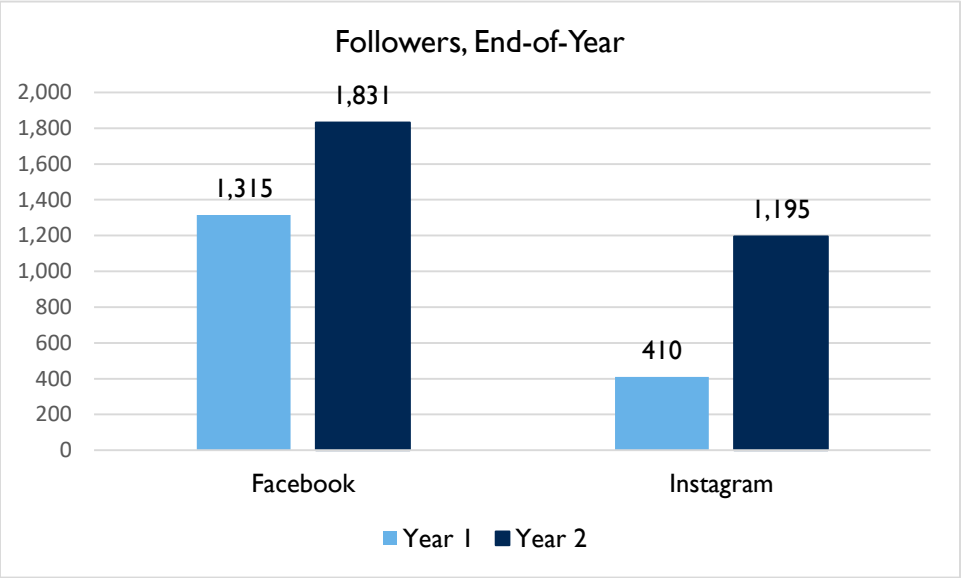
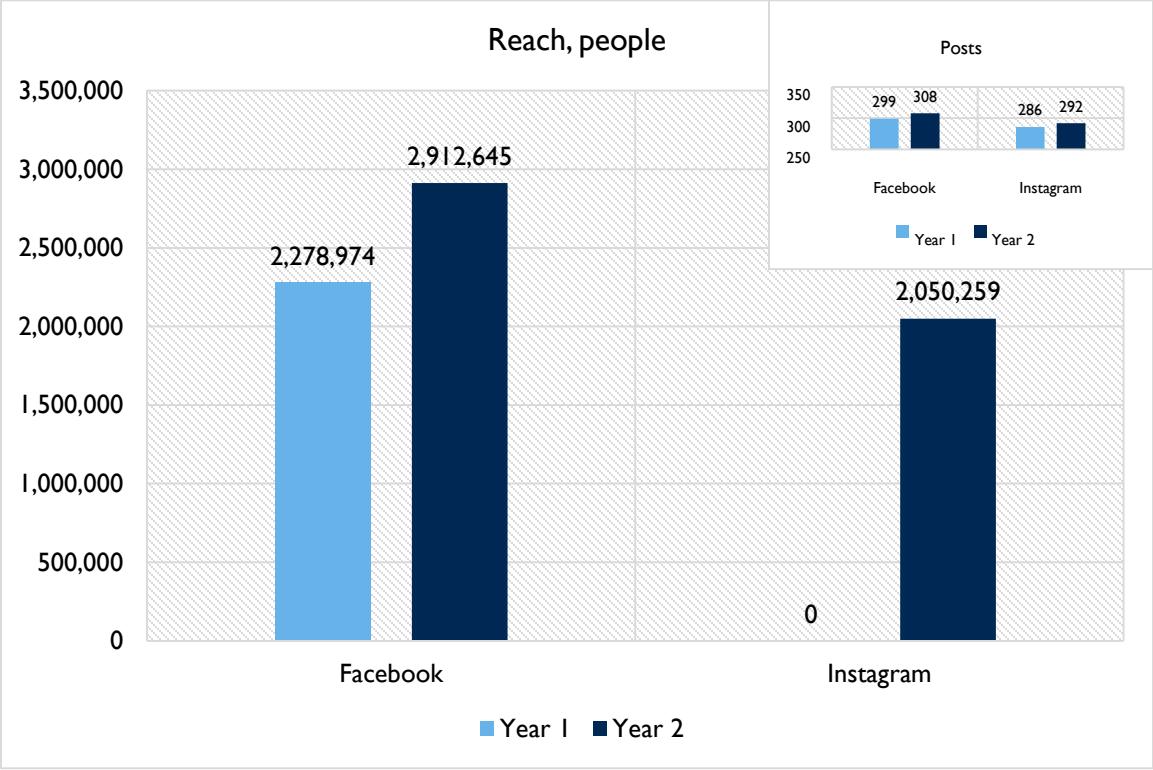


Figure 11. Number of posts and people reached in Year 2 on Facebook and Instagram of NTP



To maximize the coverage of the population with information on TB and create a unified information environment, the Project received direct access to the Facebook page of the Social Government and the Bishkek city Health Department social pages for the publication of information on TB.

At the request of the MHSD public relations sector to provide technical assistance to all OTCs in using social media to improve outreach activities of the TB Service (MHSD Order No. 1257 of September 13, 2021), the Project will train OTC staff and consult on the creation and maintenance of social media accounts. In September 2021, on-site trainings were held and Facebook and Instagram pages were opened for the Batken and Osh OTCs. This work will continue to cover the OTCs in other regions.

In Year 2, the Project SBC team provided technical support to the NTP in building and managing the contents of the official **NTC website**. In January 2021, the NTP website temporarily stopped functioning due to NTP difficulties in paying for hosting (see Challenges and Proposed Solutions). Thanks to the Project's advocacy, the website resumed functioning since the end of July 2021. At the request of the MHSD and the OTCs, the Project negotiated with the NTP leadership the development of individual pages for the Oblast TB Centers on the NTP website, which would enable all OTCs to post their information on a single platform without opening separate websites. The Project will train NTP staff on website and content management to ensure a smooth handover. In addition, Project staff assist the NTP with content management of their **YouTube channel**, and use it as a means of dissemination for SBC videos and other materials.

In Year 2, the Project continued to work closely with **Door Media** under the USAID Tuberculosis Patient Support Project. Cure Tuberculosis regularly contributes to the content of Door Media's monthly e-newsletter on Tuberculosis, keeping readers informed of the Project's work and achievements. In Year 2, the Project publicized 20 articles in the electronic Door Media Newsletter.

Cross-Cutting Issues

Gender equality and female empowerment

The Cure Tuberculosis Project adheres to the principles of equity, gender equality and women empowerment. Gender is an integral part of the Project agenda and it makes sure that women's needs and concerns are equally addressed in the work of its sub-grantees and partners.

The Project built a well-qualified team of specialists, where balance is also reached in terms of gender, and hired short- and long-term consultants, to help partners achieve set goals in decreasing the burden of DR-TB in the country and building better health infrastructure to provide quality TB services to the population.

In Year 2, Cure Tuberculosis staff reached 29 people. The share of women in the Project team was 62%. The Project contracted 48 consultants (29% male and 71% female) in information systems, law, financial systems and accounts, health issues, analytics, and outreach (see Figure 1, Annex 5: Gender Graphs and Charts). The Cure Tuberculosis leadership is also represented by women who hold COP and line director positions.

Cure Tuberculosis continuously works with partners and sub-grantees to address gender issues in the diagnosis, treatment, and prevention of TB among the priority groups.

- The Project included gender in the TB case management curriculum developed together with the Kyrgyz State Medical Institute of Post-Graduate Training & Continuous Education (KSMIPTCE), including gender aspects affecting TB diagnosis and treatment and different approaches to counseling women and men on TB treatment and care.
- The Project included gender-specific information about TB--the results of the formative research, gender aspects affecting the diagnosis and treatment of TB, the specifics of counseling women and men on TB treatment to increase adherence to treatment--in all training for sub-grantees, HPU specialists, TB specialists, and primary health care workers in the framework of TB CM implementation.
- The guidelines, manuals, and checklists used by sub-grantees and HPU specialists have gender-specific information related to TB.

SBC Gender Strategy and Gender-Based Approach in Community Work

Gender is an integral part of the SBC component. The Project tailored SBC activities based on the findings of the formative research conducted in Year 1, which also informed the development of the SBC strategy, with gender-related recommendations. The Project developed gender-sensitive messaging in communications and used behavioral journalism to demonstrate positive scenarios through mass media and social media aimed at countering the negative narratives and higher level of stigma for women affected by TB. Cure Tuberculosis pays significant attention to working with the population and communities to make sure women 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.

When conducting information sessions among the general public, religious groups, and in the media to improve people's perception of TB, eradicate stigma and discrimination, and create an environment that enables faster diagnosis and treatment, trained employees and volunteers of the Project sub-grantees disseminate gender-specific information on TB diagnosis and treatment, stigma and discrimination in

family and society towards persons with TB, different ways gender groups receive information, and the importance of patient support, especially of girls and young women to complete treatment.

The role of women in family health and stigma towards women with TB was the topic of a workshop on Tuberculosis and Women's Health held by Cure Tuberculosis, together with the RHPC and the NRCS. Patronage nurses, a psychologist, ex-TB volunteers, and family members of TB patients discussed challenges and problems faced by women with TB, gender aspects in access to evidence-based information about TB, barriers to TB care, and other pressing gender-based health issues.

Project staff members took part in four shows on TB and on radio, where the particularities of societal views towards women and men with TB and manifestations of gender-related stigma were discussed.

The health care system in the Kyrgyz Republic is dominated by a largely female work force, with some key leading figures in the MHSD, MHIF, and NTP being women. The majority of VHC members, community-based workers and volunteers are also women. As such, many of the Project activities aimed to strengthen the knowledge and skills of medical workers, partners, and other counterparts, build the capacity and expertise of female specialists. Cure Tuberculosis makes sure that women have equal access to knowledge as men (see Figure 2-3, Annex 5: Gender Graphs and Charts).

In Year 2, Cure Tuberculosis:

- Trained 2,690 people from TB service medical facilities, PHC, HPUs, sub-grantees, and other partner organizations in components of the WHO End TB Strategy (TB Case management, TB IC, cohort analysis for OTC and DR-TB Concilium specialists, SBC approach and raising community awareness about TB, clinical monitoring and a-DSM, etc.). Participants included 2,329 women (87%) and 361 men (13%);
- Trained 10,508 VHC members, community and religious leaders, of whom 1,473 were men (14%) and 9,035 women (86%);
- Reached 214,664 people from all social and age groups, from urban and rural settlements with informational sessions, of whom 91,387 were men (43%) and 123,277 women (57%).

Data disaggregation by gender

Gender is one of the key factors when collecting information on tuberculosis for monitoring and evaluation. The analysis of this information shows if there is a gender gap in screening, diagnosis, and treatment of tuberculosis and if and where the Project needs to take action.

In Year 2, Cure Tuberculosis collected and analyzed data, with disaggregation by gender, on the incidence of TB among health care workers reported by DDP&SSES and notification rate for new TB cases reported by the NTP. The number of health care workers diagnosed with TB increased from 34 in 2019 to 48 in 2020. The TB incidence rate among HCWs was 135.7 per 100,000, with an annual target of 52 per 100,000. Among those with TB, eight were men and 40 were women (see Figure 4, Annex 5: Gender Graphs and Charts). This higher rate among women most likely reflects the fact that the Kyrgyz health sector is dominated by a largely female workforce, and therefore higher incidence among women HCWs is more likely.

Out of the 48 HCWs infected with TB in 2020, three were from TB hospitals, 18 from PHC facilities, and 27 from general health facilities. In 2020, 35,360 medical specialists worked in the health sector in total. The higher TB incidence at PHC (increased by 11 cases up from seven in 2019) is likely due to a larger share of HCWs undergoing X-ray/screening for TB in 2020. Due to concerns about COVID-19

and similarity between respiratory symptoms of COVID-19 and TB, increased screening led to greater TB case detection among HCWs.

The 2020 notification rate for new TB cases fell to 53.4 per 100,000 population compared to 78.9 in 2019, largely due to decreased case detection in relation to COVID-19. Of the total 3,518 TB cases registered in 2020, the civil sector notified 3,477 cases and the penitentiary system 41 (in 2019, 4,985 and 111 notifications, respectively out of a total of 5,096 registered TB cases). In the civil sector, 1,973 were male cases and 1,504 were female cases, and in the penitentiary system, all cases were men (see Figure 5, Annex 5: Gender Graphs and Charts). The lower notification rate for new TB cases among the population in 2020 (decreased by 33%) was due to a decreased TB case detection associated with the COVID-19 epidemic in the country.

As noted above, the Project uses gender-sensitive messaging in public communications to reach the female population and eliminate barriers to TB care for women. Further, as the main drivers of health promotion in the family, educating women on TB issues in turn helps to improve TB screening and diagnosis across all population groups.

Starting from Year 3, the Project will include two gender-specific output indicators in the MELP:

- Number of HCWs trained in TB case management, including gender aspects
- Number of community leaders trained in TB, including gender aspects

These indicators are meant to reflect on the Project's input in building the capacity of health care workers in providing psychosocial counseling for TB patients, taking into account gender aspects, and training community leaders on gender-specific information in TB when working with the population.

Sustainability mechanisms

Cure Tuberculosis works closely with the Kyrgyz Government to ensure the institutionalization and sustainability of improved TB services, improved infrastructure and legal framework, and the self-reliance of national partners.

Thanks to Cure Tuberculosis **advocacy and technical assistance to the MHIF**, the USAID-supported specimen and drug transportation services in Chui and Talas Oblasts, the financing of the successfully completed TB cases at PHC, and the per capita financing of OTCs for the coordination of TB services at PHC were financed in full despite the emergency reallocation of funds to the fight against COVID-19. The MHIF Budget 2021 allocated 724.1 million soms in funds for financing TB services in health care organizations. The approved budget was 12% larger than the budget of 2020. **Institutionalization** and incorporation into the MHIF Budget Law of the USAID-developed financing methodology and standards helped ensure the sustainability of all these initiatives and Kyrgyz Government ownership.

In Year 2, Cure Tuberculosis continued to fine-tune services, develop new approaches, and roll out the approved methods and techniques in new areas. The Project reached a political agreement with the MHIF to **expand the system of payment for successfully treated TB cases at PHC** in Naryn and Batken Oblasts and Leninsky district of Bishkek. The Project developed a draft order approved by the MHSD and will provide technical assistance to the implementation of the payment system through capacity-building training, consultation, and other required technical support. The Project provided technical assistance to the MHIF to develop a financing mechanism that allowed covering transportation services to the four remote regions in Naryn Oblast by the state funds. These rayons had not been covered by the GF/UNDP program who rolled out USAID-developed financing mechanisms and standards in other regions. Cure Tuberculosis will continue to provide technical assistance and

consultation to the MHIF and NTP to transfer TB transportation services in all regions under the state budget financing.

Cure Tuberculosis **continued the development and implementation of TB MIS**, including four key products, LDMIS, EMR, and e-TB Register TB-01 Module, and TB Treated Cases at PHC adapting TB MIS to the needs of the Kyrgyz health sector in better data management tools for quality and fast diagnostics and treatment. The Project worked closely with the users of the LDMIS, EMR, and e-TB Register information products to respond to their feedback, provide consultation, and technical support.

The Project started negotiations to **transfer the LDMIS to the MHSD** and provided the MHSD with full access to the coronavirus test database developed during the COVID-19 epidemic in the country. The transfer aims at the sustainability of the system and its roll-out nationwide, including potentially for adaptation other diseases in the future. Cure Tuberculosis will continue to fine-tune, build user capacity, and provide consultation and other required support for the operation and availability of software products in the field of TB services until government takeover.

The Project transferred the technical support of the **modified COVID-19 LDMIS system** to a new USAID initiative to support the Kyrgyz Republic's response to the ongoing COVID-19 pandemic. The measure aimed to help ensure the maintenance, further implementation, and financing of the SMS notification and QR-code generation features in the first year of implementation, under technical supervision and oversight of the Social Services State Enterprise under the State Committee on Information Technologies and Communications (SCITC).

In order to improve the **quality of care** for TB patients in in-patient settings, Cure Tuberculosis **donated 100 hospital beds and mattresses** to the NTP. The value of this assistance is estimated at $360,800. These modern emergency relief beds are specifically tailored to the needs of patients with respiratory problems and provide special features to ensure patient safety and facilitate treatment. The Cure Tuberculosis Project partnered with a humanitarian organization Project C.U.R.E. to organize the delivery of the beds to the Kyrgyz Republic from the United States.

To ensure government ownership and sustainability of the policies and procedures in TB diagnosis, prevention, treatment, and care developed with the technical assistance of Cure Tuberculosis, the Project actively facilitated the development of the **National Tuberculosis Program-VI for 2022-2026**. The Project provided technical and financial assistance to the Working Group and advocated to include important new topics in the Tuberculosis-VI program, including NTP management strengthening, latent TB infection, and, for the first time, social and behavior change.

The Project contributed to the development of a **national curriculum** to improve the knowledge base of TB specialists. The curriculum, which includes many topics on TB case management, clinical and laboratory diagnostics, DR-TB, etc. has been adopted by the Kyrgyz State Medical Institute of Post-Graduate Training & Continuous Education (KSMIPT&CE) which ensures its institutionalization.

COVID-19 epidemic

Cure Tuberculosis Project COVID-19 activities

The Project had to factor in COVID-19 in all its activities. In Year 2, the Project implemented its activities relatively unrestricted, including in the regions thanks to an improved epidemiological situation and lifted restrictions. Some of the events took place in a hybrid in-person/virtual format to ensure the safety of people at high risk of infection. When in June, during the third wave (see Annex 6 – COVID-19

epidemic in the Kyrgyz Republic for detail), the epidemiological situation started to pose a risk for the safety of Project staff, sub-grantees, partners and beneficiaries, the Project decided to cancel or postpone some events and hold only those meetings in-person that were crucial, could not be held otherwise and could be organized with appropriate sanitary and hygiene measures. Starting September, the Cure Tuberculosis office resumed regular work hours from 9 a.m.-6 p.m.

Despite the myriad challenges posed by COVID-19, a number of the resulting emergency response strategies will have lasting benefit to the country's TB response. Many of the strategies for remote treatment adherence support and virtual clinical services that were implemented in response to COVID-19 have now been **institutionalized** via several MHSD orders. The 14-day drug supply, expanded community-based treatment support options, and VOT instructions that were rolled out via the order on provision of TB services under emergency conditions in Year 1, have now been included into the order on case management in Year 2 and will continue being used in routine TB case management. The virtual Concilia piloted in Year 1 during the COVID-19 emergency have now been approved via an MHSD order and are being rolled out nationwide oblast by oblast. The virtual patient support groups offered via WhatsApp during the COVID-19 lockdown proved very popular with patients and are being continued. As such, all of the strategies that were developed to mitigate the impacts of COVID-19 on TB services have now become part of **updated and improved approaches in TB management**.

At the beginning of Year 2, Cure Tuberculosis received a **Letter of Recognition** from the State Committee on Information Technologies and Communications (SCITC) for support to the COVID-19 response in the Kyrgyz Republic in 2020. The Project helped modify the LDMIS used for TB testing throughout the country to record, store, share, and report data on COVID-19 tests. The modification to the LDMIS system was implemented in 15 state laboratories nationwide with an additional SMS notification module to immediately inform people about their test results online, the QR code generation feature to validate test results, and with all necessary measures to ensure data protection and personal information safety. The Cure Tuberculosis MIS team developed software to generate QR codes for validation of laboratory certificates in Q1Y2. When scanned, QR codes link to the official database and enable quick authentication of a test result and avoid forged results.

In Year 2, the Project developed a **combined TB/COVID diagnostic algorithm** as an emergency response to decreased detection of TB cases. This combined testing aimed to strengthen the detection of people with presumptive symptoms of TB who otherwise would be overlooked due to diverted attention to COVID-19. TB case detection was added into the COVID-19 clinical guidelines (see SSP 1.1 for detail).

The Cure Tuberculosis Project designed a **COVID-19 module** for the nationwide QTSA survey that was integrated into both the provider interview and patient questionnaire to capture the impact of COVID-19 on TB services, including impacts on TB diagnosis, treatment, infection control, drug management, resource allocation, patient health-seeking behavior, and case management and treatment support. At the same time, the implementation of QTSA was affected by the 32% decrease in detection of TB cases in 2020 due to COVID-19. An extensive recalculation of the sampling frame had to be conducted which required adding a significant number of rayons and facilities (see the SI & M&E section for detail). This delayed the implementation of the QTSA and demonstrated first-hand the impact of COVID-19 on the TB control system.

The COVID-19 module proved to be an extremely valuable tool in assessing the impact of COVID-19 on TB services. The findings of the QTSA on the impact of COVID-19 show **significant disruption to TB services** across all areas: TB diagnosis and case detection, contact investigation, access to services

for patients, TB treatment and case management, infection control, and many health system resources diverted to COVID-19. However, the findings also show **significant nationwide uptake** of the remote treatment adherence and virtual clinical services initiatives implemented in response to COVID-19. These initiatives helped **mitigate the impact of COVID-19** on TB case detection and treatment and helped patients continue treatment uninterrupted, and served to make services more **patient-centered**. Detailed findings from the QTSA on the impact of COVID-19 on TB services are presented in Annex 7.

The impact of COVID-19 on TB was a frequent topic of **training sessions**, workshops, round tables, and other activities held by the Project or its sub-grantees and partners. All education provided by the SBC team (training for sub-grantees, HPU specialists, media specialists of health organizations and medical institutions) included information on the impact of the COVID-19 pandemic on TB, similarities and differences in TB and COVID-19, and the projected increase in the detection of TB cases due to the lower detection during the lockdown and the height of the epidemic. The Project provided technical assistance to the MHSD to train the heads of republican medical institutions in Bishkek on communication to the media about COVID-19 and TB, the principles of effective and crisis communication, and use of social media in disseminating information.

During the year, the Project continued **targeted support of TB patients** from priority groups by providing CBTS services and online support through WhatsApp support groups to decrease the number of personal contacts of TB patients, who are at risk of co-infection, with HCWs and other patients.

Strategic Information and Monitoring and Evaluation

Quality of TB Services Assessment (QTSA)

In Year 2, the Project implemented a facility-based KAP survey, using standardized QTSA tools developed by the USAID/MEASURE Evaluation Project. The Project helped adapt the four questionnaires (facility audit, provider interview, patient interview, and register review) to the Kyrgyz context and developed a new COVID-19 module in collaboration with TB DIAH to assess the impact of COVID-19 on TB services. The module was integrated into the provider and patient questionnaires to capture effects on TB diagnosis and case detection, treatment and case management, infection control, drug management, resource allocation, patient health-seeking behavior and treatment support. The **COVID-19 module** was piloted in Kyrgyzstan and Afghanistan simultaneously and proved to be an extremely valuable tool in assessing the impact of COVID-19 on TB services. The final version of the module is now available on the TB DIAH website as part of the global toolkit for countries to use and adapt to their contexts.

All tools were finalized, translated to Russian and Kyrgyz, and field-tested. After receiving necessary approvals from the Kyrgyz Ethical Committee and MHSD, PIL Research Company conducted fieldwork from January 2021 to March 2021. Due to the 32% decrease in TB case detection related to COVID-19, PIL researchers could not recruit sufficient TB patients in the field and an extensive recalculation of the sampling frame was conducted. An additional 12 rayons and 76 facilities had to be added in order to meet the target sample, which entailed additional time and costs. In total, **1,381 interviews** were conducted in **258 facilities** in 27 rayons, five towns, and the two largest cities (Bishkek and Osh), representing approximately **70% of the total number of rayons nationwide**. The interviews consisted of 258 facility audits, 740 patient interviews, 350 provider interviews, and 33 register reviews.

After completion of fieldwork, the research company cleaned the data and conducted data analysis. The draft report is currently under review by Project staff as well as the NTP, and will be finalized in the next quarter. Preliminary analysis of the results of the COVID-19 module contributed to several presentations to local and regional partners. Detailed findings from the QTSA on the impact of COVID-19 on TB services are presented in Annex 7.

Strategic Information Dissemination

Four abstracts were submitted and accepted to the **52nd Union World Conference on Lung Health** on the results of the QTSA on the impact of COVID-19 on TB services, the Cure Tuberculosis Project's programmatic interventions to mitigate the impact of COVID-19 on TB services, and results from the Project's SBC formative research. The abstracts generated two oral presentations and two e-posters at the Union conference:

1) "Impact of COVID-19 on TB services in the Kyrgyz Republic" (oral presentation)
2) "Evaluation of factors affecting the behavior of target groups in health care-seeking and TB treatment in Kyrgyzstan" (oral presentation)
3) "Interventions to mitigate the impact of COVID-19 on TB services in the Kyrgyz Republic (poster)
4) "Comparison of COVID-19 related tuberculosis resource reallocation in Afghanistan and Kyrgyzstan" (joint poster in collaboration with TB DIAH)

Operational Research

In Year 2, the Project also implemented an operational research assessment to evaluate the **implementation of the incentive payment system for successfully-treated TB cases at PHC**. The research study assessed the criteria used to verify successfully treated cases for payment, the categorization of cases based on clinical criteria, and the payments made. The assessment will serve to inform the design of the verification system at the OTC level and improve the system's effectiveness going forward.

The study is based on a sample of 300 cases (20%) from the cases submitted for payment in Chui and Jalal-Abad Oblasts from the 2018 treatment cohort. The Project hired two NTP specialists to conduct the operational research. They analyzed medical records kept at PHC facilities and verified these records against the TB-01 form and TB-02 form (e-TB Register), and TB lab journal. The final report with research results is being reviewed by Cure Tuberculosis staff in consultation with the NTP.

TB DIAH

The TB DIAH project began operation in Kyrgyzstan. TB DIAH will support the NTP in developing TB surveillance systems and improving data use, building capacity to report on the country's TB Roadmap indicators, strengthening M&E skills, and developing and promoting online data resources.

Cure Tuberculosis coordinated joint activities with TB DIAH representatives for the coming months and collaborated on the QTSA survey sample recalculation, TB MIS audit, national M&E system strengthening, etc.

MELP

At the end of Year 2, the Project **realigned the Project MELP** to the recently-released USAID Performance-Based Monitoring and Evaluation Framework (PBMEF). Many of the indicator definitions were revised to match PBMEF definitions and allow for reporting on Kyrgyz Republic Annual TB Roadmap indicators, a few indicators were added or substituted, and two new gender indicators were added to measure gender-related activities. The Project's logical framework was also revised to align more closely to the Global TB Accelerator pillars Reach – Cure – Prevent – Sustain.

Sub-grantee M&E System Strengthening

During the reporting period, the Analytic team and technical staff paid monitoring visits to the Project sub-grantees to verify the reporting data and assess the management and storage of data (paper and electronic documents), the quality of the project database, and the implementation of program activities. In addition, the Project specialists checked the targeted use of funds under the articles "Motivation packages" and "Transportation costs" of sub-grantees offering psychosocial support to people affected by TB. The monitoring team provided detailed recommendations for all identified gaps (including on branding and marking when implementing project-related activities) in order to improve the M&E system of sub-grantee organizations, their record-keeping practices, and discussed planned events for coming months.

In addition, during the visits, Project technical staff held meetings with patronage nurses, volunteers and patients (randomly selected), discussed current issues, gave recommendations and advice.

PITT

The Project Indicators Tracking Table (PITT) including performance of annual reporting indicators is included in Annex I.

Challenges and Proposed Solutions

CHALLENGES	PROPOSED SOLUTIONS
Reforms in the government initiated at the beginning of 2020 by the new President Administration assumed a new structure of the cabinet, reassignment of functions and goals of the ministries and departments. The changes in the government pose a long-term challenge to Project technical assistance supporting the Kyrgyz TB Service as the restructuring of the line ministries affects health organizations at all levels, from PHC to decision-making authorities: - The Ministry of Health was merged with the Ministry of Labor and Social Development into the Ministry of Health and Social Development according to the Resolution of the Government of the Kyrgyz Republic of February 12, 2021, No. 38. - The Mandatory Health Insurance Fund and Social Fund under the Government were submerged under the MHSD through the same Resolution. The merger created an ambiguity in the management of the budgets of these organizations and the execution of the surveillance function. MHIF was previously the purchaser and MOH the implementer of health services; now the MHIF reports to the MHSD. - The territorial hospitals were merged with the FMCs to General Practice Centers, which distracted medical workers and managers from their current activities and required the re-discussion of plans and re-approval of new documents. - Consolidation of territorial SES increased the geographical coverage for epidemiological investigations. The above might affect the implementation of Project action plans in terms of time, funding, and effort.	The Project followed up on the undergoing reforms and adjusted its action plans accordingly to continue smooth operation and the implementation of set tasks and activities according to the schedule and at minimum costs. - Ensured informed support and buy-in of the Project by the MHSD, MHIF, NTP, and other stakeholders; - Ensured the new staff received appropriate training to facilitate quick on-boarding and continued support and instruction on TB issues; - Provided support to SES in conducting epidemiological investigations.
The **changes in the leadership** in key Project national partners caused by reappointments and structural reforms created difficulties in coordinating work plans and processes and delays in the approval of many strategic documents and implementation of activities:	The Project adapted some activities taking into account the ongoing changes and delays. - Invested significant time and effort briefing the new appointees on current issues in TB control in the Kyrgyz Republic and explaining Cure Tuberculosis goals and how

- A new Minister of Health was appointed in October 2020; - A new Deputy Minister of Health (TB issues) was appointed in November 2020; - A new Deputy Minister of Health (Digital Health) was appointed in November 2020; - A new NTP Director was appointed in April 2021; - Directors of many FMCs and GPCs were reappointed; - A new head of the MHSD Medical Department, which oversees TB issues, was appointed in April 2021; - A new specialist responsible for TB issues at the MHSD Medical Department was appointed in August 2021; Above required additional time and effort to meet and brief the incumbents on current issues in TB control in the Kyrgyz Republic and bring them in line with the Project goals and priority activities. In most cases, managers of inpatient facilities took the leadership of GPCs, who are not committed to TB case management at the primary care level. The Project faced difficulties in the implementation of TB CM, detection of TB, and the introduction of the e-TB Register, LDMIS. The change in the leadership of FMCs resulted in a failure to renegotiate contracts with public or private laboratories for the delivery of laboratory tests required for clinical monitoring.	the Project work is aligned with the NTP, RHPC, and MHSD; - Held program meetings with the new head of the MHSD Treatment Department to discuss current TB activities and plans for 2021, strengthen relationships and facilitate TB issues; - Worked close with the new MHSD specialist in charge of TB to bring them on board with project plans and promote TB issues with the MHSD; - Discussed with the FMC leadership the need to conclude model agreements with service laboratories.
In accordance with Presidential Decree No. 26 of February 8, 2021 on the **inventory of regulatory and legal acts**, the MHSD began an inventory of laws in the health care system. As a result, the Law on Protection of the Population from Tuberculosis is proposed to lose its effect. Some provisions of this law will be included in the Law on Public Health. The Decree recommends until December 31, 2021 to make proposals aimed at eliminating the identified inconsistencies in the legislation, and says nothing about the development and adoption of bills by this date. However, some experts or groups of experts involved in inventory "hastily" analyze laws and make recommendations for their loss, revision, or re-approval, often not taking into account those who will be directly affected by these changes in legislation. Thus, there is a risk some key provisions of the Law on Tuberculosis will be lost.	The Project HSS team and legal advisor actively participate in discussions on the new bill and make proposals on the inclusion of provisions on tuberculosis in accordance with the new international standards for TB management.

COVID-19 epidemic in the country continued to affect the work of the Project and TB system. In June 2021, the epidemiological situation started to worsen, with the highest cases in Bishkek and Chui Oblast (see Cross-cutting issues). - Core funds of the health care system were directed to the fight against COVID-19, which led to delays in financing TB services at the PHC level, including incentive payments to HCWs for treated TB cases at the PHC level; - TB hospitals accommodated patients with COVID-19, without adequately taking IPC measures into account - patients with TB were hospitalized together with COVID-19 patients without taking into account the bacteriological status and resistance to drugs, posing a threat of co-infection; - In June, about 60 NTC employees contracted COVID-19 and were quarantined. The outbreak limited the capacity of the NTC and restricted the work of the Project; - Organization of "red zones" in hospitals of general practice for patients with COVID-19 limited the introduction of TB active case finding at PHC; - Training, monitoring, etc. related to the implementation of the TB active case finding approach was thrown out of schedule in Bishkek City Clinical Hospitals No. 6 and No. 1 as these health facilities were fully repurposed to fight against COVID-19; - SES employees were mostly occupied with COVID-19 issues, which affected their ability to conduct contact tracing for TB; - Many rayon TB doctors in the FMCs commissioned their services to COVID-19 mobile brigades, which distracted the rotation schedule for the deputy chairs of DR-TB Concilia; - Project could not deliver some training due to detected COVID-19 cases among the health care workers of targeted health facilities; - In the course of the QTSA implementation, PIL researchers faced difficulties recruiting TB patients in the field to meet the required sample size due to a decrease in detected	The Project considered various measures to help the health system to respond to the COVID-19 challenges and continue the implementation of the planned project activities: - Project specialists worked with the MHIF to find ways to settle arrears in payments for the successful completion of treatment of TB cases at the PHC level for 2020 and ensured the financing for TB services in 2021 at the level originally set for 2020 without reductions; - To ensure compliance with IPC requirements, the Project offered IPC training for health care workers and strengthening administrative measures in health organizations. The Project developed an algorithm for the hospitalization of TB patients, taking into account the admission of patients with COVID-19 in the same health care facilities; - The IPC measures in the NTC were intensified with support from the Project; - Project specialists worked with the management of the re-purposed Bishkek hospitals to re-confirm the implementation of the TB active case finding and begin the planned activities as soon as the epidemiological situation has improved; - The Project decided to involve other entities in TB contact tracing, including PHC facilities, local self-government representatives, and village health committees, to compensate for the low availability and involvement of SES specialists; - Implementation of combined testing for COVID-19 and TB in Leninsky district of Bishkek continued as an emergency response to lower detection of TB cases until the NRL has officially stopped testing for COVID-19; - Concilium members backed each other up; - Project staff and consultants postponed training in the facilities with employees who contracted COVID-19 until the situation has improved; - The Project collaborated with TB DIAH HQ to recalculate the sampling frame and reallocate sample targets by oblast

TB cases. National NTP statistics reported that detected TB cases fell roughly by 30% in 2020 compared with previous years; - New restrictions associated with the epidemiological situation limited the number of participants of public events; - Mass events in March to commemorate World TB Day 2021, which usually convene many people from all walks of life for marathons, bike rides, concerts, flash mobs, etc. were restricted to mainly online activities.	according to updated national data. This required PIL to add an additional 12 rayons and 76 facilities to meet the requirements for the sample size of health care workers and patients. Three contract modifications were signed altogether and a recalculated budget increase to provide for a time extension and increased expenses to complete fieldwork, data analysis, and writing the final report; - Project resorted to online format when holding some information dissemination activities, paying maximum attention to the TB/Covid-19 problem in conventional and social media, including that of the national partners and sub-grantees; - Some events were postponed to a later date when the epidemiological situation has improved; - Project sub-grantees organized sports events and other outdoor activities in the regions where the epidemiological situation allowed mass gatherings, otherwise covering the TB problem primarily online, in conventional and social media.
The **open fire conflict** on the border with Tajikistan in April 2021 jeopardized the roll-out of activities in Batken as a pilot region in PY2. - The three-day conflict (April 28-30) between the border services of the two countries resulted in 36 casualties among Kyrgyz citizens according to official data (190 were injured); 40.6 thousand people were evacuated, of whom 24 thousand children; thousands fled their homes. - Many lost their property. Some administrative buildings and businesses were destroyed. - The situation continues to be tense and the risk of an open conflict remains. The issue is the disputed sections of the border (est. 451 km) between Kyrgyzstan and Tajikistan that have not been demarcated and delimitated.	The Project monitors the situation and will respond to the developments in Batken Oblast with care for the life and safety of its staff, consultants, sub-grantees, and partners. While the situation permits, the Project continues the roll-out and implementation of activities as scheduled, transferring some of the planned activities online.
- The process of **registration of WHO-prequalified TB drugs** faced difficulties primarily due to COVID and associated	Earlier in January 2021, the Project initiated a working meeting with the MHSD, DDS&ME, NTP, representative offices of organizations distributing WHO-prequalified TB drugs, and partners to

delays in communication and logistical issues. - The representative offices of organizations distributing WHO-prequalified TB drugs were not able to bid in the tender for the procurement of TB drugs at the expense of the state budget before the registration was completed; - The WHO-prequalified TB drug distributors are not interested in the Kyrgyz market because of its small capacity and the Kyrgyz Government doesn't have leverage in negotiations on the price of TB drugs; - The Kyrgyz Law on Public Procurement prioritizes low price over quality. After the strike of the COVID-19 pandemic, the prices for TB drugs have risen, and the distributors of WHO-prequalified TB drugs cannot decrease the price to accommodate Kyrgyz government requirements for the lowest price available to procure WHO-prequalified TB drugs in the country.	expedite the registration process of TB drugs submitted for registration. Fifteen out of 16 TB drugs passed registration. The Project will initiate training in PY3 for the MHSD, Ministry of Finance, MHIF, DDS&ME, NTP in the requirements for drawing up technical specifications for TB drugs in accordance with international standards. USP will help develop a template for drafting technical specifications for TB drugs to use in the procurement of TB drugs with public funds in accordance with GMP and other drug quality standards. These measures will help NTP procure quality WHO-prequalified TB drugs.
The absence of an **ACSM/SBC specialist** at the NTP created difficulties in coordinating and developing joint SBC plans for national partners and stakeholders in TB.	The Project SBC team rendered technical support to the RHPC to lead the coordination and development of a joint SBC plan for 2021, a plan of events for World TB Day, and the development of a National SBC strategy for 2022-2026.
The problem with the **lack of necessary IT infrastructure** in health care organizations persists. Health facilities lack the necessary IT infrastructure, sustainable IT processes, and technical support, which impedes current work and slows down the initiation of further activities.	The MIS team assisted in the gradual upgrade of IT technologies and bringing IT processes and maintenance up to current requirements, engaging the heads of health organizations into the process, convincing them of the need to raise funds from their organizations' budget, and attracting international donor organizations to help with the acquisition of equipment and creation of IT infrastructure. As a last resort, if the organization is very important for the implementation of TB MIS, the Project can consider payment through the project funds.

Priority Activities for Next Quarter

In Quarter 1 of PY3, Cure Tuberculosis will develop and pilot new initiatives according to the USAID-approved Year 3 Work Plan and continue to roll out and strengthen initiatives started in Years 1 and 2. The Project will expand to the new pilot oblast of Osh and continue the implementation of tested activities in Bishkek and the city of Osh, in Chui, Talas, Naryn, Batken, and Jalal-Abad Oblasts. All Project initiatives aim 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

- Finalize the situation analysis of the TB lab network and start the development of the National Strategic Plan of the TB lab system;
- Revise the existing SOPs on TB transportation system in Naryn and Batken Oblasts;
- Conduct situation analysis of the transportation of biomaterials and TB drugs in Bishkek;
- Support the logistics of biomaterial transportation from FGP/FAPs to the rayon level and delivery of TB drugs from the rayon level to FGP/FAPs in Bishkek and Naryn Oblast;
- Continue TB contact investigation activities in Kemin, Sokuluk rayons of Chui oblast and Naryn and Batken Oblasts;
- Roll out FAST in Naryn Oblast;
- Facilitate development of an algorithm for the NRCS involvement in TB contact screening;
- Conduct targeted screening among high-priority groups at homeless shelters and penal colony settlements to find people with presumptive TB, 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

- Begin the implementation of the DR-TB Concilium reform in Osh Oblast;
- Start the implementation of cohort analysis in Batken Oblast; conduct the first stage of training on cohort analysis;
- Develop training modules on TB CM (including AE management, social support, SBC) and ensure their inclusion in the curriculum of the Family Medicine and Phthisiopulmonology Departments of KSMIPT&CE;
- Conduct training for PHC medical workers on the standards for TB CM in Jalal-Abad Oblast;
- Conduct workshops with heads of PHC organizations and territorial divisions of MHIF on the introduction of new payment methods at PHC in Naryn, Batken Oblasts and Bishkek;
- Approve the training module on TB CM with the Departments of Family Medicine and Phthisiopulmonology of KSMIPT&CE;
- Train DDS&ME laboratory staff on international drug quality control standards, including TB drugs;
- Conduct an assessment of current supply chain processes in TB service delivery and produce recommendations for a strong supply chain in TB service delivery;
- Implement an X-Ray image visualization connector in Naryn Oblast.

SP 3: Prevention of DR-TB infections

- Implement the fourth stage of the TB IPC improvement cycle in TB hospitals in Naryn, Talas, and Batken Oblasts;
- Revise the existing TB IPC guidelines;

- Develop information materials and stories with demonstration of encouraged behaviors of health managers, HCWs, and CBTSs in organizing TB diagnosis and treatment of patients to motivate the development of certain behaviors among HCWs
- Revise TB patient educational flip-book for use during counseling of TB patients at PHC;
- Develop and distribute SBC videos and videos with celebrities in order to disseminate key messages and information on TB.

SP 4: Improved enabling environment

- Continue facilitating the development of the National Program Tuberculosis-VI, conduct workshops with partners and stakeholders in TB care to discuss the first draft;
- Build the capacity of health care managers in Naryn, Batken, Chui Oblasts and Bishkek on new financing methods in TB service;
- Revise framework contracts between the MHIF with OTCs, taking into account the expanded coordination and management functions and tasks;
- Implement the reporting module for the e-TB register;
- Develop and implement annual Media Plan of the Project to create a unified information environment on TB & TB/COVID-19 issues;
- Facilitate the development of annual joint action plans with the RHPC, NTP and other partners and stakeholders in TB to reduce stigma and discrimination towards TB patients and their families and create enabling environment for early detection and completion of TB treatment;
- Award the winners of the media contest at a thematic workshop on the prospects of cooperation on TB issues with the media.

SI & M&E

- Finalize the QTSA report and present the results and findings in print and at workshops;
- Finalize the operational research study and produce a final report;
- Conduct a round table on Cure Tuberculosis Year 2 performance results and plans for roll-out in Year 3 for the Project's partners and stakeholders in TB.

Administrative and Financial Progress

Administration

In Year 2, United States Pharmacopeia (USP), a JSI technical assistance partner, began the implementation of activities. USP has a three-year technical assistance agreement with JSI.

Four Project sub-grantees who are local cooperation partners (TB People, the Association of Village Health Committees, the National Red Crescent Society, and the Hospital Association of the Kyrgyz Republic) signed grant modifications from October 1, 2020, with updated SOWs and budgets for 12 months.

In response to the COVID-19 pandemic, the Project F&A team developed an interim COVID-19 Code of Conduct and shared it with the staff. This document outlines what the Project will provide to staff to keep them safe from the virus while at work and which safety regulations JSI expects staff to follow in return.

In Year 2, Project staff continued to partially work remotely due to the epidemiological situation in the country. The Project office remained open during regular hours from 9 am to 6 pm. Staff presence in the office was restricted to the scheduled office hours that all Project teams had to follow. The office was used with infection control and safety requirements in place. The F&A team managed all administrative support and procurement needs in accordance with the duty schedule.

In September, the Cure Tuberculosis team resumed regular work in the office thanks to an improved epidemiological situation. Staff were provided with masks and sanitizers to ensure safety. The office rooms were equipped with disinfectants to ensure safe working conditions.

To ensure stable Internet at employees' workplaces at home, the Project provided payments to cover Internet expenses at the height of the pandemic. Reimbursements for home Internet were ceased when the work in the office resumed.

When COVID-19 vaccines became available, Project staff began the vaccination. The majority of staff (72%) have now been vaccinated against COVID-19.

As FY2 neared its end in September, the F&A team initiated rebidding processes for office vendors. All open contracts signed up to September 30, 2021 were closed. New contracts will be signed with winning bidders for the new FY3.

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 2, the Cure Tuberculosis team increased to 29 local staff (22 JSI and seven URC), including 23 technical staff and six finance and administrative specialists (11 men and 18 women). Five new staff joined the team: a part-time Legal Advisor, an Information System Specialist, and a TB Policy Specialist for JSI, and an Infection Prevention Specialist and Clinical Specialist for URC. All new staff passed their probation period and signed annual employment contracts. All staff received an orientation to JSI and to the Project. The Research Specialist left the Project at the end of October 2020 and the position remained vacant during Year 2; this position will be filled in Year 3.

In February 2021, all JSI staff took an online course Ethics at JSI. This annual training program describes JSI's ethical guidelines for working with honesty, integrity, diligence, fairness, trust, and respect. All staff must complete this course at the start of employment and repeat it annually. URC staff had to take a course on safety in the workplace in July 2021. All URC staff must repeat this course annually.

Deliverables

In Year 2, the Cure Tuberculosis project finalized and submitted to USAID:

- Year 3 Work Plan
- Revised Year 3 MELP

During the year, one modification was made to the Cooperative Agreement:

- On September 13, USAID issued Agreement Modification 03 to increase the obligated amount and reflect the revised language on USAID sponsored J-1 visas and the updated Standard Provisions for U.S. Nongovernmental Organizations.

Annex 1: PITT Progress

See attached Excel file.

Annex 2: Success Story: USAID Interventions Reduce Laboratory Turn-around Time for Faster Diagnosis of Tuberculosis

See attached PDF file.

Annex 3: Implementation of TB MIS (LDMIS, EMR, and e-TB Register TB-01 Module) in health care facilities

The LDMIS system is implemented in 115 health organizations, 134 laboratories (September 30, 2021) providing TB services to the population:

- 39 TB services laboratories (NTC – 2; OTCs – 14; TB hospitals – 23);
- 83 PHC laboratories;
- 12 SES laboratories (COVID-19 module for LDMIS).

The 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
    b. Clinical 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
7. Uzgen TBH
   a. Bacteriological laboratory
   b. Clinical laboratory
8. Kara-Suu TBH
   a. Bacteriological laboratory
   b. Clinical laboratory
9. Nookat TBH
   a. Bacteriological laboratory
   b. Clinical laboratory
10. TB Hospital (TBH) Shekaftar
   a. Bacteriological laboratory
   b. Clinical laboratory
11. TB Center of Bishkek city
   a. Bacteriological laboratory
   b. Clinical laboratory
12. Bishkek city Children TBH
   a. Clinical laboratory

PHC Laboratories:

1. Jayil 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
10. Uzgen FMC
11. Kara-Suu FMC
12. Aravan FMC
13. Talas FMC
14. Alamudun FMC
15. Panfilov GPC
16. Lenin rayon FMC #1
17. FGP No.34 (FMC No.17), Bishkek
18. Chui rayon FMC
19. FMC #2 Bishkek
20. FMC #8 Bishkek
21. Republican AIDs Center
22. Nooken GPC
23. Suzak GPC
24. Aksuu GPC

25. Issyk-Kul rayon GPC
26. Ananyevo GPC
27. Ak-Talaa FMC
28. Naryn Oblast GPC
29. Jumgal GPC
30. Kochkor GPC
31. At-Bashy FMC
32. Naryn rayon FMC
33. Alay GPC
34. Kara-Suu FMC
35. Kemin FMC
36. Ak-Talaa Hospital
37. Kara-Kulzha GPC
38. Myrza-Ake GPC
39. Aravan GPC
40. Kok-Zhangak GPC
41. Bazar-Korgon GPC
42. Affiliate of Kara-Suu GPC "Kurmandjan Datka"
43. Affiliate Kashgar-Kyshtak
44. Penal Colony-Settlement No.31
45. Bishkek City Hospital No.1
46. Batken FMC
47. Sulykta GPC
48. Kadamzhai FMC
49. Kyzyl-Kia FMC
50. Leilek FMC
51. Jalal-Abad rayon FMC
52. Ala-Buka GPC
53. City FMC, Osh city
54. Kurshab GPC
55. Nookat “Baryn” FMC
56. Kara-Bura Hospital
57. Bakai-Ata GPC
58. Manas GPC
59. FGP No.9 (FMC No.1)
60. Kochkor-Ata GPC
61. Zhany-Zher GPC
62. FGP No. 35 in FMC No. 17
63. Toktogul GPC
64. Kara-kul GPC
65. Mailuu-Suu GPC
66. Tash-Kumyr GPC
67. Shamaldy-Say GPC
68. Karakol rayon FMC
69. Ton GPC
70. Tyup GPC
71. FGP No.1 (OFMC No.1)
72. FGP No.9 (OFMC No.1)
73. FGP No.12 (OFMC No.1)
74. Affiliate of FGP Kyzyl-Asker (OFMC No.1)

75. FGP No.1 (GPC Suzak)
76. FGP No.2 (GPC Suzak)
77. FGP No.4 (GPC Suzak)
78. FGP No.5 (GPC Suzak)
79. FGP No.28 (GPC Kok-Zhangak)
80. FGP No.1 (GPC Bazar-Korgon)
81. FGP No.2 (GPC Bazar-Korgon)
82. FGP No.3 (GPC Bazar-Korgon)
83. FGP No.4 (GPC Bazar-Korgon)

DDP&SSES and other labs 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. Jayil 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 19 TB facilities in Year 2:

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
15. Bauer Jalal-Abad Oblast Tuberculosis Center
16. National Tuberculosis Center
17. Uzgen TB Hospital
18. Kara-Suu TB Hospital
19. Nookat TB Hospital

The **e-TB Register TB-01 Module is** implemented in 81 health care facilities:

1. National Tuberculosis Center – 1

Oblast Tuberculosis Centers – 7

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 – 10

9. Osh Oblast Children's Tuberculosis Hospital
10. Kemin Tuberculosis Hospital
11. Jeti-Oguz National Rehabilitation Center
12. Kara-Balta National Tuberculosis Hospital
13. City Tuberculosis Hospital in Bishkek
14. Shekaftar TB Hospital
15. Uzgen TB Hospital
16. Kara-Suu TB Hospital
17. Nookat TB Hospital
18. TB Center of Bishkek city

PHC-level facilities – 63

1. Batken FMC
2. Kulunda GPC
3. Kyzyl-Kyia FMC
4. Kadamzhay FMC
5. Sulyukta GPC
6. Jany-Jer GPC
7. Uch-Korgon GPC
8. Aidarken GPC
9. Bakay-Ata GPC
10. Manas GPC
11. Talas city FMC
12. Talas FMC
13. Kara-Bura FMC
14. At-Bashy FMC
15. Ak-Talaa FMC
16. Kochkor FMC
17. Naryn city FMC
18. Jumgal FMC
19. Uzgen FMC
20. Kara-Suu FMC
21. Nookat FMC (Medigos)
22. Aravan FMC
23. Leilek FMC

24. Alamudun FMC
25. Jayil FMC
26. Osh FMC
27. Tokmok FMC
28. Kemin FMC
29. Moskva FMC
30. Sokuluk FMC
31. Yssyk-Ata FMC
32. Kurshab GPC
33. Myrza-Ake GPC
34. Jalal-Abad FMC
35. Karakol FMC
36. Ak-Suu FMC
37. Ala-Buka GPC
38. Alay GPC
39. Bazar-Korgon GPC
40. Kochkor-Ata city GPC
41. Jeti-oguz GPC
42. Issyk-Kul GPC
43. Kara-Kulzha GPC
44. Kara-Kul GPC
45. Kok-Zhangak GPC
46. Maily-Suu GPC
47. Nooken GPC
48. Panfilov GPC
49. Suzak GPC
50. Tash-Kumyr GPC
51. Toktogul GPC
52. Ton GPC
53. Tyup GPC
54. Shamaldy-Sai GPC
55. Aksy FMC
56. Balykchy FMC
57. Nookat FMC (Baryn)
58. Chui FMC
59. Chon-Alay GPC
60. Naryn FMC
61. Settlement Colony No.31 of SSPE (State Service for Penalty Execution)
62. Kurmanzhan-datka FMC
63. Kashkar-kyshtak FMC

Annex 4. Regulatory documents developed and adopted in Year 2

No.	Title	Short description	Project role
1	Order of the MHSD KR No. 200 "On Implementation of Software for Registration of TB Patients Receiving Outpatient Treatment", dated February 17, 2021	This Order approves the schedules for installation of the optimized software for registration of TB patients receiving outpatient treatment, and training schedules for the staff of PHC facilities and Oblast Tuberculosis Centers.	The Project has carried out the optimization of software for registration of TB patients. Technical support with the software installation has been provided to the KR MHSD and MHIF.
2	Order of the of the MHSD KR No. 202 "On Enhancement of Approach to TB Case Management", dated February 17, 2021	This Order approves the standards for TB Case Management (TBCM) for the health care workers of PHC facilities and activities for integration of TBCM to the PHC facilities with appointing of designated persons and a period of performance, and indicators of monitoring the efficiency of introduction of TBCM; the Order also identifies the tasks and activities for Oblast Tuberculosis Centers related to the TBCM integration.	The Project has developed the standards for TB Case Management (TBCM) for the health care workers of PHC facilities; the required activities for TBCM integration to the PHC facilities have been identified; and the indicators for monitoring the efficiency of TBCM integration have been developed.
3	Order of the of the MHSD KR No. 255 "On Strengthening Activities for DR-TB Case Management Teams in Naryn, Batken, Talas, Jalal-Abad oblasts and Bishkek City", dated March 5, 2021	Regulation on strengthening activities for DR-TB case management teams in the specified oblasts has been approved.	Rendering technical support with strengthening activities for DR-TB case management teams in the specified sites by: - Development of a rotation schedule for the position of a deputy chair; - Capacity strengthening of the members of the case management teams with the assistance of the Kyrgyz State Medical Institute of Retraining and Advanced Training; - Training the members of the case management teams on filling out TB registers; - Operational aspects of the TB case management teams via electronic TB registers.
4	Order of the of the MHSD KR No. 449 "On Approval of Practice Guidelines on Management of TB Drugs", dated April 20, 2021	For the first time Guidelines include the description of functions and tasks of various organizations for all TB drugs management processes; the revised and updated accounting	Technical and methodological assistance to the Working Group for drafting and approval of this Practice Guidelines on management of TB drugs has been provided.

		and reporting forms on TB drugs management have been approved. The Guidelines are designed for the specialists in drug management, doctors, druggists, and nurses of the health care facilities. The Guidelines present a comprehensive understanding of all components of drugs management and may serve as a useful manual for other health workers.	
5	Order of the of the MHSD KR No. 513 "On Scaling-up the Project of "Improvement of TB Contacts Tracing System", dated May 7, 2021	This Order approved: - Scaling-up the pilot Project of TB Contacts Tracing System in Naryn and Batken oblasts until 2022. - Extension of the pilot project duration in Kemin and Sokuluk rayons of Chui oblast, from the end of 2021 to the end of 2022.	Introduction of the developed guidelines under the Project as approved by Order of the MHSD No. 171, dated March 20, 2020, in Naryn and Batken oblasts. Further technical support in Kemin and Sokuluk rayons of Chui oblast
6	Order of the of the MHSD KR No. 514 "On Adoption of Proactive TB Case-Finding Approach in the Health Care Facilities in Bishkek City and Chui oblast", dated May 7, 2021	This Order has approved: - Guidelines and standards of active TB Case Finding Approach in the general hospitals; - Checklist and indicator for monitoring and evaluation of adoption of the proactive TB Case-Finding Approach in the general hospitals;	Guidelines and standards of active TB Case Finding in the general hospitals have been developed, followed by appointing the designated persons and a period of performance, and indicators of monitoring the efficiency of adoption; tasks and objectives of the approach adoption have been identified.
7	Order of the of the MHSD KR No. 515 "On Ensuring the Laboratory and Diagnostic Testing for Patients with DR-TB, who are Receiving Short-term and Individual Treatment Courses in the Health Care Facilities of the Single-Payer Healthcare System", dated May 7, 2021	This Order allows to improve accessibility for patients with DR-TB to the required laboratory and diagnostic testing on a free-of-charge basis; it will enable health care facilities to conclude contracts with other entities for conduct of the required laboratory tests. This document has approved: - List of laboratory and diagnostic testing for patients with DR-TB, who are receiving short-term and individual treatment courses in the health care facilities;	The Project in cooperation with the National Tuberculosis Center of has identified the List of laboratory and diagnostic testing for patients with DR-TB who are receiving short-term and individual treatment courses in the health care facilities; The model contracts have been drafted for contracting private laboratories or public health care facilities for conduct of the above listed laboratory and diagnostic testing; The calculations of the average cost of the above listed tests have been prepared and the

		- Model contract for public, municipal and private facilities for performance of the above listed laboratory and diagnostic testing; - The methodology for calculation of basic prices for the above listed laboratory and diagnostic testing; - Basic prices for the above listed laboratory and diagnostic testing performed by the private health care facilities.	basic prices for the above listed laboratory and diagnostic testing have been identified. The methodology for calculation of basic prices for the above listed laboratory tests have been developed.
8	Order of the of the MHSD KR No. 1177 "On Scaling-Up and Introduction of Payment Scheme for Successfully Completed Treatment of TB Case", dated August 23, 2021	This order has approved a new regulation on the procedure for payment for PHC facilities for a successfully completed treatment of TB case, with application of a new method for TB case management; it identifies the roles of the key entities engaged in the enforcement of this Regulation on payment; the procedure for preparing a request for payment and the rules for submission of a request for payment has been developed. The methodology for calculation of the case cost for payment of treated TB case at the outpatient level has been approved.	The Project has developed a new Regulation on the payment procedure for PHC for a successfully completed treatment of TB case at the outpatient level; the accounting and reporting forms for submission for payment have been revised; the distribution of payments between a team of TBCM has been revised.
9	Orders of the MHSD KR on re-registration of oblast tuberculosis centers, including new regulations of OTCs, changes in the organization setup of OTCs: "On Re-registration of Chui Oblast Tuberculosis Center" No. 1207, dated September 2, 2021. - "On Re-registration of Batken Oblast Tuberculosis Center" No. 1206, dated September 2, 2021 - "On Re-registration of Osh Oblast Tuberculosis Center" No. 1208, dated September 2, 2021	New regulations of Oblast Tuberculosis Centers have been approved given the new functions of coordination of TB help in the oblast, on coordination of introduction of TBCM at the PHC; modifications have been made to the organizational setup of OTCs with the roles and functions of Monitoring and Evaluation units changed; verification of successfully completed treatment TB cases at the outpatient level and submission for payment to the MHIF have been conducted.	Technical and methodological assistance to the OTCs have been provided with the drafting new regulations of these facilities; the functions and role of OTCs in coordination of TB aid to the residents of the oblast have been revised; on coordination of introduction of TBCM at the outpatient level and changes in the organizational setup of OTCs.

	- "On Re-registration of Talas Oblast Tuberculosis Center" No. 1209, dated September 2, 2021 - "On Re-registration of Jalal-Abad Oblast Tuberculosis Center" No. 989, dated July 22, 2021; - "On Re-registration of Naryn Oblast Tuberculosis Center" No. 1057, dated September 2, 2021 - "On Re-registration of Bishkek City Tuberculosis Center" No. 1293, dated September 16, 2021		

Annex 5: Gender Graphs and Charts

Figure 1. Gender representation among Project staff and consultants

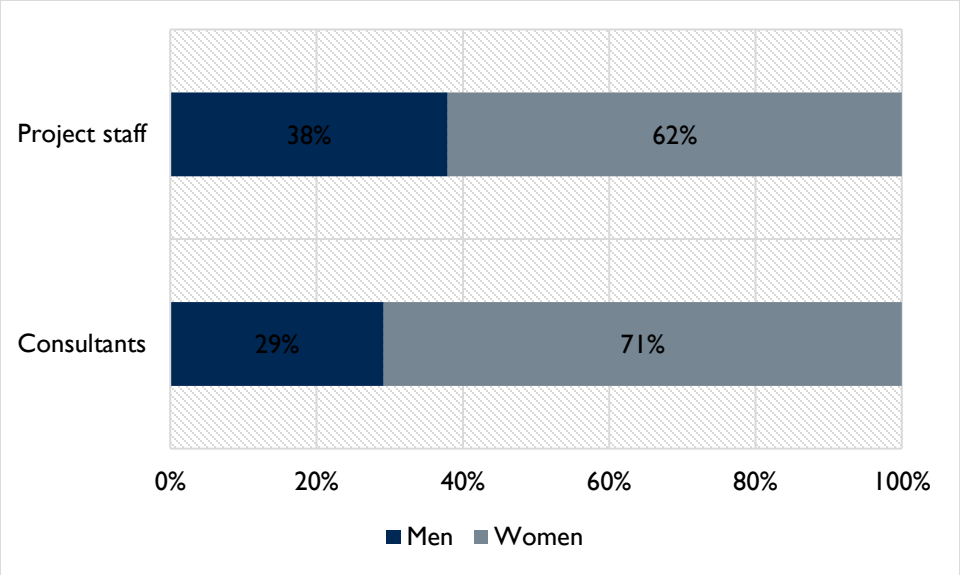


Figure 2. Disaggregation of Year2 Project training activities by gender

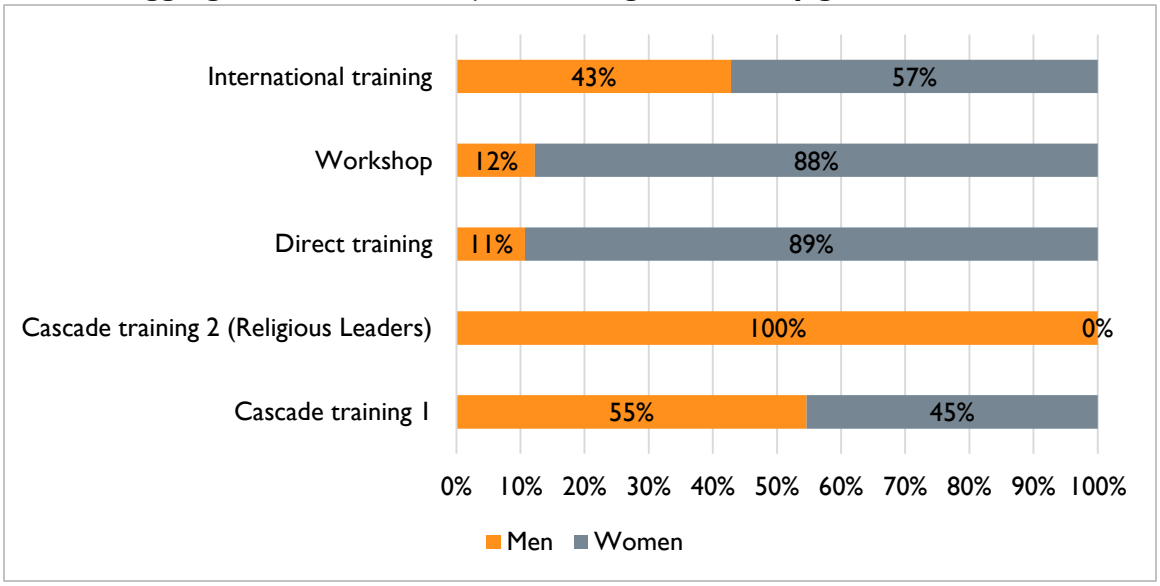


Figure 3. Coverage of the population through community-based activities by gender

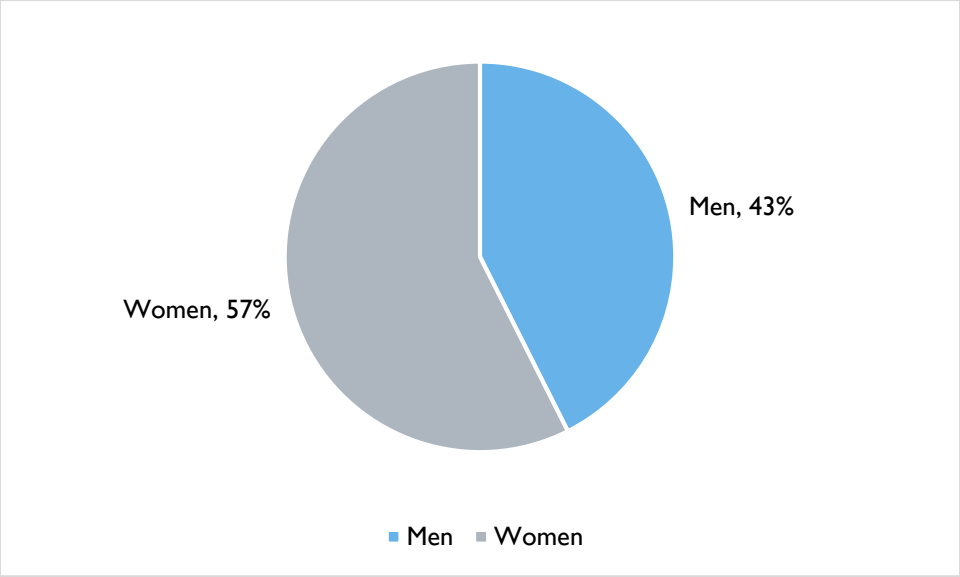


Figure 4. Number of TB cases among health care workers by gender

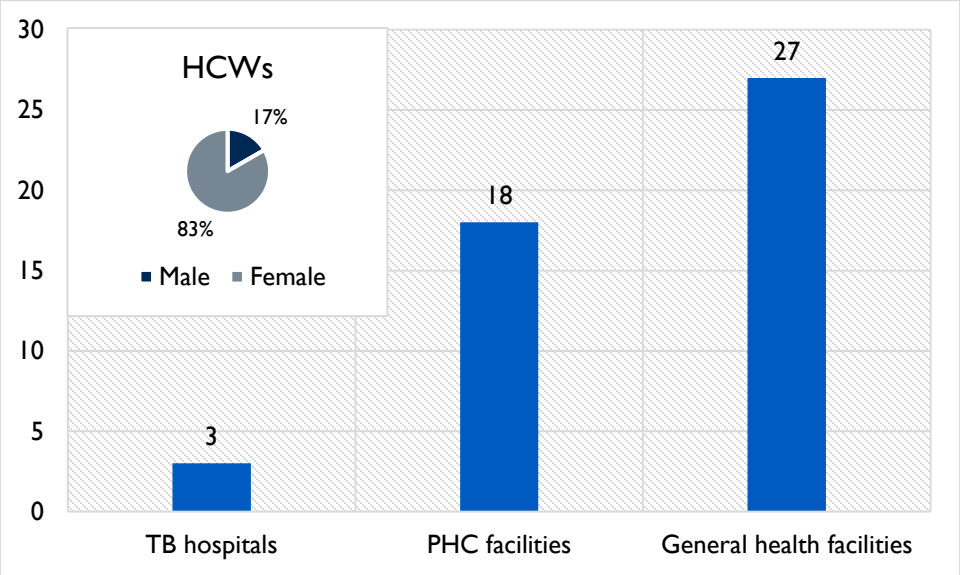
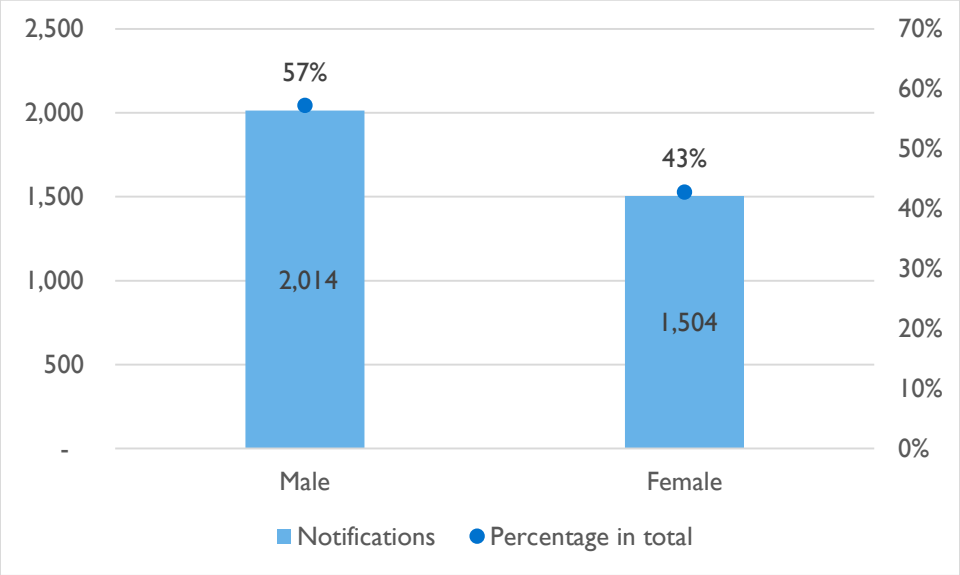


Figure 5. TB notification cases by gender out of the total number of new notifications



Annex 6: COVID-19 epidemic in the Kyrgyz Republic

From October to December 2020 and from May to August 2021, the COVID-19 epidemic in Kyrgyzstan entered its second and third waves, respectively. The third wave was more intense and had a worse toll on people's health and lives.

As of October 1, the total number of cases was 178,608, of which 123,039 cases were laboratory (bacteriologically) confirmed, 55,569 cases were clinically and epidemiologically confirmed, as reported by the Ministry of Health and Social Development (Table 1).

During the epidemic, Kyrgyzstan lost a total of 2,607 lives to COVID-19, of which 1,080 were laboratory confirmed, and 1,527 – clinically and epidemiologically confirmed.

Over the entire period of the pandemic, 6,833 HCWs contracted the coronavirus, of whom 6,660 have officially recovered.

Table 1. Key country statistics as of October 1, 2021

Indicator	Cases
Total number of confirmed cases (U07.1 and U07.2) • Bacteriologically confirmed • Clinically confirmed	178,608 • 123,039 • 55,569
Number of recovered cases	173,305
Number of deaths (U07.1 and U07.2) • Bacteriologically confirmed • Clinically confirmed	2,607 • 1,080 • 1,527
Case fatality rate	1.5%

Source: MHSD

According to the MHSD data, 1,889,683 PCR tests were performed in total. These must include test performed by both state and private laboratories.

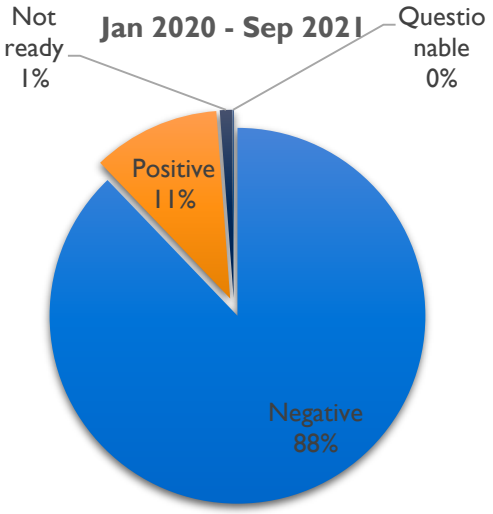
The 15 state laboratories that are equipped to perform tests for COVID-19, of which 12 SES laboratories, used LDMIS for recording, storing, mapping, and sharing data. More than 890,000 records for COVID-19, or 71% of the total number of entries, were entered in the LDMIS system (Table 2).

Table 2. Cumulative number of lab tests for COVID-19 in LDMIS by the end of each quarter in PY2

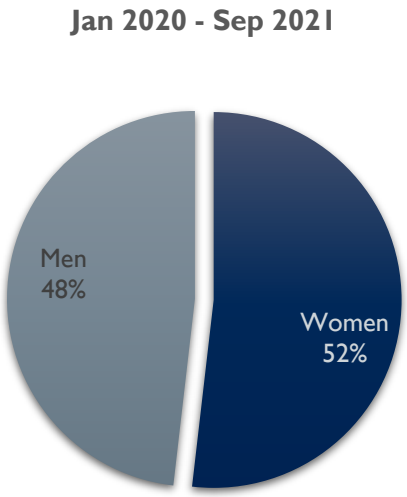
Date	Number of COVID-19 tests
December 31 (2020)	>370,000
March 31 (2021)	>472,000
June 30 (2021)	>624,000
September 30 (2021)	>890,000

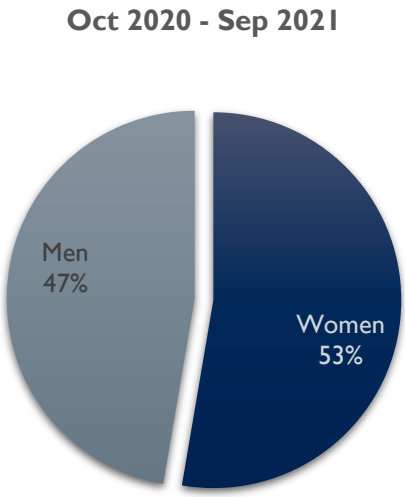
Source: LDMIS

Figures 1-2. PCR tests performed by 15 state laboratories equipped to test for COVID-19 by result

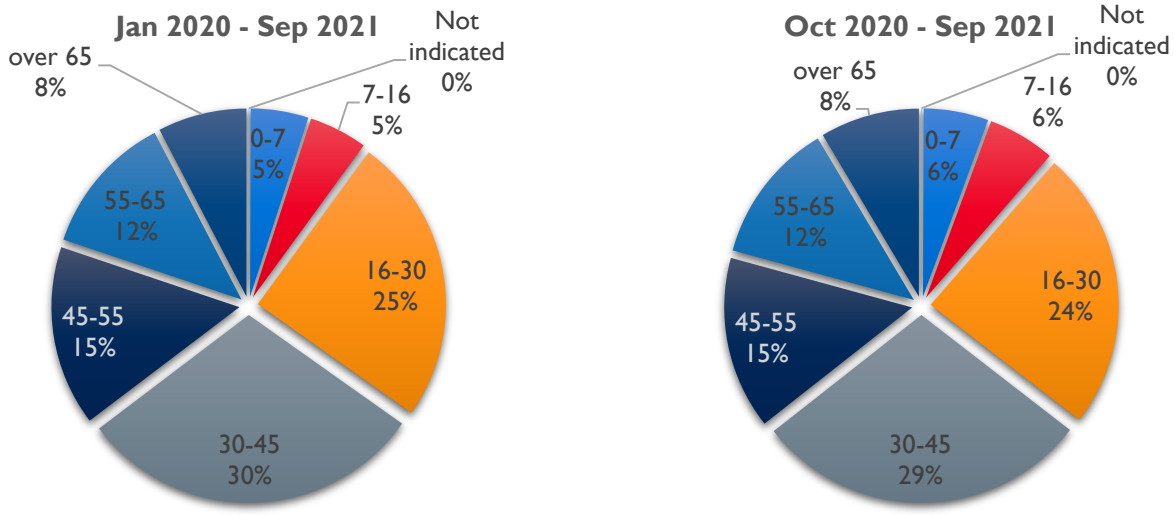


Figures 3-4. PCR tests performed by 15 state laboratories equipped to test for COVID-19 by gender





Figures 5-6. PCR tests performed by 15 state laboratories equipped to test for COVID-19 by age



Source: LDMIS

According to the MHSD, the increase in **COVID-19 morbidity** was associated with:

- New mutated strains;
- Fatigue from continued restrictions resulting in disregard of preventive measures;
- Low social responsibility.

The increase in diagnosed cases was also associated with increased availability of laboratory diagnostics:

- 94% of cases are laboratory confirmed (as of June 30, 2021, MHSD). For comparison, in July 2020, only 20-30% of cases were confirmed by laboratory tests, the rest were clinically and epidemiologically confirmed.
- Laboratory capacities for PCR tests for COVID-19 increased from 16 PCR machines last year to 30 machines operating today (private laboratories included).
- About 1-2 thousand tests were performed daily; in the height of the epidemic, up to 8 thousand tests were processed per day (including in private laboratories).

More than 50% of all cases that received treatment were treated on an outpatient basis. On October 1, 436 patients were still in inpatient treatment; 779 patients received outpatient treatment.

Bishkek and Chui Oblast led in the number of daily cases and the total count. During the height of the pandemic, in July 2021, the incidence in Bishkek was five times higher than in Chui Oblast, the second-highest. In September, the number of cases per 100 thousand population decreased by 13.2 times, compared with July. The share of Bishkek was still the largest (over 47%), followed by Chui Oblast (about 22%), and Issyk-Kul Oblast (over 15%).

Vaccination against coronavirus in Kyrgyzstan began on March 29, 2021. The national plan for COVID-19 vaccination developed in April had three stages to be completed by the end of December 2021:

- In the first stage, mainly health care workers, law enforcement officers, and other people in contact-heavy specialties were supposed to receive vaccines.

- In the second stage, people with clinical risk factors, chronic diseases, socially vulnerable groups of the population, as well as people over 60.
- Vaccination among the rest of the population was supposed to be carried out at the third stage.

According to the MHSD, as of October 1, 2021, about 829 thousand people were vaccinated. This represents about 12.4% of the total population (Table 3). Of these, 623.7 people received a second dose of vaccine. The slowest vaccination is carried out in Bishkek and Chui Oblast – much below the country's average (Table 4). Naryn, Talas and Osh Oblasts and Osh city are more pro-active.

According to the National Center for Disease Prevention, the number of citizens in need of vaccination is about 3.4 million people (number of people over 18 years old). Of these, 2.4 million people are the target group size or 70% of the total number of Kyrgyzstanis subject to vaccination. It is this number of vaccinated people that must be achieved in order for herd immunity to develop.

Table 3. Country's vaccination statistics, October 1, 2021

	Thousand (people)	**Percentage**
Population (as of July 1, 2021)	6,691	100%
Number of vaccinated	829	12%
Fully vaccinated	624	9%
Total vaccinations	1,453	

Source: National COVID-19 Coordination Unit

Kyrgyzstanis can get vaccinated with Chinese vaccines Sinopharm and Sinovac (CoronaVac), the Russian Sputnik V and the Anglo-Swedish AstraZeneca received through the COVAX program. The country also received the Kazakh vaccine QazVac as humanitarian aid but has not used it for vaccination yet. The use of vaccines depends largely on their expiration date. Thus, Sinovac vaccines (150,000 doses) received from Turkey in September will be withheld because they have a later expiration date. Vaccination with AstraZeneca stopped on September 30, 2021 because vaccines expired.

The stock of available vaccines is 1,589.9 thousand doses (https://vc.emed.gov.kg/). In October 2021, the country expects to receive 419 thousand more vaccines: 259,000 doses of Pfizer vaccine, 110,000 doses of Sinopharm and 50,000 doses of AstraZeneca. On October 1, four Pfizer special refrigerators holding a temperature of minus 70 degrees Celsius were delivered to Kyrgyzstan with support from UNICEF.

Table 4. Number of vaccinated by region as of October 1, 2021 (MHSD)

Region	**Vaccinated (people)**	**Population on July 1, 2021 (thous. people)**	**Vaccinated in total population**
Bishkek	100,722	1,086	9%
Osh c.	57,155	328	17%
Chui	72,605	980	7%
Osh	216,068	1,403	15%
Issyk-Kul	68,834	504	14%
Talas	42,332	273	16%
Naryn	53,061	293	18%
Jalal-Abad	146,081	1,271	12%
Batken	71,945	553	13%
Kyrgyz Republic	828,803	6,691	12%

Annex 7: Impact of COVID-19 on TB services (QTSA results)

The Quality of TB Services Assessment (QTSA) was implemented between November 2020 and March 2021. In total, 1,381 interviews were conducted in 258 facilities randomly selected using cluster sampling in 27 rayons in all 7 oblasts. A special COVID-19 module was designed in collaboration with TB DIAH to assess the impacts of COVID-19 on TB services. This module was piloted in Kyrgyzstan and Afghanistan at the same time.

The COVID-19 module was integrated into both the facility audits and patient interviews in order to gather both provider and patient perspectives on impacts of COVID-19. In total, the COVID-19 module was implemented in 258 facility audits and 740 patient interviews (998 interviews in total). The analysis was stratified by type/level of facility (primary/secondary/tertiary), location (urban/rural) and oblast. Below in Table 1 are the topics that were assessed within each tool.

Table 1. Topics assessed within the COVID-19 module by type of questionnaire

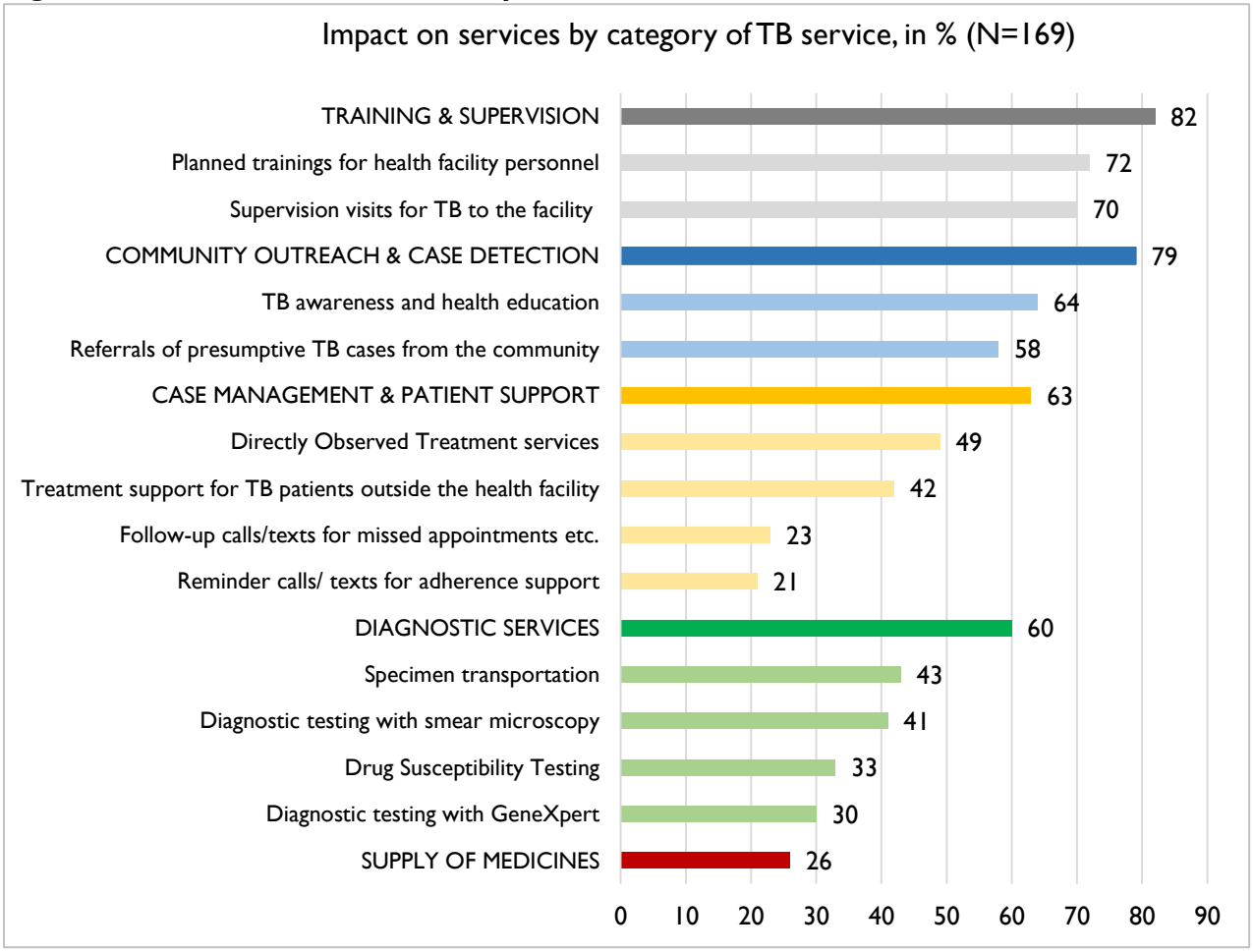
Facility audit (providers)	**Patient interview**
Impact on TB services	Access to TB services
Resource reallocation	
Impact on TB diagnosis and case detection	Health-seeking behavior
Impact on TB treatment and case management	Changes to treatment and treatment support
Drug management	
Infection control	Precautions/infection control

Impact on TB services

Overall, 69% (169) of facilities nationwide reported that COVID-19 affected the delivery of TB services; the most affected were secondary facilities (88%) and tertiary facilities (86%). By location, the most affected were the largest cities of Bishkek (77%) and Osh (75%), as well as other urban areas.

Figure 1 below shows the TB services most affected by COVID-19, grouped into aggregate categories (darker bars). The most affected (aggregate) services were training and supervision (82%), community outreach and case detection (79%), case management and patient support (63%), diagnostic services (60%), and supply of TB medicines (26%).

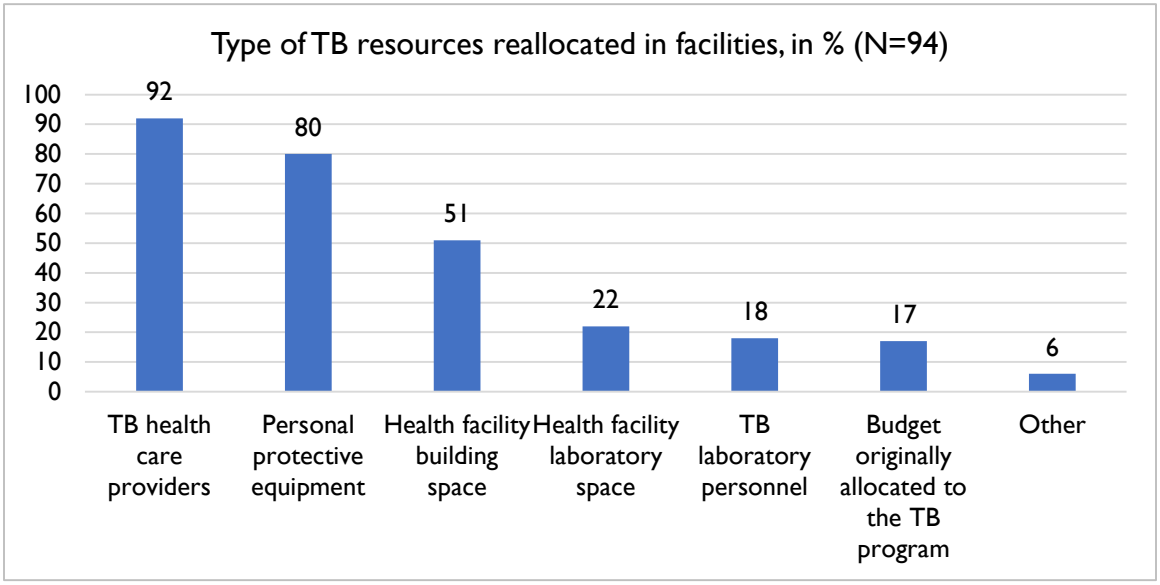
Figure 1. TB services most affected by COVID-19



Resource reallocation

Overall, 33% (94) of facilities reallocated resources from TB services to COVID-19. Of those facilities that reallocated resources, the most commonly reallocated resources were TB health care providers (92%), personal protective equipment (80%), health facility building space (51%), health facility laboratory space (22%), TB laboratory personnel (18%), and budget originally allocated to the TB program (17%) (Figure 2).

Figure 2. Resource reallocation by type of TB resources



When asked separately about reassignment of staff, a full 63% (178) of facilities indicated that they assigned TB service providers to COVID-19, either part-time or full-time. Tertiary facilities were the most affected by staff and resource reallocations, with 86% reallocating resources and 100% reassigning staff.

Around half of inpatient facilities reassigned beds to COVID-19:

- 48% (10) of inpatient facilities providing DS-TB treatment services reassigned DS-TB beds
- 55% (11) of inpatient facilities providing DR-TB treatment services reassigned DR-TB beds

Thirteen percent (35) of facilities experienced any stockouts of TB drugs:

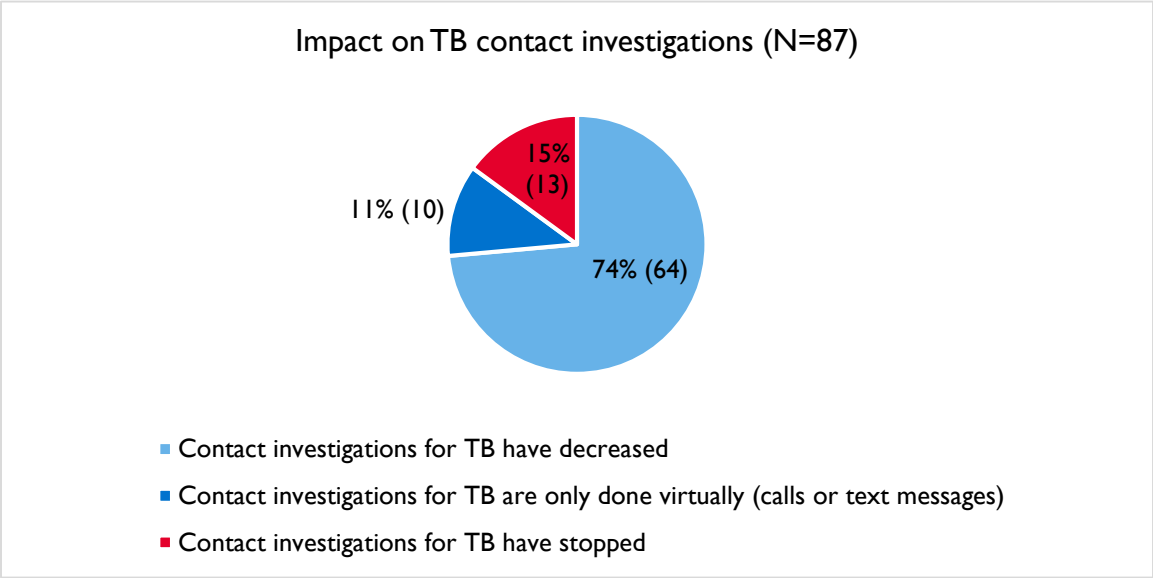
- 11% (31) of facilities experienced stockouts of first-line drugs, at the primary (11%) and secondary (24%) facility levels
- 10% (28) of facilities experienced stockouts of second-line drugs, mostly at tertiary (38%) and secondary (13%) levels

Impact on TB diagnosis and case detection

Overall, 37% (103) of facilities reported a decrease in TB testing and diagnosis as a result of COVID-19. Facilities reported a 57% decrease in the average daily number of presumptive TB cases presenting to health facilities for testing (from 5.4 people per day pre-COVID, to 2.3 people per day during COVID).

In terms of contact investigations, 78% (217) of facilities reported being involved in contact investigations for COVID-19. Of those, 40% (87) indicated that this impacted contact investigations for TB: 74% indicated that contact investigations for TB decreased; 11% indicated that contact investigations were done virtually; and 15% indicated that contact investigations for TB stopped altogether (Figure 3).

Figure 3. Impact of COVID-19 contact investigations on TB contact investigations



Impact on TB treatment and case management

39% (109) of facilities indicated that the number of TB cases initiated on treatment has decreased since the onset of COVID-19. There was a 58% decrease in the average daily number of patients presenting to health facilities for treatment monitoring (from 6.9 pre-COVID to 2.9 during COVID).

In terms of precautionary measures to avoid contracting COVID-19, in 97% (270) of facilities providers instructed patients to self-isolate at home and in 89% (248) of facilities they told patients to come to TB facilities less frequently; these measures were confirmed by 86% (632) and 70% (518) of patients, respectively.

25% (71) of facilities indicated delays in routine care visits and 13% (37) of facilities indicated delays in assigning treatment outcomes and difficulty obtaining follow-up smears for treatment monitoring.

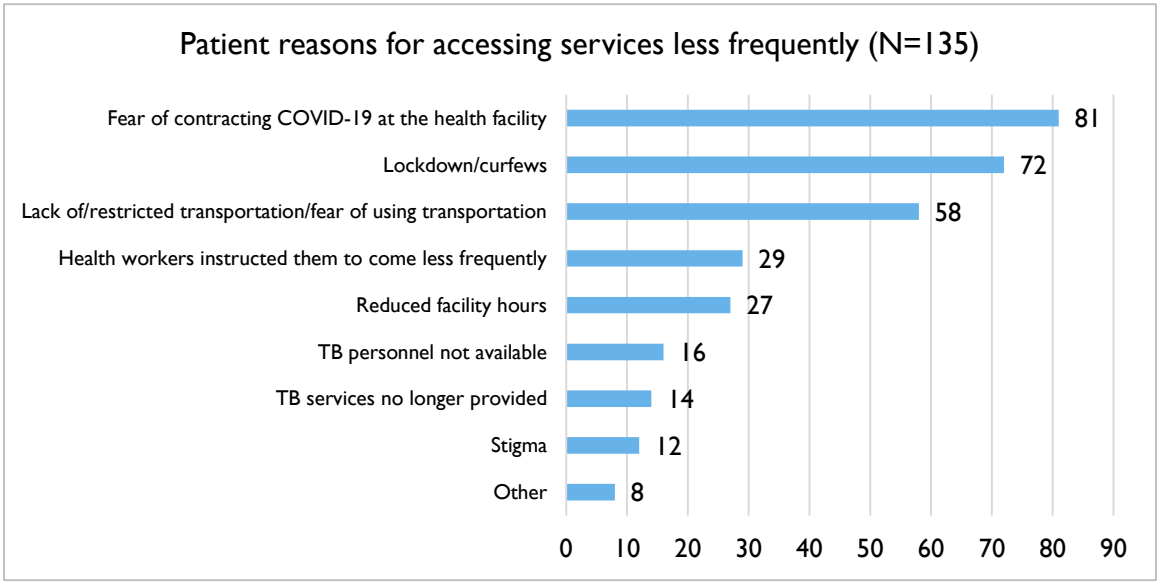
Regarding virtual services for DR-TB Concilia, 72% (62) of relevant facilities reported they were able to participate remotely in Concilium meetings, and 79% (68) were able to communicate remotely with Concilium members for advice and consultation on TB cases.

Patient health-seeking behavior and access to services

18% (135) of patients reported that COVID-19 impacted their decision or ability to access TB care at health facilities. The services that were most affected were: pharmacy visits/medication pick-up (53%), treatment follow-up visits (51%), TB diagnosis services (48%), and starting TB treatment (38%).

According to the patients who reported accessing facilities less frequently, the most commonly cited reasons were: fear of contracting COVID-19 (81%), lockdowns/curfews (72%), issues with transportation (58%), instructions from health workers to come less frequently (29%), reduced facility hours (27%), unavailability of TB personnel (16%), TB services no longer provided (14%), and stigma (12%) (Figure 4).

Figure 4. Reasons for accessing TB services less frequently according to patients with reduced access



Similar questions were asked of health providers through the facility audit; the reasons cited by providers for patients accessing facilities less frequently were very similar, through fear of COVID-19 and stigma played a stronger deterring role for patients than according to providers.

Remote treatment adherence support

Around half of providers in the facility audits indicated that changes were made to TB treatment services as a result of COVID-19:

- 57% (159) of facilities increased the use of phone/online communication instead of in-person visits
- 49% (138) of facilities reported dispensing TB medication for a prolonged period of time
- 49% (138) of facilities increased the use of remote adherence monitoring (i.e. video-observed treatment, SMS/WhatsApp follow-ups, voice reminders, etc.)

71% (198) of facilities indicated that they expanded remote and advice support for TB patients, and 64% (473) of patients confirmed that they received remote advice and support for TB during COVID. The table below summarizes the different forms of expanded support that were offered, including take-home drugs supply, home delivery of drugs through community-based treatment support, video-observed treatment (VOT) and digital support groups, from the perspective of both providers and patients (Table 2).

Table 2. Expanded remote support provided to patients during COVID, according to providers and patients

	Facilities (providers)	**Patients**
Expanded remote support	71% (198) of facilities provided expanded advice and support to TB patients	64% (473) of patients reported receiving remote advice and support
Take-home drug supply	74% (190) of outpatient facilities increased the amount of take-home drugs:	50% (366) of patients reported their doctor increased the amount of take-home drugs:

	• 67% for up to 2 weeks • 28% for up to 1 week • 5% for up to 1 month	• 57% for up to 1 week • 41% for up to 1 weeks • 2% for up to 3 weeks • 1% for up to 1 month
Home delivery of drugs and community-based treatment support	62% (158) of outpatient facilities indicated that home delivery of drugs was available: • 95% through patronage nurses • 12% through community-based treatment supporters • 1% through village health committees	35% (262) of patients indicated that home delivery of TB drugs was possible: • 93% through patronage nurses • 12% through community-based treatment supporters • 2% through village health committees
Video-observed treatment (VOT)	57% (157) of facilities provided VOT	34% (249) of patients reported receiving VOT
Digital patient support groups	31% (88) of facilities offered digital support groups	16% (118) of patients participated in digital support groups

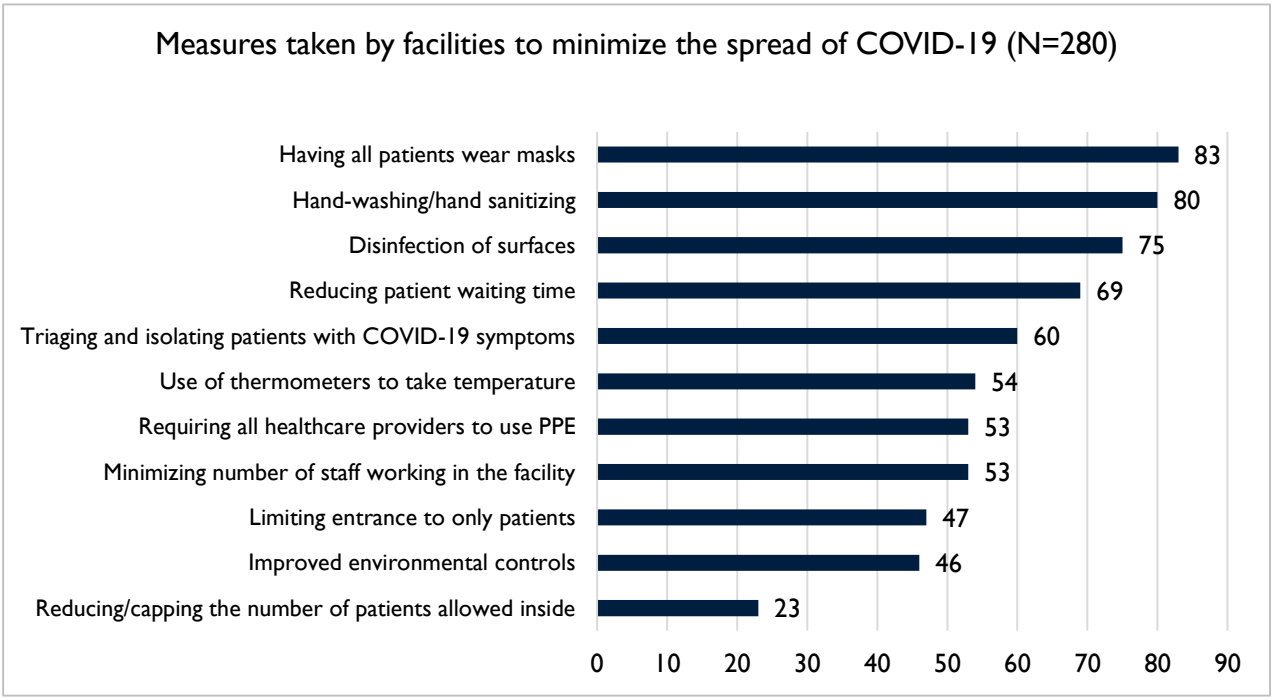
Impact on infection control

57% (159) of facilities reported amending their infection control practices in response to COVID-19. 15% (42) of facilities indicated that they received new TB diagnostic, laboratory and/or treatment algorithms and procedures since the onset of COVID-19.

98% (273) of facilities reported having sufficient quantities of PPE, mostly at tertiary level. 70% (194) of facilities routinely test staff for COVID-19.

The most common infection control measures implemented by health facilities are summarized in the graph below (Figure 5).

Figure 5. Health facility measures to minimize the spread of COVID-19



Conclusions

- The COVID-19 module proved to be an extremely valuable tool in assessing the impact of COVID-19 on TB services. The final version of the module is now available for other countries to use and download from the TB DIAH website.

- Overall, the QTSA results from Kyrgyzstan show widespread disruption to TB services due to COVID-19 across all areas:
  - TB diagnosis and case detection, contact investigation, and access to services for patients
    - Global experience has shown that decreased case detection may lead to a future surge in TB cases
  - TB treatment and case management
  - Health system resources and staff diverted to COVID-19 and infection control challenges

- However, QTSA results also show **significant nationwide uptake** of some of the Cure Tuberculosis initiatives implemented in response to COVID-19, including remote treatment adherence support, virtual Concilia, and infection control changes.

- Many of these initiatives helped **mitigate the impact on TB case detection and treatment** and helped patients continue treatment uninterrupted.

- Some of these initiatives have served to make TB services **more patient-oriented**, including community-based treatment support, video-observed treatment, and online support groups.

- There are lessons to be learned beyond COVID-19 in trying to maintain and further institutionalize some of these positive developments for better patient-centered care.

Annex 8: Calendar of Events

November – December 2021

Date / Time	Venue	Event description	Key Audience / Participants
Nov 2	Bishkek	Workshop on the results and prospects of cooperation with the media to highlight TB issues	Journalists from Bishkek and regions, MHSD, NTP, RHPC, PHC
Nov 2-3	Talas Oblast	Training on Social Media Marketing (SMM)	OTC staff
Nov 17	Batken Oblast	Training on Cohort Analysis (first stage)	TB doctors at OTC and PHC, M&E staff
Nov 22-23	Jalal-Abad Oblast	Training on informing the population on TB (TB People)	Religious leaders
Nov 23-24	Issyk-Kul Oblast	Training on Social Media Marketing (SMM)	OTC staff
Nov 25-26	Osh Oblast	Training on informing the population on TB (TB People)	Religious leaders
November	Bishkek	Training on the FAST implementation in hospital settings	Medical staff of 2 Hospitals (No 1 and No 6) in Bishkek
November	Bishkek	Workshop on National Program Tuberculosis-VI for 2022-2026 (TB 6)	National partners and stakeholders in TB
November	Bishkek	Training on TB case management	Professors of the Family Medicine Department, KSMIPT&CE, from all oblasts
Dec 1	Bishkek	Training on informing the population on TB	Chui and Bishkek volunteers
Dec 7 (TBC)	Bishkek	Round Table on Cure Tuberculosis Year 2 Achievements and Plans for Next Year	USAID, MHSD, NTP, RHPC, MHIF, donors, stakeholders
Dec 9-10	Jalal-Abad Oblast	Training on Social Media Marketing (SMM)	OTC staff
Dec 14	Chui oblast	Training on Cohort Analysis (third stage)	TB doctors at OTC and PHC, M&E staff
Dec 15	Bishkek	Training on TB issues and key messages to encourage residents of settlement colonies to seek TB screening	Staff of settlement colonies in Chui Oblast
Dec 24-25	Chui Oblast	Training on informing the population on TB (TB People)	Religious leaders
December	Naryn, Kara-Suu	Training of medical specialist on strategy FAST in Hospitals in Naryn oblast and Kara-Suu district in Osh Oblast	Medical staff of hospitals
December	Kara-Sui, Osh Oblast	Training on TB case management	Family doctors, family nurses, district TB doctors

Annex 9: Media Clippings

Quarter 4 of Year 2 (Jul 1 – Sep 30, 2021)

Date	USAID Mentioned	Outlet	Platform	Link	Heading	Language
16-Jul	Yes	Website	Kaktus.Media	https://goo-gl.me/cvqO6	Why is TB treatment not patient-friendly and how can we make it more patient-centered?	RUS
24-Jul	No	Info Agency	Kaktus.Media	https://goo-gl.me/Z9ld5	Can TB patients be vaccinated against coronavirus? Answer of the National Tuberculosis Center	RUS
26-Jul	Yes	Radio	OTRK		Impact of COVID on TB (newscast)	RUS
26-Jul	Yes	Radio	OTRK		Impact of COVID on TB (newscast)	KYR
11-Aug	No	TV	STV		The sensitivity of the healthcare professional is the key to the success of treatment! - family nurse (SBC-video, shown 60 times)	KYR
13-Aug	No	YouTube	STV	https://www.YouTube.com/watch?v=ocjwi7V_u8s	Sensitivity of health care workers	KYR
16-Aug	No	TV	ELTR		The sensitivity of the healthcare professional is the key to the success of treatment! - family nurse (SBC-video, shown 8 times)	KYR
11-Aug	No	Facebook	ELTR	https://goo-gl.me/3K0nc	Tuberculosis: Sensitivity of health care workers	KYR
11-Aug	No	TV	STV		When sick, women need more moral support from their loved ones! - a story of a young family who defeated TB (SBC video, shown 60 times)	KYR
12-Aug	No	YouTube	STV	https://www.YouTube.com/watch?v=jANVoNew6rE	When sick, women need more support from family	KYR
13-Aug	No	TV	ELTR		When sick, women need more moral support from their loved ones! - a story of a young family who defeated TB (SBC video, shown 8 times)	KYR
16-Aug	No	Facebook	ELTR	https://goo-gl.me/3bx7c	When sick, women need more support from family	KYR
11-Aug	No	TV	STV		VHC leader on the importance of TB patient support by their family (SBC video, shown 60 times)	KYR

12-Aug	No	YouTube	STV	https://www.YouTube.com/watch?v=5jAPzOwMA64	The importance of family support for the patient	KYR
14-Aug	No	TV	ELTR		VHC leader on the importance of TB patient support by their family (SBC video, shown 8 times)	KYR
16-Aug	No	Facebook	ELTR	https://goo-gl.me/CsKSA	TB can be overcome with timely detection and treatment	KYR
2-Aug	Yes	Radio	OTRK		Public Assistant for TB Treatment (newscast)	RUS
2-Aug	Yes	Radio	OTRK		Public Assistant for TB Treatment (newscast)	KYR
11-Aug	No	TV	STV		Public Assistant in TB Treatment - Rural nurse's opinion (SBC video, shown 60 times)	KYR
10-Aug	No	YouTube	STV	https://goo-gl.me/ekq8w	Community-based supporter Nurzhamal	KYR
19-Aug	No	TV	ELTR		Public Assistant in TB Treatment - Rural nurse's opinion (SBC video, shown 8 times)	KYR
10-Sep	No	Facebook	ELTR	https://goo-gl.me/C2nVi	TUBERCULOSIS AND SOCIAL ASSISTANT	KYR
1-Sep	No	Radio	OTRK		Impact of the COVID-19 pandemic on the TB situation in the Kyrgyz Republic (newscast)	RUS
1-Sep	No	Radio	OTRK		Impact of the COVID-19 pandemic on the TB situation in the Kyrgyz Republic (newscast)	KYR
8-Sep	Yes	TV	ELTR		Special Feature: How COVID-19 Pandemic Affected TB Situation in Kyrgyzstan	RUS
9-Sep	Yes	YouTube	ELTR	https://www.YouTube.com/watch?v=vtc4fp14-rQ	How did COVID-19 Pandemic Affect TB?	RUS
9-Sep	Yes	TV	ELTR		Special Report: How COVID-19 Pandemic Affected TB Situation in Kyrgyzstan	KYR
9-Sep	Yes	YouTube	ELTR	https://www.YouTube.com/watch?v=UC4fxD0XB8c	How did COVID-19 Pandemic Affect TB?	KYR
8-Sep	Yes	TV	STV		Special Report: How COVID-19 Pandemic Affected TB Situation in Kyrgyzstan	KYR
9-Sep	Yes	YouTube	STV	https://www.YouTube.com/watch?v=VMjG2FZWZyQ	Stop TB!	KYR
9-Sep	Yes	TV	STV		Special Report: How COVID-19 Pandemic Affected TB Situation in Kyrgyzstan	RUS

11-Sep	Yes	YouTube	STV	https://www.YouTube.com/watch?v=nGC_nyyJSTc	Special Report: How COVID-19 Pandemic Affected TB Situation in Kyrgyzstan	RUS
17-Sep	Yes	Info Agency	Kabar	https://goo-gl.me/b8BJz	Kyrgyzstan takes part in 5th International Conference on Integrated Tuberculosis Control in Central Asia in Tashkent	RUS
27-Sep	Yes	Radio	OTRK		5th International Conference on Integrated Tuberculosis Control in Central Asia	RUS
27-Sep	Yes	Radio	OTRK		5th International Conference on Integrated Tuberculosis Control in Central Asia	KYR
29-Sep	Yes	TV	STV		5th International Conference on Integrated Tuberculosis Control in Central Asia	RUS
29-Sep	Yes	YouTube	STV	https://www.YouTube.com/watch?v=Rto7qRU-eqM	CA Conference 2021	RUS
30-Sep	Yes	TV	ELTR		5th International Conference on Integrated Tuberculosis Control in Central Asia	RUS
30-Sep	Yes	Facebook	ELTR	https://goo-gl.me/aJWGe		RUS
30-Sep	Yes	YouTube	ELTR	https://www.YouTube.com/watch?v=AKMkB7Nz2JM	5th International Conference on Integrated Tuberculosis Control in Central Asia	RUS
30-Sep	Yes	Telegram	ELTR	https://t.me/eltrkyrgyzstan/3251	5th International Conference on Integrated Tuberculosis Control in Central Asia	RUS
30-Sep	Yes	Website	MHSD	https://goo-gl.me/zC8en	Kyrgyzstan Day in 5th International Conference on Integrated Tuberculosis Control in Central Asia	KYR
30-Sep	Yes	Website	MHSD	https://goo-gl.me/r9exb	Kyrgyzstan Day in 5th International Conference on Integrated Tuberculosis Control in Central Asia	RUS
30-Sep	Yes	Info Agency	AKIpress	https://zdorovie.akipress.org/news:1733672	Third Day of 5th International Conference on Integrated Tuberculosis Control in Central Asia dedicated to Kyrgyz Experience	RUS
30-Sep	Yes	Website	NTP	https://goo-gl.me/QqQID	Kyrgyzstan Day in 5th International Conference on Integrated Tuberculosis Control in Central Asia	RUS