USAID | CENTRAL ASIA
FROM THE AMERICAN PEOPLE

QUALITY HEALTH CARE PROJECT 2010-2015

FINAL REPORT

October 2015

This report was produced for review by the United States Agency for International Development. It was prepared by the Quality Health Care Project in the Central Asian Republics.

The USAID Quality Health Care Project is a five-year program designed to improve the health of Central Asians by strengthening health care systems and services, particularly in the areas of HIV/AIDS and TB care and prevention. The project helps governments and communities meet the needs of vulnerable populations, increase use of health services, and improve health outcomes. The Quality Health Care Project is part of USAID's third objective of investing in people as part of the US Strategic Framework for Foreign Assistance.

Recommended Citation: USAID Quality Health Care Project Final Report, October 2015. Bethesda, MD. Quality Health Care Project in the Central Asian Republics, Abt Associates Inc.

Contract Information: The Quality Health Care Project is funded by the U.S. Agency for International Development under Contract No. AID-176-C-10-00001, beginning September 2010. The Quality Project is implemented by Abt Associates Inc. and its subcontractors AIDS Projects Management Group (APMG), Project HOPE, Scientific Technology and Language Institute (STLI), and Socium Consult.

Submitted to: Arman Dairov
Office of Health and Education
USAID Central Asia Regional Mission

QUALITY HEALTH CARE PROJECT (2010-2015)

FINAL REPORT

DISCLAIMER

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development (USAID) or the United States Government

CONTENTS

Contents ..... **iii**

Abbreviations ..... **v**

1. Introduction **9**

2. Tuberculosis **14**

2.1 Component Overview 14
2.2 Improving Access to Quality Care 15
2.3 Strengthening Capacity 24
2.4 Improving Data Use for Decision-Making 26

3. HIV **40**

3.1 Key Results 40
3.2 HIV Component Goals and Objectives, Regional Learning, and Specific Barriers 41
3.3 Overarching Approach and Methods 42
3.4 Improving Access to Quality Care 43
3.5 Strengthening Capacity 49
3.6 Improving Data Use for Decision-Making 53

4. Maternal and Child Health **65**

4.1 Improving Access to Quality Care 68
4.2 Improved Capacity to Plan, Manage, and Monitor Enhanced Programs and Services 71
4.3 Strengthened Use of Data for Decision-Making 75

5. Family Planning/reproductive Health **84**

5.1 Improving Access to Quality Care 86
5.2 Strengthening Capacity 89
5.3 Improving Data Use for Decision-Making 90

6. Other Public Health Threats **92**

6.1 Rational Use of Antibiotics 92
6.2 CVD 97

7. Cross-Cutting Activities **98**

8. Lessons Learned & Recommendations **102**

8.1 Lessons Learned 102

8.2 Recommendations 103

9. Annexes 104

Annex A: Year Five Summary 104
Annex B: Year Five Training Data 107
Annex C: AMEP 108
Annex D: Technical Reports Produced by the Quality Project 117
Annex E: Clinical Protocols/ Clinical Practice Guidelines developed with technical support from the Quality Project 119

ABBREVIATIONS

ACSM	Advocacy, communication and social mobilization
AFEW	AIDS Foundation East-West
AFM	ARV forecasting and management
AKF	Aga Khan Foundation
AMR	Anti-microbial resistance
ANC	Antenatal care
ART	Anti-retroviral therapy
ARV	Anti-retroviral medication
AUA	Appropriate use of antibiotics
BCG	Bacille Calmette–Guérin
CAH	Community action for health
CAR	Central Asian Region/Republics
CARHAP	Central Asia HIV/AIDS Program (GTZ)
CC	Coordination Council
CCM	Country Coordinating Mechanism (Global Fund)
CDC	Centers for Disease Control and Prevention
CHC	City Health Center
CHSD	Center for Health System Development
CMCC	Central Medical Consultation Commission
CME	Continuing medical education
CP	Clinical protocol
CPG	Clinical practice guideline
CVD	Cardiovascular disease
DCC	Donors Coordination Committee
DFID	Department for International Development (U.K.)
DIC	Drug Information Center
DOTS	Directly observed treatment, short course
DRA	Drug Regulatory Authorities
DRG	Diagnosis-related groups
DST	Drug susceptibility testing
EBM	Evidence-based medicine
EBMC	Evidence-Based Medicine Center
EDL	Essential drug list
ELI	European Tuberculosis Laboratory Initiative
EmOC	Emergency obstetric care
EPC	Effective perinatal care
EQA	External quality assurance
FAP	Rural PHC posts without doctors (Kyrgyzstan)
FAST	Find cases Actively, Separate safely and, Treat effectively

FGP	Family Group Practice (Kyrgyzstan)
FGPNA	Family Group Practice and Nurses Association (Kyrgyzstan)
FLD	First-line drug
FM	Family medicine
FMC	Family Medicine Center
FMSA	Family Medicine Specialists Association (Kyrgyzstan)
FP	Family planning
GDF	Global Drug Facility
GFATM	The Global Fund to Fight AIDS, Tuberculosis and Malaria
GIU	Grant Implementation Unit (GFATM)
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GLC	Green Light Committee
GMS	Grant Management Solution Group
HAKR	Hospital Association of Kyrgyzstan
HC	Health Center
HCV	Hepatitis C virus
HIS	Health information system
HPAC	Health Policy Analysis Center
HoH	House of Health
IC	Infection control
ICATT	IMCI computerized adaption and training tool
IEC	Information, education, and communication
IG	Initiative groups
IMCI	Integrated Management of Childhood Illness
IPCC	Interpersonal communication and counseling
IPT	Isoniazid prevention therapy
JAR	Joint annual review
KAFP	Kazakhstan Association of Family Physicians
KCH	Keeping Children Healthy (Turkmenistan)
KfW	German Development Bank
KSMA	Kyrgyz State Medical Academy
KSMIRCE	Kyrgyz State Medical Institute for Retraining and Continuing Education
LED	Light-emitting diode
LMIS	Logistics management information system
M&E	Monitoring and evaluation
M&M	Monitoring and mentoring
MARPs	Most at-risk populations
MAT	Medication-assisted therapy
MCH	Maternal and child health
MCHI	Maternal and Child Health Institute (Turkmenistan)
MDR-TB	Multi-drug resistant tuberculosis
MET	Medical economic tariffs
MHIF	Mandatory Health Insurance Fund
MOF	Ministry of Finance
MOFA	Ministry of Foreign Affairs
MOH	Ministry of Health

MOHMIT	Ministry of Health and Medical Industry of Turkmenistan
MOU	Memorandum of understanding
MSM	Men who have sex with men
NAC	National Analytical Center
NCC	National Coordination Council of the Country Coordination Mechanism for the GFATM
NCD	Non-communicable disease
NCTP	National Center of Tuberculosis Problems
NGO	Non-governmental organization
NRL	National Reference Laboratory
NTBC	National Tuberculosis Center
NTD	Neglected tropical diseases
NTP	National Tuberculosis Program
OHD	Oblast Health Department
OPHT	Other Public Health Threats
OR	Operational research
PAL	Practical Approach to Lung Health
PEPFAR	President's Emergency Plan for AIDS Relief
PGMI	Post Graduate Medical Institute (Tajikistan)
PHC	Primary health care
PIU	Project Implementation Unit (GFATM)
PLHIV	People living with HIV
PMP	Performance monitoring plan
PMTCT	Prevention of mother-to-child transmission of HIV
PR	Principal Recipient (of the Global Fund to Fight AIDS, Tuberculosis and Malaria)
PRA	Participatory rapid assessment
PSG	Patient support group
PSM	Procurement and supply management
PWID	People who inject drugs
QA	Quality Assurance
QMS	Quality Management system
R&R	Recording and reporting forms
RAC	Republican AIDS Center
RCC	Rolling continuation channel
RCHCD	Republican Center for Health Care Development (Kazakhstan)
RCHP	Republican Center for Health Promotion (Kyrgyzstan)
RH	Reproductive health
RHC	Reproductive Health Center
RNC	Republican Narcology Center (Kyrgyzstan)
ROP	Regional Operational Plan
SES	Sanitary Epidemiological Service
SGBP	State Guaranteed Benefit Package
SHCDP	State Health Care Development Program
SLD	Second line drug
SM	Safe Motherhood

SOP	Standard operating procedure
SS+/-	Sputum smear positive/negative
STI	Sexually transmitted infection
STLI	Scientific Technology and Language Institute
SW	Sex worker
SWAp	Sector-wide Approach
SVA	Rural physician practice (Kazakhstan)
SVP	Rural physician practice (Uzbekistan)
SRL	Supranational Laboratory
TA	Technical assistance
TB	Tuberculosis
TFM	Transitional Funding Mechanism
TOR	Terms of reference
TOT	Training of trainers
TSMU	Tajik/Turkmen State Medical University
TWG	Technical working group
UNDP	United Nations Development Program
UNFPA	United Nations Population Fund
UNGASS	United Nations General Assembly Special Session
UNICEF	United Nations Children's Fund
UNODC	United Nations Office on Drugs and Crime
USAID	United States Agency for International Development
VCT	Voluntary counseling and testing
VHC	Village Health Committee
WHO	World Health Organization
XDR-TB	Extensively drug-resistant tuberculosis
ZN	Ziehl Neelsen method

I. INTRODUCTION

1.1.1 BACKGROUND

The countries of Central Asia have seen dramatic improvements in health outcomes in recent years. Motherhood has become safer as maternal mortality rates have fallen. Regional health systems have worked to stop the growth of epidemics such as HIV and tuberculosis (TB). Children are better nourished. Cardiovascular diseases are better managed.

The USAID Quality Health Care Project represents the fourth in a series of five-year USAID projects in Central Asia. While the first three projects focused more on strengthening the health systems as such, the Quality Project focused on specific health areas, including HIV, tuberculosis, maternal and child health, family planning, and other public health threats. Within these health areas, the Quality Project employed a health systems approach, with the objective of creating sustainable institutionalized systems and processes which contribute to the overall goal of improved health outcomes.

In each of these health areas, the Project worked to improve access to care, raise the capacity of health care workers and others in the system, and improve data use for decision-making.

1.1.2 CHANGING SCOPE OF WORK

The original goal of the project was to improve the health status of people in Central Asian by building the capacity of public health systems in five priority areas: Tuberculosis, HIV, Mother and Child Health, Family Planning/Reproductive Health and Other Public Health Threats. However, with changes in USAID funding parameters, including significant reductions in maternal and child health, family planning and reproductive health and other public health earmarked funds and some increase of TB and HIV/AIDS funding, USAID redirected project activities. USAID informed the project as early as the middle of the first year of program activities that the project's scope would be adjusted. After more than a year of discussion, USAID formally adjusted the project's statement of work in October 2013 with a contract modification. During implementation years 3-5 the project focused on TB and HIV/AIDS priority areas; however, the project was also able to continue programming MCH and RH activities, using already-obligated funds earmarked for these areas. USAID's adjustments to project SOW included a narrowing of the scopes of the project's TB and HIV work as well.

USAID approved the project's AMEP (PMP) only in March 2014. The AMEP generally captured results of the modified program while some activities and particularly broader HSS activities such as health finance, implemented in the first years of the project, were not reflected in the AMEP.

During the second and third years of the project, implementation was difficult at times because of the uncertainty of the scope of work and the lack of an approved monitoring plan. Project leadership found it difficult to work with national partners, as sometimes planned program activities were cancelled due to changing USAID priorities. Some damage was likely done to the long-standing positive relationships

that USAID and Abt Associates had established with national and local partners in the region. In Years 4 & 5, with the revised scope of work, the project had more clarity in direction and objectives, and was able to work more effectively. The Project experienced other difficulties as well; most significantly, the Abt's inability to register in Uzbekistan, meaning that in that country, the Project was only able to implement TB activities (through the Project Hope subcontract).[1]

As evidenced in the component sections of this report, despite the difficulties, the Project managed to carry out significant work, achieve meaningful results, and contribute to improvements in national health indicators.

1.1.3 KEY APPROACHES

The Quality Project continued several key approaches which had already proven successful under the three earlier *Zdrav* projects: close collaboration with other donor organizations; a step-by-step, strategic implementation approach; using WHO recommendations and evidence-based medicine as the foundation for introduction for improved medical approaches; piloting followed by scale-up; focus on establishing appropriate institutional roles and relationships; and involvement of local partners throughout all of the processes. As a result, the improvements that USAID supported became part of the country system and will not disappear when assistance money comes to an end.

Within all of its health components, the project worked to institutionalize key USG supported interventions and best practices and transit them to Government and/or other donors as appropriate. Due to the reduction of broader HSS activities within the project, this approach to institutionalization was also limited to match the revised scope of work. However, in all components the project worked to institutionalize quality improvement as a standard management approach at all levels of the health system in each country. The project undertook a dual approach to institutionalization and sustainability of quality improvement:

- Top-Down Approach which consisted of strengthening EBM capacity among all health sector stakeholders, and developing new evidence-based CPGs as the mechanism to change the content of clinical practice, and a
- Bottom-Up Approach, which consisted of dissemination of new CPGs through CME and their implementation through facility level QI processes.

[1] In Year 5, on USAID's request, Abt Associates issued grants to the WHO and UN. Scopes of work for these grants are included in Appendix A..

To achieve this, the project worked with country institutions to establish formal processes for developing, disseminating, evaluating, and revising evidence based standards for health care. The project worked to institutionalize evidence-based policymaking by strengthening country capacity to develop M&E frameworks, indicators, and processes that create a continuous flow of information and analysis that strengthens the feedback loop from quality improvement activities to action for improvement at all system levels. Wherever possible the project linked quality improvement to improving medical education as a major condition of sustainability and expansion of quality improvement. The project supported medical education institutions to revise the existing training programs based on EBM approaches.

1.1.3.1 INSTITUTIONALIZATION

Institutionalization for sustainability was an inherent objective of the Project's work, and required that the Project always strive to incorporate improved methodologies, technologies, and tools into clear and appropriate institutional structure, roles, and relationships of national partners. The Project engaged national partners as true participants in improving policy development, monitoring, conducting training, and other interventions. Through this engagement, national partners solidified their understanding of and commitment to evidence-based medicine (EBM) promotion mechanisms; Clinical Practice Guideline (CPG) development methodology; CME delivery; incorporating general improvements and evidence-based content of clinical content into undergraduate and graduate medical education; human resource development and retention tools; and quality improvement methodologies. The Project contributed to the development of over 135 Clinical Protocols and Clinical Practice Guidelines. In all Project components, key training topics were integrated into national undergraduate and/or CME courses.

Local NGOs that worked with the Project, especially on the HIV and TB components, internalized new approaches through joint work on Comprehensive Packages of Services for Key Populations and development of approaches to fully outpatient TB care in the region.

1.1.4 SUPPORT FOR NATIONAL HEALTHCARE: STRATEGIES AND COLLABORATION WITH GOVERNMENT PARTNERS

The Project effectively collaborated with and built capacity of Ministries of Health and their subordinate bodies such as National and Oblast TB Centers, AIDS and Narcology Centers, MCH and FP Centers, health care providers and managers, NGOs, to make changes that would improve access to quality health care for population, and particularly vulnerable groups of population. Collaboration with national government partners to support implementation of the on-going health development programs and contribute to the development of new strategic programs was the major strategic approach of the project to implementation, institutionalization and sustainability of international approaches to health supported by the USG.

In Kazakhstan, the project supported the implementation of the State Health Care Reform and Development Program 2011-2015 developed with support of USAID earlier projects. The project contributed to the development and implementation of new strategic programs and plans in priority areas of TB, HIV, MCH, and FP/RH: "The Comprehensive plan on TB/MDR/XDR TB control for 2014-2020", national Comprehensive Packages for PWID, MSM and SWs, National MCH/FP/RH Roadmap 2012-2015 and the new State Health Care Development Program 2016-2020.

In Kyrgyzstan, the project contributed to the development of the National Health Program "Den Sooluk" and its implementation plan, "Roadmap for Developing TB Services in Kyrgyzstan"; the State Program on HIV for 2012-2016.; the National TB Strategy Section on ACSM; and "MoH Decree on Improvement of Service Delivery for TB Patients and TB Surveillance (#670)". The project supported development of National Adherence Plan incorporated into National HIV Program 2012-2016 to increase the efficiency of GFATM spending and Comprehensive packages of services for PWID, MSM/TG, SW.

In Tajikistan, the project supported implementation of the National Health Care Strategy for 2010-2020. The project contributed to key strategic programs including "National Tuberculosis Advocacy, Communication and Social Mobilization Strategy 2010-2015", "National Strategic Plan for Tuberculosis Control in the Republic of Tajikistan 2015-2020", "National Program for improving the sexual and reproductive health of population for period 2015 – 2020", Health Financing Roadmap.

In Uzbekistan, the project contributed to the development of the National TB ACSM Strategy, a comprehensive "Unified TB Order" of the MOH, national Xpert MTB/RIF implementation strategy, a National Plan to Combat Multidrug-and Extensively Drug-Resistant Tuberculosis (M/XDR-TB) in Uzbekistan 2012-2015.

In Turkmenistan, with USAID strong support the Quality Project established good relationships with Ministry of Health and Medical Industry of Turkmenistan (MOHMIT. Through cost-share agreements with WHO, GFATM) UNFPA, UNICEF, UNODC, and Youth Centers the project contributed to the development of the National Maternal, Newborns, Child and Adolescent Strategy for 2014 -2018; National Strategy on Infection control focusing on RUA, the National HIV Strategy and a related plan of action for 2012-2016.

1.1.5 KEY ROLE OF GRANTEES AND OTHER NATIONAL PARTNERS

The Quality Project grantees, professional associations in Kyrgyzstan and Kazakhstan played a key role in implementing and institutionalizing approaches introduced by the project. The project's grantees the Kazakhstan Association of Family Practitioners, the Hospital Association of the Kyrgyz Republic (HAKR) the Family Medicine Specialists Association (KR, Year One only) and the Family Practice Group Practice and Nursing Association (FGPNA) linked to the network of FM trainers in both countries were instrumental in implementing project-supported activities nationally. Supported by the project the grantees worked to increase capacity of PHC providers through a range of trainings aimed to improve their knowledge on TB and HIV prevention including universal precautions, stigma reduction, interpersonal communication skills, referral mechanisms, ensuring STI patients are screened for HIV and HIV patients are screened for TB/STIs. The project provided support to grantees to develop M&E frameworks to document and conduct focused monitoring of implemented approaches in all components. In Kyrgyzstan, led by Quality Deputy Director, and supported by 10 STLI doctors of different specialties, PA grantees, and ME staff, the project worked to increase the QI impact by improving CME. To achieve this, the project worked to improve curriculum to educate a GP; improve teaching approaches by introducing problem-based learning; and contributed expertise to reform clinical curriculum consistent with EBM and new CPGs in priority program areas including MCH, TB, and HIV. The project contributed to improving nursing education curriculum to strengthen mid-level staffing and enhance the role of nurses in QI. In Kazakhstan, KAFP worked to improve the CME system to review the national clinical protocols and the GP program with the focus on AMR to ensure its consistence with

EBM. Based on project pilot experiences in improving TB PHC prevention and treatment QI KAFP developed a methodology (guidelines) on implementing TB PHC CQI approved by the MOH for national use.

Community interventions involved a variety of NGOs and community groups, especially in the HIV and TB components, as the Project developed local capacity and reached out to key populations. Other community groups, such as Village Health Committees and Mahallas, as well as religious leaders and women's committees, also served as close project partners on specific population outreach activities.

1.1.6 COLLABORATION WITH INTERNATIONAL PARTNERS/DONORS

In all countries, the Quality Project worked with other USAID and USG implementers in country and in the region to leverage USG resources and multiply impact. The project collaborated with GFATM grants for HIV/AIDS and/or Tuberculosis implemented in Kazakhstan, the Kyrgyz Republic, and Tajikistan to strengthen CCM mechanisms, and support implementation efforts. In collaboration with other USG partner projects the project worked with national institutions to enhance and operationalize HIV/AIDS and TB strategies, protocols and services. Working with NGOs, the project focused its effort on building capacity of these organizations to improve quality services they provide, and participate in social contracting (Kazakhstan). In collaboration with other USG implementing partners, the project worked to promote coordinated relationships between centers for EBM, National Research Institutes, MOH departments tasked with developing clinical protocols, and institutes of medical education. In all countries, the project collaborated with international donors to support the development of strategic programs and plans as described in the above sections.

1.1.7 LEARNING/SHARING OF EXPERIENCE ACROSS COUNTRIES IN THE REGION

The project took a consistent effort to document, share and disseminate CAR country experiences, proven practices and lessons learned in countries and across the CA region. The project conducted a range of high profile national graduation events aimed to summarize and present USG supported activities and results in CA to policy makers, health workers, mass media, and broad public.

1.1.8 STRUCTURE OF THIS REPORT

The sections below detail select specific results of Project interventions, organized by Project Components: tuberculosis, HIV, MCH, RH, and OPHT. Those are followed by a cross-cutting section, to cover work carried out before the March 2013 modification which formally altered the scope of Project activities. Within each component section, Project work is described by the USAID objectives:

- Improving Access to Quality Care
- Strengthening Capacity
- Improving Data Use for Decision Making.

Where project activities varied significantly by country, specific country approaches and achievements are highlighted.

2. TUBERCULOSIS

2.1 COMPONENT OVERVIEW

The Quality Project strategies and activities were defined taking into account the epidemiological trends across the region. When the project started in 2010, national TB programs in each country were still "vertical," with TB hospitals, outpatient facilities, labs, and other support services separated from the general health system. Excessive numbers of large TB hospitals were a holdover from an era of prolonged mandatory hospitalization for all TB patients and hospital payment systems disincentivized fully outpatient care by reimbursing hospitals based on bed occupancy rates. At the same time, integration of TB services at the PHC level was always limited, even after introduction of DOTS, partly because of the vertical nature of the TB systems that lacked mechanisms to provide the necessary monitoring and support of PHC providers. Due to ongoing health system reforms, Kyrgyzstan stands out as one location where TB reforms were expected to advance most rapidly.

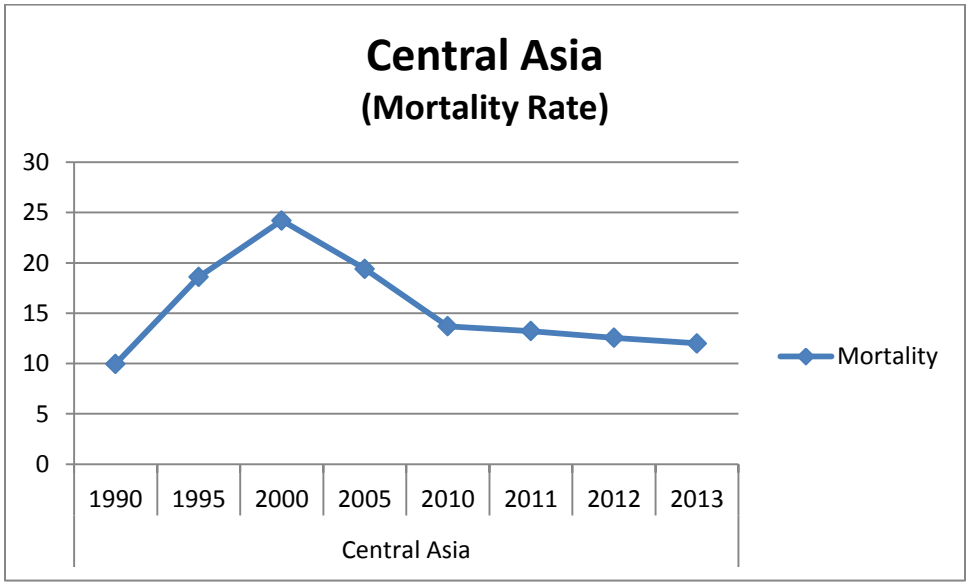
The primary project strategy and activities were designed within this context, taking into account country-specific environments, to bring systematic change to TB control by: strengthening integration of TB services at the PHC level using quality improvement approaches; addressing payment mechanisms to better motivate delivery of recommended services; strengthening TB policies; improving TB laboratory services and their ability to diagnose TB/MDR-TB; strengthening drug supply systems; and improving infection control to reduce TB transmission. Due to a project modification many of these activities had to be abandoned or the planned scope of activities was reduced with some continuing only in select countries (e.g. drug management in Kyrgyzstan). These changes dramatically altered the planned scope of the project.

Epidemiological Situation

A broad view of the epidemiological situation with TB throughout Central Asia from the time of the collapse of the Soviet Union until the 2014 WHO Global TB report shows important trends in the epidemic. Despite country-specific differences (e.g. estimate incidence rates in Turkmenistan and Uzbekistan are lower than the other countries), trends in each country are very similar: TB incidence rates dramatically increased following the economic collapse of the Soviet Union and subsequent collapse of the health systems in each of the Central Asian Republics. As the region recovered economically, the DOTS strategy was introduced and adopted across the region. DOTS introduction contributed to increased TB case notification and case detection as well as improved reporting of data. Throughout the region TB mortality rates have been reduced significantly, but now those rates are declining very slowly, except in Turkmenistan where mortality rates according to the WHO have not changed since 2005.

While the overall epidemiological situation has improved, the ability of the countries to diagnose drug resistance and multi-drug resistant TB (MDR-TB) have also greatly increased and revealed very high rates of primary drug resistance including MDR-TB and extremely high rates of secondary MDR-TB; all of the countries in the region, except Turkmenistan, are among those with the highest rates of MDR-TB in the world. There are indications that the MDR-TB situation in Turkmenistan is similarly high but such data has not yet been formally published.

Figure 1



*Data taken from the WHO Global TB Report 2014

2.2 IMPROVING ACCESS TO QUALITY CARE

A main priority of the Quality Project was improving access to and utilization of essential TB services across CAR by addressing key issues at the population level (symptom awareness, stigma, and discrimination) while simultaneously addressing quality gaps in the detection and treatment of TB and MDR TB at all levels of the health system. It was also important to minimize the risk of TB transmission in health facilities responsible for diagnosing and treating TB. Achievement of these goals required addressing outdated regulations governing organization of TB services, clinical standards, essential support services (lab and drug management), and population issues. One of the main interventions of the Quality Project was to promote treatment of patients without hospitalization, a WHO recommendation aimed at reducing the risk of nosocomial transmission of MDR TB and promoting adherence to treatment through a more patient-oriented approach. The Quality Project strengthened the quality of health services and systems at local and national levels by modeling interventions to demonstrate best practices that could be institutionalized and scaled-up nationally by national and international partners.

2.2.1 PHC STRENGTHENING AND MOVE TOWARD FULLY AMBULATORY CARE

From the inception of the USAID Quality Health Care Project, the strategy was to promote a shift toward fully ambulatory treatment of TB which required strengthening the integration of TB services into the PHC system. The move to fully ambulatory TB treatment was driven by the following: poor infection control in hospitals as a potential contributor to the high MDR rates in the region; the high cost of hospitalization; lack of effectiveness of DOTS as implemented in the region, as evidenced by high numbers of loss of patients to care, demonstrating the need for a more patient-centered approach.

The Quality Project supported a shift toward fully ambulatory TB treatment through a wide TB activities (including lab quality, support for GeneXpert, CPGs/CPs/QI, infection control, health financing, work with SES, policy, ACSM, Quality Improvement, and ACSM.)

2.2.1.1 KEY RESULTS: PHC STRENGTHENING / FULLY OUTPATIENT TB CARE

- In Tajikistan districts supported by the Quality Project, 49-70% of TB patients were treated without hospitalization in 2014
- In Kyrgyzstan, a successful district-level pilot of ambulatory care with introduction of PHC-level rapid molecular-based detection of MDR TB led to a decision by NTP to expand the ambulatory care model to the entire region (oblast), with later plans for nationwide scale-up.
- In the Kyrgyzstan ambulatory pilot, the number of patients referred per year by PHC providers for sputum microscopy more than doubled, while the proportion of referred patients testing positive for TB was in the 5-10% target range and the percent of clinically diagnosed (smear negative) TB dropped from 58 to 40% .
- In Kyrgyzstan, a 5-year Master Plan for reducing the number of TB hospitals while simultaneously strengthening PHC services and expanding fully ambulatory treatment of TB is underway.
- In Kazakhstan, the Quality Project introduced quality improvement methodologies to improve the quality of TB services in PHC facilities. This approach has garnered attention at the MOH level and is now being scaled up by local partners.

Figure 2:

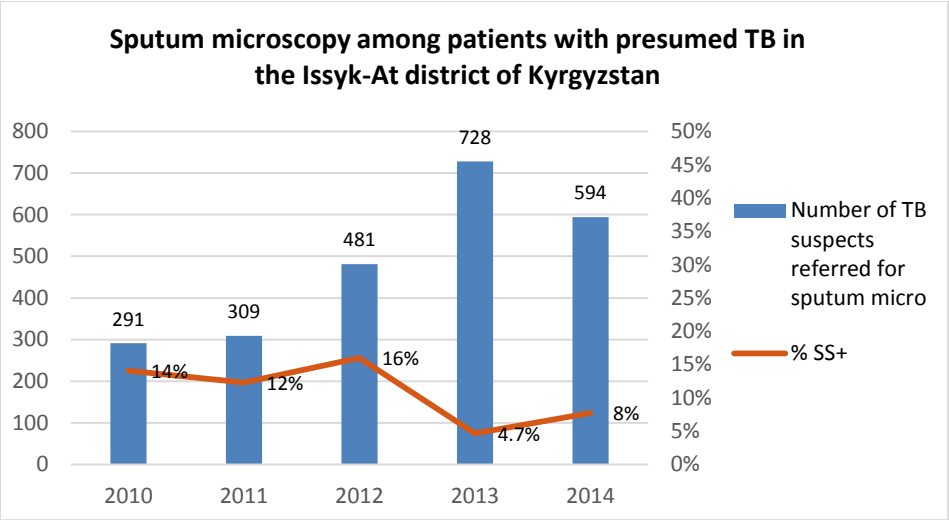
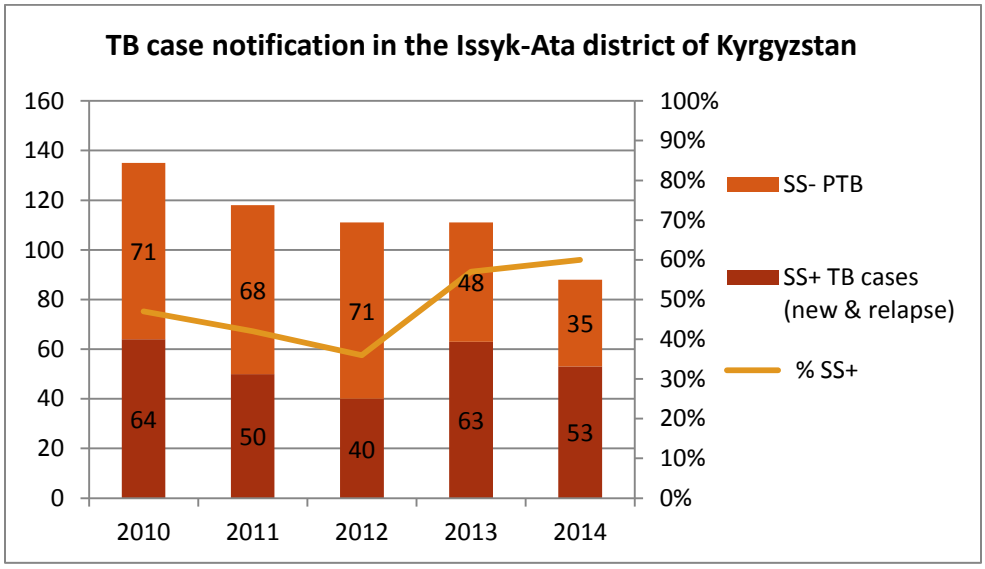


Figure 3



2.2.2 INFECTION CONTROL

Throughout countries of the former Soviet Union, nosocomial TB transmission is considered a primary factor fueling the MDR TB epidemics. At the beginning of the Project, there was almost no awareness of recommended IC measures at the PHC level and all TB patients were routinely hospitalized for two months or more in TB hospitals where IC measures were not followed. This led to patients with undiagnosed MDR TB sharing rooms with patients with DS TB for weeks or months before their MDR status was identified.

To address these issues the Quality Project planned TB infection control activities at both the TB system and PHC levels. While there were exceptions, the Quality Project and TB CARE I divided TB IC activities; the Quality Project focused more on introducing PHC level TB IC measures while the TB CARE I project targeted the TB hospitals, while both projects collaborated on developing or revising national TB Infection control plans. The range and duration of The Quality Project TB IC activities differed between countries primarily due requests of the donor.

The Project supported rollout of the WHO TB infection control policy and later the Harvard-designed FAST (Find Actively, Separate safely, Treat effectively) approach. To support implementation of these measures, the Quality Project conducted TB-IC training in all countries of the region and included key stakeholders from all levels of the health system including SES workers who are responsible for ensuring national TB-IC policies are followed. PHC-level TB IC activities implemented in Kyrgyzstan, Tajikistan and Uzbekistan included cough screening at the entry point of health facilities and the triage these patients in order to reduce the risk of TB transmission, to identify TB cases sooner, and get them on effective treatment. In Uzbekistan, TB IC activities in The Quality Project sites were halted by donor request in 2012.

In Kazakhstan, Kyrgyzstan, Tajikistan, and in Uzbekistan, The Quality Project assisted public health services (SES) to update their standards on TB IC in accordance with international norms and, in some cases, to more clearly define their role in monitoring health facilities' adherence to TB IC standards. These were critical steps given the monitoring and oversight role that SES has in ensuring sanitary rules and norms are followed in these countries.

2.2.2.1 KEY RESULTS: TB INFECTION CONTROL

- The Quality Project provided significant technical support to countries in developing national TB IC standards, including a national TB IC manual (KZ), national clinical protocol on TB IC at the PHC level (KR), TB IC standards contained in MOH regulation #109 (TJ) , and sections on TB IC within the unified MOH regulation on TB (UZ).
- In Kyrgyzstan, The Quality Project provided close technical support to NTP and SES to make major revisions in the national regulation governing organization of TB services, including TB IC, where the monitoring responsibilities of SES were clearly defined. TB IC monitoring instruments were included.
- The Quality Project supported over 800 total PHC facilities in KR, TJ, and UZ to implement key IC measures. In KR, HAKR supported implementation of IC measures in 27 general hospitals.

2.2.3 DRUG MANAGEMENT

TB drug consistency, quality and management systems in Central Asia had markedly improved even prior to the start of the USAID Quality Project. However, many weaknesses remained and stock-outs still occurred due to a poor flow of information between the peripheral and central levels of the drug management reporting systems. Drug warehousing was still weak in some countries, TB drugs remained available for purchase from local pharmacies without prescription, and shortages of second-line drugs (SLDs) were an issue in all countries. In addition, national partners still needed assistance to improve coordination with the major international drug supply mechanisms such as the Global Drug Facility not only to organize drug requests but also to register these drugs in the countries.

The Quality Project team was well aware of the issues in the region and planned to build upon the accomplishments of earlier USAID projects to ensure an uninterrupted supply of quality-assured TB drugs across the region. To contribute towards that goal, the teams planned to strengthen the existing Logistic Management Information Systems (LMIS) by expanding them to cover SLDs and to further institutionalize them to ensure the central level, where drug orders are prepared, would have all information required to quantify drug needs for procurement, to better manage existing stocks and distribution to the level of the patient, and to strengthen the storage of TB drugs. The Quality Project drug management specialists also worked closely with the GDF and national-level drug regulatory agencies to assist partners to register TB drugs. By the second year of the project, USAID asked that drug management activities be curtailed and the 2013 contract modification eliminated these activities in Tajikistan, Turkmenistan, and Uzbekistan. Despite this restriction, important achievements were still made.

The initial approach used across the region consisted of assessing the status of LMIS systems used in each country. Where reporting forms for Second Line Drugs were not yet in place the LMIS were adapted to include those forms. Joint monitoring with NTP specialists was conducted to improve the

flow of information and training was conducted to help key staff better manage that information for quantifying drug needs, realigning stock, and preparing procurement requests. These initial assessments also helped identify other issues with the drug management systems. Where support was needed to register TB drugs, The Quality Project staff worked together with local partners, including the drug regulatory authorities, to facilitate this process. The Quality Project staff also assisted the WHO and GDF by participating in GDF missions and supporting national partners in preparing orders and additional grants requests for TB drugs.

2.2.4 KEY RESULTS: TB DRUG MANAGEMENT

- Kyrgyzstan and Tajikistan added second-line drugs to their logistics management information system (LMIS) and updated their LMIS manuals accordingly.
- PHC facilities showed marked improvements in their reporting as a result of the project's LMIS work in KZ: 75% of PHC facilities sent correct LMIS reports for SLD to the national level, as compared to 68% of facilities prior to project intervention. Also 71% of PHC facilities kept updated records compared to 0% prior to the project intervention.
- PHC facilities in Dushanbe showed marked improvements in their reporting following The Quality Project interventions: 80% of PHC facilities sent correct LMIS reports for SLD to the national level, as compared to 0% of facilities prior to the project intervention. Also 80% of PHC facilities in Dushanbe kept updated records compared to 0% prior to the project intervention.
- Contributed to a WHO-Europe initiative aimed at realizing the "Consolidated Action Plan to Prevent and Combat M/XDR-TB in the WHO European Region, 2011-2015" by estimating the second line drug needs and cost shortfalls for each country in the region from 2012-2015.
- The Quality Project's technical assistance to the NTP in KR resulted in several successful applications for TB drugs: 2 grants from The Global Drug Facility (one for pediatrics TB drugs for 2012-2014 and one for adult first-line drugs for 2013-2014) and a UNITAID grant for SLDs (cohort of 220 MDR TB patients).
- In UZ, The Quality Project supported the successful application for a grant that provided pediatric formulations of TB drugs for 2000 children.
- In Turkmenistan, collaborative work between the Quality Project and WHO led to the adoption of a regulation prohibiting the sale of all first-line TB drugs on the open market.

2.2.5 POLICY

At the beginning of the project, national clinical protocols on TB in most CAR countries were either non-existent or not fully in line with WHO-recommended approaches; similarly, national policies regulating organization of TB services, including support services (lab, drug management), TB surveillance, and quality assurance were in need of revision.

Through its TB policy work, the Quality Project aimed to improve service delivery, remove barriers to treatment, and institutionalize methods for defining and implementing evidence-based quality standards. Policy work also aimed to strengthen health system functions including governance (clarifying structural roles and relationships between key stakeholders and strengthening management); resource generation and management (lab, drug); and participation of civil society in improving access to quality care.

The Quality Project facilitated policy development by organizing and leading TWGs that developed and revised regulatory documents, MOH orders, national TB Strategies, ACSM strategies, and M&E strategies.

Building off the work of the Zdrav Projects to introduce evidence-based medicine and establish EBM Centers in the region, the Quality Project was particularly successful first in Kyrgyzstan and then Tajikistan in promoting evidence-based approaches to TB diagnosis, treatment, and even program management by developing capacity among key clinical leaders to first understand what "evidence-based medicine" encompasses and then to critically assess existing evidence and synthesize it in the format of practically-oriented clinical guidelines and protocols adapted to the local environment.

2.2.6 KEY RESULTS: TB POLICY

- Contributed to the delineation of priority directions in TB reform, corresponding work plans, and M&E activities in national health strategy documents:
    - National Health Care Development Program of Kazakhstan for 2011-2015 ("Salamaty Kazakhstan")
    - The national health reform strategy, "Den Sooluk" (2013-2017) and National TB Strategy IV in Kyrgyzstan
    - Unified Decree on TB in UZ, which provide both clinical and organizational recommendations to improve service delivery.
    - National ACSM strategies in KR, TJ, and TM; methodological recommendations on ACSM in KZ
- Contributed to the development of national-level clinical standards of care:
    - The Comprehensive plan on TB/MDR/XDR TB control for 2014-2020 in KZ
    - Technical input into the development of 11 TB CPGs/CPs in Kyrgyzstan; three in Tajikistan; and one each in Turkmenistan and Uzbekistan.
    - National TB infection control guideline in TM
- Contributed to development, revision and implementation of a range of regulatory documents governing organization of TB services:
    - Order #670 in Kyrgyzstan which also outlined the roles and responsibilities of the State Department of Public Health
    - Unified Decree on TB in UZ
    - Order #218 on TB control, "National manual on drug need forecasting and calculation", and "Methodical recommendations for implementation of TB ACSM activities" in KZ
- Contributed to the development of M&E strategies and indicators:
    - In KZ, took primary role in developing "Methodology on quality improvement of TB services at PHC level" which was officially approved my MOHSP in October 2014.
    - In KR, facilitated TWG meetings to revise the national TB M&E strategy and corresponding guideline.
- Contributed to the development or revision of TB payment indicators:
    - In KZ, the indicators have been included in the PHC P4P system (MOH Prikaz #245)
    - In KR, The Quality Project participated in the creation of a DRG payment system for hospitals and proposed PHC-level payment indicators which are being considered by MHIF
- Took the leading role in developing laboratory QMS Guidelines, EQA guidelines, and SOPs on laboratory procedures. Final drafts of the QMS guideline are being finalized in KZ, KR, TJ, and TM.

2.2.7 MEDICAL EDUCATION

Many evidence-based WHO approaches to TB care go against what health care workers have been taught. To address this in a sustainable way, the Quality Project cooperated with national medical institutes to integrate updated clinical standards of care into the national under- and postgraduate curricula.

The Quality Project played a crucial role in the development of new TB CPGs for PHC providers and helped ensure their implementation by supporting family medicine and TB trainers in both Kyrgyzstan and Tajikistan. In Kyrgyzstan, the project collaborated with the Kyrgyz State Medical Institute for Retraining and Continuing Education to develop continuing medical education (CME) modules for PHC providers on the new CPGs; in Tajikistan this work was done in collaboration with the Tajik State Medical University and Tajik Postgraduate Medical Institute including development of the related training modules.

The Quality Project also linked with GFATM and other partners to ensure funding and mechanisms were in place to scale up educational interventions initiated under the Quality Project beyond the districts and regions the project was able to support.

2.2.7.1 KEY RESULTS: MEDICAL EDUCATION FOR TB

- In Kazakhstan, supported local partners to develop a textbook covering the diagnosis and management of TB, providing the next generation of medical students with a desperately needed resource containing up-to-date recommendations (the textbook was approved for use and published)
- In Kyrgyzstan, The Quality Project supported the development of a 3-day continuing medical education module based on the new TB CPGs, trained a team of national trainers from the departments of family medicine and phthisiatry at KSMIRCE, and supported them to train all PHC providers (doctors, nurses, and feldshers) throughout Chui Oblast. The training is now being scaled up nationally through KSMIRCE using GFATM funding.
- A similar approach was used to develop a training module and train national TB specialists and national, regional, and district-level family medicine trainers in Tajikistan. Cascade training of PHC providers has begun.

2.2.8 LAB

Laboratory services with ensured quality are a basic requirement for successful implementation of TB control programs. Early and accurate TB diagnosis creates the basis for selection of appropriate treatment regimen and successful treatment completion. At the same time, early initiation of effective treatment prevents further spread of infection in the patient's environment and community. The Quality Project team, jointly with the national NTP teams and international organizations present in the CAR region worked on improvement of quality of TB laboratory services and increasing the capacity for early diagnosis of TB and MDR TB. Main areas of lab activity included: External quality assurance of

smear microscopy; introduction of the Quality Management System; and technical assistance for introduction of GeneXpert rapid testing technology.

2.2.8.1 1. EQA OF SMEAR MICROSCOPY

The Quality Project introduced the WHO recommended methods for quality assurance of smear microscopy, including procedures for internal quality control and EQA, implemented by the higher level laboratories. Taking into account the three level structure of TB laboratory network, blinded rechecking of slides was used as the most appropriate and most reliable method to ensure high level of quality in smear microscopy. A representative sample of slides examined at peripheral level microscopy labs was rechecked by oblast-level laboratories and, if discrepant results were found, confirmatory rechecking was done by NRL. For successful implementation of this EQA system, The Quality Project lab specialists partnered with NRL senior staff to conduct trainings for lab coordinators and provide supportive supervision at implementation sites. The Quality Project also developed the capacity of NRL staff to collect, analyze, and report on EQA data.

2.2.8.1 QUALITY MANAGEMENT SYSTEM

Laboratory QMS covers all aspects of laboratory operation, including infrastructure and organization; methods; infection control and bio-safety; supply management; equipment and maintenance; referral systems and documentation. The Quality Project supported the process of implementation of QMS in TB laboratories, introducing and implementing internationally approved quality standards for each component of laboratory operation based on ISO 15 189:2007.

QMS implementation was supported by development of QMS guidelines describing all required quality standards as well as instruments and checklists for monitoring QMS implementation. Checklists were based on the WHO - GLI recommended approach for phase 1 of QMS implementation, ensuring that all basic elements for laboratory functioning are in place: organization and staffing; bio-safety; equipment; technical procedures and quality assurance.

2.2.8.2 SUPPORT OF GENEXPERT IMPLEMENTATION

The Quality Project was involved in the procurement of two GeneXpert platforms: one in Kyrgyzstan and one in Tajikistan. In Kyrgyzstan, the project supported GeneXpert implementation as part of the pilot of outpatient management of patients with drug-sensitive TB described earlier. However, The Quality Project conducted activities to support the implementation of GeneXpert and its optimal use on a much broader scale in both countries, contributing to the development of national GeneXpert implementation strategies, diagnostic algorithms incorporating GeneXpert testing, and clinical protocols outlining recommended treatment regimens based on GeneXpert results. The Quality Project also supported the training of lab personnel on GeneXpert use and maintenance.

2.2.8.3 KEY RESULTS

- Expansion of Eternal Quality Assurance (EQA) for smear microscopy network; by the end of the Project, 100% of smear microscopy labs in Kyrgyzstan were included in the EQA system and submitting slides for review in a timely fashion.
- Implementation of Quality Management System (QMS) in TB laboratories

- Support in implementation of GeneXpert diagnosis for ambulatory treatment of TB
- Supported development of QMS and EQA guidelines.

2.2.9 ACSM

In the second year of the Quality Project, operational research confirmed that TB symptom awareness was still quite low in the general population, misconceptions about TB transmission were common, and TB-related stigma and discrimination were widespread. These factors diminished the likelihood that patients would present to health facilities in a timely manner for diagnosis and treatment. In addition, TB specialists and PHC providers responsible for counseling patients immediately after diagnosis and during treatment were time-constrained, poorly equipped with effective educational materials, and often lacked the communication skills needed for creating a supportive patient-provider relationship that is so important for promoting adherence to long treatment regimens.

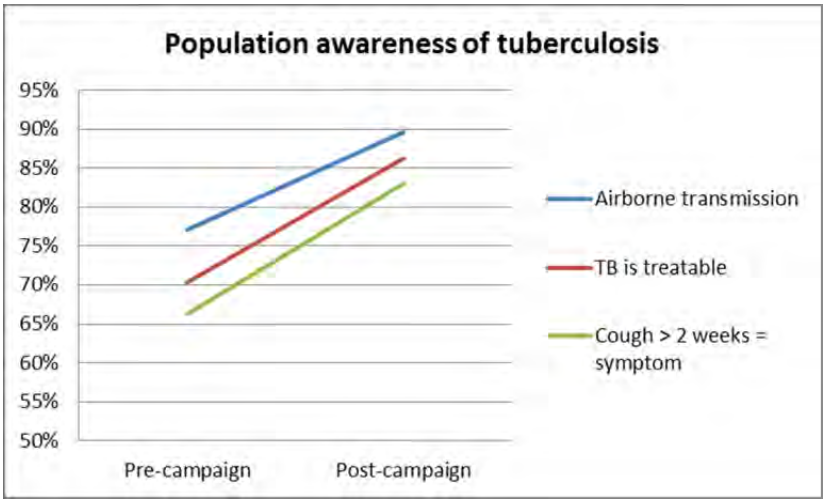
To address these issues, the Project carried out a common set of activities in each country:

- Development of national ACSM strategies
- Implementation of patient support groups
- Training of health care workers on interpersonal communication skills for TB counseling
- Development of IEC materials and their dissemination through community-based organizations (mahalla committees, village health committees, local NGOs, as well as mass media and religious leaders)
- Support for World TB Day events annually, to raise awareness of policymakers and the population, decrease stigma, and increase political commitment for implementing TB control policies.

2.2.9.1 KEY RESULTS

- In Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan the project contributed to development of ACSM strategies that received government approval. In Turkmenistan a strategy was developed and provided to the WHO to seek MoHMIT approval.
- The work on PSGs established by The Quality Project in Tajikistan was recognized by the WHO Regional Bureau as a best practice and was included in the publication, “Best Practices in Prevention, Control, and Care for Drug-resistant TB.” The MOH in Tajikistan issued a prikaz which institutionalized the use of PSGs countrywide.
- The creation of patients support groups in Kyrgyzstan helped improve treatment adherence up to 88%.
- Through 1,780 village health committees throughout Kyrgyzstan, the Quality Project supported distribution of 951,520 leaflets and 18,360 posters, covering approximately 64% of the country’s population with messages about TB symptoms, methods of transmission, and the curable nature of TB. Monitoring conducted by RCHP showed improvements in population awareness of key messages as a result of the campaigns.

Figure 4



- In Kazakhstan, IEC materials developed by The Quality Project were widely distributed and taken up by the Healthy Lifestyles Center for use throughout the country and funds were allocated from the state budget for printing select materials.
- The Quality Project supported the organization of a constituent assembly of the STOP TB partnership ("STOP TB Partnership, Tajikistan"), a coalition of people affected by TB and organizations involved in the fight against TB.

2.3 STRENGTHENING CAPACITY

The Quality Project designed its approaches in all TB program areas (lab, drug management, ACSM, PHC strengthening) to achieve institutionalization and maximize sustainability by working closely with local partners and strengthening their capacity to develop effective programs and manage them effectively. Most countries needed support to develop or update policies to ensure that evidence-based, internationally-recommended approaches were being advocated and The Quality Project provided extensive technical assistance in developing national health reform strategies, national TB strategies, monitoring frameworks, M&E guides, targeted strategic documents (e.g. GeneXpert MTB/RIF implementation; national EQA strategies), and evidence-based clinical guidelines. The Quality Project then worked closely with NTPs and educational institutes to develop training programs to ensure target populations were aware of new policies/guidelines and had adequate support to implement them. In many program areas, The Quality Project personnel or local partners worked side by side with target populations until they had adequate capacity to carry out their roles independently (e.g. trainers, lab personnel, drug management specialists, PSG leaders). The Quality Project also worked closely with agencies responsible for quality monitoring to ensure they were using appropriate performance measures and monitoring instruments.

In addition to working with State facilities, the Quality Project built the capacity of local NGOs and civil society to address TB issues and to support fully outpatient TB treatment pilots in KR and TJ.

2.3.1 TRAINING

Where target populations were large (e.g. PHC providers), the Quality Project worked closely with medical education institutes responsible for in-service education of practicing clinicians. After supporting the development or revision of training modules, project personnel trained trainers and then supported them to conduct cascade training on a large scale. In KR and TJ, The Quality Project was successful in integrating newly developed training curricula into the long-term training programs of these institutes and in preparing a cadre of national and regional trainers. Where target populations were small (e.g. NRL personnel; lab specialists in GeneXpert pilots; national-level drug management specialists), The Quality Project personnel provided ongoing mentoring and support. Round Table discussions were also used as a forum for the project and partners to share international best practices and to discuss technical issues and approaches whereby participants could learn through the discussion and debate.

The main technical areas of focus for Quality-led trainings included legal and policy work, service delivery at the PHC level, QMS, EQA, drug management, quality assurance, infection control, and CAH. topics, which targeted strengthening of community/civil society involvement in TB control.

By involving local partners in all program implementation—from CPG development to LAB monitoring to development of ACSM materials, the Project developed the capacity of local partners, including influential medical decision-makers and leaders. This had been a key approach of the earlier Zdrav projects, and was continued by the Quality Project as an effective method of institutionalizing new approaches and developing local champions for new approaches. This was especially effective in evidence-based approaches/CPGs and lab activities under the Quality Project.

Changing Minds through Work on CPGs

In Kyrgyzstan, The Quality Project made a strategic decision early in the project to provide close technical support to local TB experts to develop evidence-based clinical guidelines rather than having project specialists draft the documents or providing translations of existing WHO guidelines. This approach required training clinical leaders in evidence-based medicine and guideline development methodology; providing an extensive set of source documents from which they could synthesize clinical recommendations; and meeting regularly to discuss and debate (sometimes extensively!) suggested standards of care. Although it took nearly 18 months to finalize the clinical guidelines, the shift in mindset of the authors could never have been achieved by other methods, particularly where evidence-based recommendations required the authors to abandon approaches they had practiced and taught for decades (e.g. mandatory lengthy hospitalizations, extensive disinfection of surfaces in household with TB patients, reliance on annual X-ray screening to detect TB in general and at-risk populations).

PROFESSIONAL ASSOCIATIONS

In Kazakhstan and Kyrgyzstan, the Quality Project worked very closely with the professional association of family physicians (KAFP and FGPNA, respectively) to improve quality of TB services at the PHC level. In both countries, these associations have a long history of developing and coordinating quality improvement initiatives but had not

previously worked in the area of tuberculosis. Project personnel provided close TA support early in the project to help these PAs develop TB quality improvement programs, which involved multiple meetings with PHC facilities to better understand existing resources, processes, and barriers to quality. KAFP and FGPNA then developed manageable sets of TB quality indicators and corresponding monitoring instruments. Over the life of the Quality Project, both associations took on leading roles in supporting PHC personnel to deliver services in line with national guidelines and in advocating for policies that strengthen integration of TB services at the PHC level. Their approaches were adopted by NTPs.

2.4 IMPROVING DATA USE FOR DECISION-MAKING

The Quality Project worked to increase the use of data for decision-making by mentoring and training key managers and health workers on the utilization and analysis of data required for managing the level of the health system for which they were responsible. All TB components of the project included training or mentoring of national partners to utilize data for decision making. National level managers were trained in the use and analysis of data to identify TB program issues, which require corrective actions. Laboratory staff was trained to identify facility level issues through the use of QMS checklists and managers were trained to identify various issues utilizing QMS results and EQA data to identify specific issues that could be addressed in a systematic and targeted fashion. Drug management activities focused on working with national counterparts to improve the tracking of existing stock levels, strengthen drug quantification, and forecasting in order to improve stock management throughout the supply chain. TB infection control, at the PHC level focused on introducing the FAST approach and included the introduction of cough registers that are later reviewed to track use and the benefits of this approach; at the TB system level The Quality Project staff worked with partners on the use of thermo-anemometers to measure air changes per hour (ACH) and irradiance meters that are used to measure if UV lighting used for air disinfection in these facilities is working within the necessary range to be effective. Even ACSM activities utilized patient records to identify patients who interrupt treatment so actions could be taken to get them back on treatment. The outcome results for participants in patient support groups were analyzed verses those that did not participate which helped national partners assess and expand such activities. Finally, the results of outpatient treatment verses patients treated by the traditional approach were used to help decision makers assess the results of the project pilots; which helped expand the use of ambulatory treatment and provided decision makers with the data they needed to further promote this already internationally accepted approach to TB control.

The Quality Project worked with local partners to develop/revise national TB monitoring frameworks and guides in all countries except Uzbekistan. , project personnel conducted training on how to develop high quality indicators that cover all components of the system (resources, processes, outcomes) and how to select appropriate indicators for different levels of the healthcare system. In Kyrgyzstan, the national TB M&E guide was revised with The Quality Project support to include a clear delineation of the roles and responsibilities of the National TB Institute, oblast facilities, rayon-level specialists, FMCs, MHIF, SES, and professional associations. It also included a matrix of suggested monitoring indicators

and, for the first time, a description of the role of rayon TB specialists in monitoring PHC-level delivery of TB services.

Project staff also worked with agencies outside the NTP that play key roles in monitoring various aspects of TB services, such as SES (monitoring infection control and contact tracing), the MHIF in Kyrgyzstan, and the State Agency for Quality Inspection in Tajikistan. In Kyrgyzstan, Project personnel participated in the training of SES inspectors and managers from all rayons on new infection control standards and helped them to develop monitoring instruments, which have now been approved by the MOH. Similarly, the project facilitated training of all MHIF auditors and helped them develop a set of quality indicators for use in service contracts with health facilities.

2.4.1 MONITORING VISITS

Monitoring activities conducted together with local partners was not only a key activity used to monitor progress of the work implemented by the Quality Project but also as a vehicle to strengthen national monitoring staff in their use of data for decision making and to support the institutionalization of activities. A prime example of monitoring being used to strengthen and institutionalize the use of data for decision making is the joint EQA monitoring and annual round tables on EQA results in Tajikistan. This process was used to build both staff capacity and to institutionalize the NRLs use of data to better manage Tajikistan's EQA network. This approach was used in all countries of the project and helped to support the NRL in Kyrgyzstan to expand EQA to cover the entire country and for Kazakhstan to plan nationwide expansion of EQA for sputum smear microscopy based on The Quality Project results in Almaty and East Kazakhstan Oblasts. In Tajikistan, the project was able to progressively and finally completely hand over this activity to national partners during the final quarter of the project.

2.4.2 CQI PROCESSES

An overarching aim of the Quality Project, as originally designed, was to institutionalize Quality Improvement methodologies as a sustainable mechanism to improve the quality of service delivery in all program areas. To achieve this goal, training on CQI methodologies was conducted across the region in selected PHC facilities and facility-level multidisciplinary teams were created to improve TB services by: (1) identifying quality gaps and prioritizing problems to be addressed via continuous quality improvement; (2) conducting root-cause analysis of identified problems; (3) developing concrete improvement plans; and (4) monitoring change using indicators and tools developed for quality audits. The Quality Project facilitated regular supportive supervision visits to assist providers and managers to carry out CQI plans. After the introduction of this approach a progressively rapid rollout was envisioned based on demonstration of the results from selected sites. While the Quality Project was asked to abandon the CQI approach during the second year of the project, numerous achievements were realized which include:

Expansion of CQI activities from 4 to 37 facilities in four oblasts in Kazakhstan. Almaty oblast was preparing to scale up the approach throughout the entire oblast when the activity was stopped. Without The Quality Project support National partners from the TB system scaled up the use of TB QI tools and methodologies to additional districts of the Southern Region of Almaty Oblast. When representatives of

Quality Control department of MoHSD visited the region visited these sites they took examples of the tools to implement them in Almaty City, thus even with a limited time to introduce the CQI methodology it has expanded with the initiative of local health care managers. Additionally, the Project worked with the Kazakhstan Association of Family Physicians to develop a handbook for PHC managers on how to use a QI approach to improve TB services in response to country-wide implementation of a pay-for-performance system that focused on outcome-level indicators but relied on healthcare organizations to distribute bonuses based on mandatory internal quality audits. This handbook was approved by the MOH Quality Committee in October 2014, institutionalizing approaches first introduced by the Quality Project.

In Kyrgyzstan, the Family Group Practice and Nursing Association uses CQI instruments and a supportive supervision approach to strengthen the capacity of PHC teams to provide quality TB services. Those activities have been scaled up to nearly 800 PHC facilities in 21 rayons which provide services to over half the population of the country. These facilities are now implementing key measures to improve TB detection and decrease the risk of TB transmission, such as active cough surveillance and isolation and fast-tracking of coughing patients.

In Tajikistan, CQI methodology contributed to an increase in the percent of patients who were managed according to the TB diagnostic algorithm by family doctors. In Dushanbe the rate improved from 65.5 to 89% at PHC facilities that started QI in year one. Dushanbe PHC facilities that started CQI in the second year, the rate improved from 65% to 81.4% at the end of project year two. Family doctors in Khojand pilot PHC facilities improved adherence to the algorithm from 45% to 83%. One hundred percent of Vakhdat family doctors followed the algorithm. This change was important because it reduces over-diagnosis of smear negative forms of TB. Dushanbe health centers increased DOT performance from 87% in quarter one to 91% in quarter four of the second project year. DOT of the intensive and continuation phases has improved from 30 to 90% at the PHC facilities in Dushanbe during the first year of the project.

In Uzbekistan's Samarkand district there was an average 15-20 day delay before starting the continuation phase of treatment because there was bad communication between the TB hospital and PHC facilities. After CQI meetings, the time was reduced from 15-20 days to 3-5 days.

COUNTRY SPECIFIC APPROACHES ON TUBERCULOSIS

KAZAKHSTAN

In Kazakhstan, the MOH has no separate TB Control plan. The country coordinates TB control activities through prikazes and national guidelines but all TB-related activities were included into "Salamatty Kazakhstan", the State Health Care Development Program of Kazakhstan for 2011-2015.

Unlike other countries in the region, Kazakhstan has the ability and has been steadily increasing its budget for TB; unfortunately the structure of the vertical TB system itself is a barrier to effectively implementing the most effective TB control measures with these funds (e.g. Eliminating the bed based financing system could allow reforms to more efficiently use TB funds for such things as out patients treatment).

Within this context there were a few unique features of the project work in Kazakhstan. These included that the project was able to work on such issues as Pay for Performance (P4P) incentives for TB work and the PHC level, government funded social support for TB patients, and the development of a new TB text book for Kazakhstan which is detailed in other sections of this report.

The Quality Project contributed to updating of TB indicators included in the PHC P4P system (MOH Prikaz #245), and development of "Methodology on quality improvement of TB services at PHC level" which was officially approved on October 2014; the methodology and tools on quality improvements allows PHC facilities to evaluate quality of TB detection and treatment process, see progress and encourage PHC staff to improve quality of their work on TB care.

The Project conducted an analysis of the legal base for social support provided by government to TB patients and discussed it at National level. The analysis supported by a national roundtable drew attention of policy makers and partners to respective issues and the fact that there are avenues available to provide various levels of social support to TB patients to help ensure they will be cured.

COUNTRY SPECIFIC APPROACHES ON TUBERCULOSIS

KYRGYZSTAN

Kyrgyzstan has the most advanced health and health financing reforms in the region. As such, it was the ideal context to fully implement the Quality Project's regional strategy, including the following:

- Integration of TB services into PHC
- Closer linkages and coordination between the TB system and PHC to improve quality and the continuum of care
- Solidification of functions, roles, and relationships across the health sector and including community involvement, relationships with prisons, HIV system, and SES;
- Use of institutionalized methodologies and tools (e.g. standard CPG development methodology, undergraduate medical education curriculum);
- Unified and consistent national legal and policy framework;
- Health financing with appropriate incentives;
- Better use of information and improved feedback loops.

The Quality Project contributed to health policy dialogue that was conducted with earlier USAID projects in the previous health sector strategies - *Manas Taalimi* and the revised strategy *Den Sooluk* and accompanying SWAp, including bi-annual joint annual technical reviews and health summits. With ongoing Health financing reforms in the country, and introducing financing mechanism for TB services - a new TB hospital payment system and TB hospital restructuring.

The Quality Project supported the health sector in continuing to institutionalize new methodologies and tools for sustainability that included CPGs for improved TB services including TB IC within PHCs, improved TB detection by introducing GeneXpert within PHCs.

The Project successfully implemented a pilot project ambulatory model of TB care within the PHCs, linked initiating new TB hospital payment system and restructuring to provide experience and lessons learned for Central Asia. However as expected, the reforms related to the new hospital payment system and restructuring proved to be a challenge and are planned to be pursued within the new USAID Defeat TB project and WHO.

Key technical inputs from the project were incorporated within key government decrees - MoH Decree on 'Improvement of service delivery for TB patients and TB surveillance' (prikaz #670) and MoH Prikaz # 358 HIF Prikaz # 126 regarding of 'population enrollment to FGPs' (approved June 2013).

Key achievements:

- Contributed to the development of the new five-year national TB strategy
- Contributed to development of the next five-year health sector strategy, Den Sooluk - Provided technical assistance prior to and during the December 2012 Joint Annual Review (JAR) (Developed a work plan and log frame for 2013);

- Successfully implemented pilot new model of ambulatory care based on rapid molecular (GeneXpert)-based identification of drug-resistant TB in Issyk-Ata rayon, Chui Oblast and gained approval from MoH to scale up the model on whole oblast in year 5;
- With significant technical assistance from the Quality Project, the evidence-based CPG on outpatient treatment of TB for PHCs was developed, and approved by MOH;
- Trained PHC master trainers to conduct cascade training on approved national TB CPG for PHC providers and handed the baton to the Project HOPE/Global Fund project for further rollout using the Quality Project-developed training and project-trained trainers;
- Supported implementation of elements of FAST and provided monitoring in nearly 800 PHCs in 21 rayons through FGPNA;
- Collected financial and medical data on from 28 TB hospitals and two general hospitals. Preparation of proposals for the optimal structure of TB services (inpatient and outpatient), based in part on the DRG recalculation, will be produced in the first or second quarter of Y5. As mentioned above work will be continued by Defeat TB project and WHO;
- Provided technical assistance to develop national The M&E framework for Den Sooluk (TB section).

COUNTRY SPECIFIC APPROACHES ON TUBERCULOSIS

TAJIKISTAN

In Tajikistan, the Quality Project has sought to catalyze change within the TB system by linking activities such as HSS and health reform to the traditional focus areas covered by the Stop TB Strategy, while also responding to emerging issues in the country. Tajikistan was the first country in the region to recognize that the lack of funding available would necessitate that the country move towards fully ambulatory care that would also include MDR-TB patients. Project activities focused on preparing the system and community for this shift toward increased outpatient TB treatment and to address the situation faced by those with MDR-TB.

In January 2011, MOH issued a prikaz expanding MDR-TB patient treatment to 11 additional rayons of the country. However, as the prikaz was issued without adequate advance planning for implementation, the Quality Project sought to mitigate potential negative consequences of the prikaz by strengthening programmatic management of drug-resistant TB in the country and to support the transition towards fully ambulatory care.

The Quality Project provided technical assistance to the national and oblast MDR-TB commissions. By providing mentoring, monitoring, and training to health care providers, the Quality Project created conditions for sustainable improved TB/MDR-TB case management and higher quality of services. The Quality Project participation in Central Medical Consultation Commission reviews of MDR-TB cases not only ensured that cases were diagnosed correctly, but also built capacity for country partners to review cases independently.

Ambulatory care of patients helps avoid extra costs for health systems and patients, reduces risk of nosocomial TB transmission, and is recommended by the WHO as most effective. The table below shows absolute number and percentage of TB patients notified by PHC facilities in The Quality Project sites whose treatment course was started in ambulatory settings from the first day of treatment in 2013 and 2014.

1: Number and percent of patients treated fully outpatient

	Dushanbe	Vakhdat	Khujand
2013	103 (53%)	4 (22%)	13 (45%)
2014	93 (49%)	13 (59%)	19 (70%)

The Quality Health Care Project in Tajikistan coordinated with the Tajik NTP, the PHC system and TB control program to increase access to high quality health care services by at-risk populations within the country. The project provided TA to all levels of the Tajik health care system in order to ensure the legal and technical mechanisms are in place for providing effective health interventions to those in need. Additionally, the project worked at the grassroots level to encourage community support for TB diagnosis and treatment. The coverage of the population with ACSM activities continued to increase as the Quality Project worked with religious leaders and women's committee activists in Dushanbe, Vakhdat and rayons of Sogd oblast.

In year four and five of the project community leaders conducted meetings for 44,487 community members. As a result of Project work with communities, community activists from project sites referred 1,011 TB suspects to PHC centers; 160 (15.8%) of them were found to have TB. Religious leaders have proven to be very active sharing TB information with the adult population (mainly, men) who attend mosques.

COUNTRY SPECIFIC APPROACHES ON TUBERCULOSIS

TURKMENISTAN

The Quality Project TB strategy in Turkmenistan was defined by the country context. This is characterized by the authoritarian political situation in which foreign aid agencies were unable to register to work in the country during the life of the project; this was further complicated because the Turkmen government would not provide USAID a memorandum of understanding (MoU), which in the past had allowed projects to work directly with national partners. The situation necessitated that the project work under the auspices of partners including; the WHO, GFATM Project (UNDP), and the National Red Crescent Society. In additional the project faced the challenge that National Partners were unable to formally share National TB Program data which complicated using data for decision making.

For this reason, the project primarily supported national partner efforts in preparing policies and guidelines that would be adopted by partners and subsequently lead to systematic changes in key areas of Turkmenistan's TB Control efforts. These activities were also complimented by targeted training seminars that addressed the policy areas to which the project was contributing.

The key achievement in the policy area of The Quality Project's work is the work done to enhance the guiding normative documents utilized by the NTP that resulted in the approval of Prikaz #109. The team contributed along with national partners to the revision of an outdated Prikaz that had been in effect since 1999. The revision of this document resulted in a New Prikaz (#109) which includes a broad set of documents to guide TB Control Activities in country. The Prikaz was officially approved on March 24, 2012 (World TB Day!!!), the date of approval is a positive indicator that despite the many challenges to working in Turkmenistan that the country is in tune with events of the Global TB Community. Technical input from the Quality Project to this prikaz focused on: the structure and functions of NTP; laboratory TB diagnosis; and TB drug management. In particular, the project assisted in these sections of the prikaz:

- Institutionalization of the conception of NTP in place of "TB services" within national legislation;
- Revision and reduction of the list of high risk groups within the population who require periodic radiological evaluations;
- Clear definition of the roles and responsibilities within each level of NTP;
- Introduction and synchronization of the principles of TB IC with other guidelines existing in the country;
- Introduction of polymerase chain reaction (PCR) methods (GenoType MTB series; GeneXpert) into the laboratory section;
- Introduction of laboratory quality assurance; and
- Introduction of LMIS for FLDs.

COUNTRY SPECIFIC APPROACHES ON TUBERCULOSIS

UZBEKISTAN

Similar to Turkmenistan, the Quality Project strategy in Uzbekistan was defined by the specific country context. The context required The Quality Project to obtain difficult-to-receive approvals from the MOH/GOU to implement activities; approval processes in Uzbekistan are far more complicated than in any other country in the region and very few international projects are able to operate in the country. As one of the few registered international NGOs in the country, sub-contractor Project HOPE implemented activities based on a MOU between the MOH and Project HOPE signed in 2011.

During the first two project years (2010-2012), the project supported broad TB prevention and care activities, but in third year when the project was modified. At that time, the project began focusing primarily on laboratory and "Community Action for Health" (CAH/ACSM) activities to support the NTP. The unique feature in the Quality Project work in Uzbekistan is the existence of parastatal organizations such as the Women's Committee, Youth Movement "Kamolot", and which work countrywide. The Quality Project in Uzbekistan was able to partner with these groups, train them, and they subsequently carried out activities in all regions of the country.

By working with the Women's Committee the Quality Health Care Project was able to support countrywide activities that resulted in joint TB activity plans between Khokimiyats and TB Dispensaries. Previously no such agreements existed which these three groups. The Quality Project supported Republican Women's committee and oblast Khokimiats in 12 oblasts of Uzbekistan to conduct monitoring visits to Navoi, Andijan, Kashkadarya, Bukhara, Khorezm, Fergana, Samarkand, Surkhandarya, Namangan, Djizak and Tashkent oblasts, Republic Karakalpakstan. Subsequently, Hokimiats started to pay increased attention to tuberculosis in their communities.

Future projects should also consider partnering with these groups to ensure institutionalization of support for local communities and to ensure the further growth of their own capacity for working on TB issues as well as how they can help multiply project initiatives to a much wider geographical coverage than a project team and MoH can manage alone.

Selected Highlights of the Project's TB Activities

Tuberculosis Textbook in Kazakhstan

In cooperation with the National Medical University the Quality Project developed and introduced a new TB textbook into the curriculum of the medical university and provided 2500 copies to Medical University's library on June 19, 2014. In September 2014, the MOH approved the textbook for national use in all medical universities. The introduction of the textbook is increasing the access of medical students to modern international approaches of TB control. The new TB textbook includes clinical and managerial sections in line with the latest internationally recommended approach of TB prevention and treatment as well as specific sections related to the situation in Kazakhstan. The development and introduction of the text book is providing students with the latest information; the textbook is replacing a textbook that had been used since 1980. At the request of USAID, TB CARE I provided funding to print another 8000 copies of the text book which ensures these text books will be available to many more students for years to come. The total of 10500 text books distributed by the project to 5 universities and practitioners covers all of the country's needs for several years.

Selected Highlights of the Project's TB Activities

Piloting Fully Ambulatory TB Treatment in Kyrgyzstan

TB specialists in countries of the former Soviet Union are often skeptical of the safety and effectiveness of outpatient care. For decades their TB programs mandated lengthy inpatient treatment under the assumption that hospitalization reduces the potential of TB transmission in the general public and guarantees treatment during the most critical phase of therapy.

The Quality Project demonstrated the feasibility and effectiveness of fully ambulatory treatment, which globally is already widely accepted and proven to be effective. By providing an evidence base to support policy reform, The Quality Project worked towards gaining acceptance of this approach and moving towards national scale-up of ambulatory treatment.

In April 2012, the USAID The Quality Project initiated a pilot project study that formally introduced fully ambulatory (Outpatient) treatment for TB patients in the Issyk-Ata district of Chui Oblast. The project trained local health personnel on modern standards of detection, diagnosis, treatment, patient education and counseling. The project also introduced early detection of drug resistant TB using rapid molecular diagnostics (GeneXpert) and introduced modern infection control practices. Initial results of the showed that 54 of the 151 patients diagnosed with pulmonary TB in Issyk-Ata received full outpatient treatment and 96% successfully completed treatment—higher than the nationwide success rate of 85%.

Based on the success of this pilot intervention the Ministry of Health of Kyrgyzstan requested The Quality Project to support scale up of the model to the entire Chui province with further plans for nationwide expansion if initial scale-up results in high treatment success rates. This is a significant milestone for TB control in Kyrgyzstan, where embracing an outpatient model of TB care has been challenging but is one important step toward safer care that is more acceptable to patients and that frees up valuable health resources. This initiative is being handed over to the Defeat TB Project.

Selected Highlights of the Project's TB Activities

Patient Support Groups in Tajikistan

In 2011, the Quality Project in Tajikistan and the Tajik NTP established patient support groups (PSGs) project pilot sites. These groups were established to address national TB data, which showed increases in the numbers of treatment interruptions and relapses, and increasing numbers of MDR-TB patients. To address the situation The Quality Project employed an approach to enable patients to take more responsibility for their health and, in particular, to support them to better adhere to treatment and increase their access to peer support and well as medical counseling.

Monthly PSG meetings were organized at primary health-care level for TB and MDR-TB patients on the continuation phase of treatment. TB and MDR-TB patients, including their family members participate in these PSGs meetings together with medical workers (TB doctors, healthy-lifestyle center doctors, family doctors and nurses) and community leaders. The Quality Project supported PSGs with training seminars and information, education and communication materials and assisted in the organization of PSG meetings. TB doctors helped coordinate in each pilot site to supervise the groups. Former TB patients also take part in PSG meetings to share their experiences and community leaders provide support by sharing information and inviting newly diagnosed TB patients to attend the PSG meetings and to provide social support to TB patients.

During the life of the project 33 PSG were formed and continue to function; the new USAID TB Control Project is working to expand this initiative which the Tajikistan National team adopted as an approach to be expanded to rayons throughout the country (Prikaz #421). To date over 13500 Tb patients and their family members have attended PSGs. Four thousand four hundred and forty eight patients have successfully completed treatment while more than 1200 continue treatment and attending PSG meetings.

Selected Highlights of the Project's TB Activities

Infection Control on the PHC level in Kyrgyzstan

FGPNA played a critical role following TB-IC training provided early in the project. Subsequently FGPNA introduced the FAST TB–IC approach in PHC facilities over a large area of the country. FGPNA also expanded monitoring for all of these PHC facilities (Over 775) in 21 rayons which cover over half of the population of Kyrgyzstan. This work included introducing active cough surveillance, triage, separation, and fast tracking of people visiting health facilities for any reason that may be presumed to have TB. This approach will increase detection of cases that previously would have gone undiagnosed for a longer period of time during which they could be further transmitting TB. An additional significant impact of IC interventions at these facilities was noted by separate IC monitoring conducted by the Republican Center for Infection Control and SES. The involvement of SES after updating their "San Pins" codes should help further institutionalize this important approach that targets the earlier diagnosis or unsuspected cases presumed to have TB.

3. HIV

The Quality Project HIV component was designed to respond to Central Asia's concentrated HIV epidemic, in which general population prevalence remains below 1%, but key populations, including people who inject drugs (PWID), men who have sex with men (MSM) and sex workers (SW) experience much higher levels of HIV prevalence and incidence. Despite the disproportionate impact of HIV on these populations, most HIV testing, and often even HIV treatment, does not target these groups.

These disparities are the result of stigma and discrimination not only towards HIV infection, but also towards the behaviors associated with PWID, MSM and SW. Historically, it has been civil society that has responded most strongly to the needs of these marginalized groups, and over the last decade, a network of NGOs have formed and been supported by international donors, including USAID, to address disparities in access to HIV prevention services. While this represented a positive step forward, it also created some further problems, namely: a lack of government accountability towards key populations being served by NGOs; an artificial divide in the continuum from prevention services to testing, treatment, care and support; lack of coordination or, in some cases, open hostility between NGO and government service providers; and an unsustainable network of NGOs, reliant solely on international funding. In addition, while early civil society movements were often led by allies of key populations, rather than key populations themselves, in many cases the voices of those most affected – particularly PWID and people living with HIV (PLHIV) – had often become sidelined by entrenched civil society leaders.

The Quality Project set out to address these issues that had arisen as part of the national HIV responses across the region, while continuing to build the capacity of both civil society and governmental partners.

3.1 KEY RESULTS

3.1.1 IMPROVING ACCESS TO QUALITY CARE

- 9 Coordination Councils have been established and are meeting regularly, to increase cross-sectoral collaboration and address issues of access to care across the continuum
- 16 new care innovations as a result of Coordination Council actions, including:
    - Increased access to rapid testing at NGOs in Kyrgyzstan, and through mobile units and primary care facilities in Tajikistan
    - Availability of peer-counselors and seconded NGO social workers in government facilities
    - Increased access to free-of-charge diagnostic testing at primary care facilities where key populations often seek care
- 13 Community Advisory Boards have been formed, meeting regularly and empowering PLHIV and MAT clients to work alongside care providers to improve quality of services.

- Comprehensive package of care policies for each key population (PWID, MSM, SW) have been created and adopted in Kazakhstan, Kyrgyzstan and Tajikistan.
- Over 12,500 key populations tested in community-based and primary care settings, thanks to Increased access to rapid testing in Kyrgyzstan and Tajikistan:.

3.1.2 STRENGTHENING CAPACITY

- 6,091 HCWs trained in Kazakhstan, Kyrgyzstan, Tajikistan and Turkmenistan
- 42 NGOs in Kazakhstan were trained on procurement and management of government contracts through "social contracting" mechanisms; a total of 18 government contracts ("social order grants") were awarded for a total of $1.3 million.
- 6 Community Advisory Boards are engaged in regional learning and exchange, with capacity to conduct annual planning and to assist new CABs in forming as part of a national CAB network.

3.1.3 IMPROV ING DATA USE FOR DECISION-MAKING

- 60% of all patients on ART in Tajikistan are enrolled in ARV Forecast Management software, assuring that their supply of medications will not be interrupted due to poor forecasting

3.2 HIV COMPONENT GOALS AND OBJECTIVES, REGIONAL LEARNING, AND SPECIFIC BARRIERS

The goal of the HIV component was to increase access to improved quality HIV prevention, testing, care, treatment and support for key populations, including PWID, MSM and SW. Specific work-plan objectives varied from year to year, based on PEPFAR ROP requirements and local needs, but can be consolidated as follows:

3.2.1 IMPROVING ACCESS TO QUALITY CARE

- Increase collaboration between government and non-governmental service providers to strengthen the continuum of HIV care and address barriers through locally-driven action.
- Empower communities of PLHIV and PWID to engage in improvements in quality of and access to care services.
- Support creation and revision of policies for HIV prevention, testing, care, treatment and support for key populations, including updates to clinical protocols and clinical practice guidelines, as needed.
- Improve access to HIV testing and knowledge of status as a key gateway to engaging more PLHIV in care and treatment.

3.2.2 STRENGTHENING CAPACITY

- Strengthen the organizational capacity of non-governmental service providers to manage sustainable, strategic organizations that provide high-quality, comprehensive HIV prevention services to key populations.

- Strengthen the capacity of governmental service providers to conduct risk assessments, provide pre- and post-test counseling, and offer appropriate care referrals for key populations at the primary and secondary care levels.
- Build the capacity of communities of PLHIV and medication-assisted therapy (MAT) clients to assess community needs and interface with clinical liaisons to drive changes in care.
- Improve government partner capacity to manage accurate antiretroviral forecasting. *(Years 1-2; Y5 in Tajikistan only)*
- Assist local partners in building and implementing systems for community-based rapid testing. *(Years 1-2; Y3 limited mentorship in Kyrgyzstan)*
- Strengthen capacity of narcology services and NGO partners to provide high-quality MAT treatment and support. *(Years 1-2 only)*

3.2.3 IMPROVING DATA USE FOR DECISION-MAKING

- Support local partners in assessment and review of systems components of the HIV response, as needed.
- Strengthen local capacity to monitoring ART stocks and create accurate forecasts based on real patient need.

Regional learning was utilized both internally, though experience-sharing and joint work-planning within the Quality Project HIV team, as well as externally, through regional trainings and workshops, as described in further detail below.

3.3 OVERARCHING APPROACH AND METHODS

The Quality Project HIV component used a dual-level approach to improving access to care for key populations in Central Asia, **focusing on both top-down policy changes, and bottom-up capacity and collaboration building**. Policy changes were based on, and driven by, international evidence and guidance written by PEPFAR and WHO/UNODC/UNAIDS. Updating and introducing policies to match international standards provides and important normative base for the delivery of higher quality, accessible care.

At the same time, all international standards have to be implemented within local contexts. In order to provide technical assistance at the front-lines of health care delivery, the project identified 3 target localities each in Kazakhstan, Kyrgyzstan and Tajikistan (later expanded to a fourth localities in each), which served high concentrations of key populations. In these target localities, the Quality Project's work building capacity and collaboration with local governmental and non-governmental partners provided a testing ground for the best ways to overcome long-standing barriers to improved care, and achieve international standards and targets. In several instances, described below, local experience fed back into national policy or standards change, allowing for the desired feedback and interplay between the top-down and bottom-up approaches.

Within this approach, the Quality Project HIV team in each country prioritized **listening and being responsive to local needs**. Each country, and at times each locality, has unique circumstances underlying the strengths and weaknesses of its HIV response, and the project worked to design responses that could leverage international experience and best practices, while being responsive to local restrictions and limitations.

At the same time, the project had to work within the framework of the PEPFAR Regional Operational Plan (ROP), and thus strived to balance local needs with regional mandates. To every extent possible, the Quality Project **structured work plans and implementation around ROP requirements** and anticipated activities of other PEPFAR implementing partners.

Balancing local needs and regional mandates, the HIV component team then tailored specific approaches and adapted tools that had been used successfully regionally or internationally. Specific approaches and tools are described in further detail below, under Access, Capacity and Data.

3.4 IMPROVING ACCESS TO QUALITY CARE

3.4.1 OVERALL APPROACH TO ACCESS

Because of the diligence of previous USAID and other international donor-led projects over the last decade, most services that are needed for a comprehensive HIV response are available on some level in Kazakhstan, Kyrgyzstan, and Tajikistan. However, critical services often remain inaccessible to the populations that need them most – namely, PWID, MSM and SW – and many require strengthening of quality or geographic reach. In order to address this, the Quality Project structured its approach around two internationally-accepted resources:

1. The **WHO/UNODC/UNAIDS guidance on comprehensive packages of services** for each key population[2], which defines the range of services that should be available for key populations and the appropriate targets for the number of individuals to be reached, in order to have a significant impact on HIV transmission. Assuring that these services are available, accessible, and that their role in key population care is well-understood by the health care workers that provide them is key to assuring an effective national HIV response. As such, the Quality Project used these guidance documents and their prescribed packages as the framework for all training and technical support provided throughout the life of the project.
2. The **HIV treatment cascade** was introduced in Years 3-5, as a way of examining 'leaks' within the continuum of care for various populations. While this tool is not, in itself, novel, it addresses long-standing shortcomings in the continuum. While activities to integrate this tool into national planning and assessment processes were not fully realized given the lower than expected overall budget ceiling of the Project, the cascade was used as part of internal workplan development, to frame which elements of the HIV response most urgently needed attention.

[2] Though WHO/UNODC/UNAIDS guidelines were originally released as separate documents for each key population, in July 2014, an updated consolidated guidance document was released, addressing the package of services needed for each population all in one place. This document, *Consolidated guidelines on HIV prevention, diagnosis, treatment and care for key populations*, is accessible at: http://www.who.int/hiv/pub/guidelines/keypopulations/en/

3.4.2 COORDINATION COUNCILS

In order to address the systemic lack of communication and cooperation witnessed between governmental and non-governmental partners in Y1, in Y2 the Quality Project introduced the Coordination Council concept, which was based on successful multi-sectoral HIV councils implemented at the national and sub-national level in other regions. The purpose of the Coordination Councils was to create a mechanism by which representatives from governmental facilities, NGOs, and key population communities (e.g. PWID, SW and MSM) could meet regularly to jointly identify problems and solutions in key population access to care. While national mechanisms exist in each country (e.g. the Global Fund-mandated Country Coordination Mechanisms) to address planning and grant oversight, there were no pragmatic mechanisms by with such cross-sectoral coordination could be facilitated at the service-delivery level; thus, the Coordination Councils were formed.

Throughout Y2 and into the first half of Y3, the Quality Project played an active role in organizing, convening, and facilitating Coordination Council meetings quarterly in each of the target localities of Kazakhstan, Kyrgyzstan and Tajikistan where the project was active. As Councils matured, the Quality Project retreated from active facilitation of each meeting, instead attending occasionally for observation, and regularly monitoring meeting minutes. By the end of the project, 9 Coordination Councils were formed and meeting regularly (either monthly or quarterly, depending on the Council's needs).

The results of the Coordination Councils were, by design, varied; each Council focused on issues that were of most urgent importance in their locality, and leveraged different sets of resources to solve problems. Some Councils, such as those in Tajikistan, flourished under the leadership of local Health Department heads, who served as Chairs of the Councils, while civil society engagement was also considerable, with local partner SpinPlus (PWID outreach NGO) hosting Council meetings on an alternating basis. While the act of government health care officials setting foot in an NGO office for an official meeting may appear symbolic, results translated into real collaboration, with government-provided services in mobile units being expanded to include HIV rapid testing, which is now regularly administered on-site at partner NGOs. In addition, key population community representatives expressed the need for more accessible HIV testing in a variety of settings; with the assistance of the Public Health Department and AIDS Center, orders were secured to make rapid testing available at select City Health Centers in Dushanbe, using peer counselors for pre- and post-test counseling. This arrangement serves as a pilot for considering expansion of rapid testing access more widely. As a result of these increases in access to testing, over 1450 individuals in Tajikistan alone have received quick, reliable testing in safe, convenient settings.

In Kyrgyzstan, on the other hand, the Osh-based Coordination Council noted weak referral systems as a key priority for strengthening, and set to work resolving the unreliable and ad hoc mechanisms in place. With a focus on sustainability and independence from donor funds, the Coordination Council decided to developed a referral directory that would outline the appropriate course of referral for individuals under different circumstances, and include contact information for all responsible individuals in both governmental and NGO sectors. With MOH approval, this document provides an official, sustainable way to navigate at-risk patients between two critical services.

In Kazakhstan, Coordination Councils struggled to have maximum impact without linkage to more official government structures; the most effective solution was to integrate individuals concerned with key population issues – in this case, representatives from local NGOs – into the local Akimat (municipal) City Health Councils as a special sub-council. In Usk-Kamenogorsk (East Kazakhstan Oblast), this partnership allowed negotiation a budget allocation that allows free TB diagnostic testing for key populations to be available at all primary care facilities in the city throughout 2015. This partnership has also lent an added benefit of sustainability, as Akimat-level Coordination Councils are now institutionalized and plan to continue functioning regularly beyond the life of the Quality Project.

Other innovations in care as a result of Coordination Council actions include:

Kazakhstan

- Increased primary care level access to ultrasound examinations and gynecologist consultations for women from key populations in Temirtau
- Peer-counseling and psychosocial support available from seconded NGO social workers at Temirtau AIDS Center on a daily basis

Kyrgyzstan

- Social services from seconded NGO social workers available at FMC#16 in Bishkek, Osh AIDS Center and Jalal-Abad Oblast AIDS Center;
- Engagement of village health committees in HIV prevention in Issyk-Kul Oblast, where NGOs are limited;
- Collaboration initiated between NGOs with the Osh Mandatory Health Insurance Fund to improve medical services for key populations at primary care facilities in Kara-Suu and Osh City;
- Referral directory of medical and social services for key populations developed and distributed in Kara-Suu and Osh City
- Ministry of Health prikaz developed and approved to permit of health services to be provided free-of-charge for key populations without proper identification documents
- NGO-based rapid testing introduced in all localities with Coordination Councils;

Tajikistan

- Increased access to free-of-charge lab tests for key populations by NGO staff or volunteers at City Health Center #10 in Dushanbe and City Health Center #1 in Vahdat
- "Day of the open door" visits of mobile groups to hostels with high concentration of key population in Khujand
- Development and publication of 10,000 copies of a directory of medical and social services for key populations in Khujand
- Social work services available from seconded NGO social workers for to at-risk clients at the City Infection Hospital;

Budgetary limitations did not allow original plans to be implemented for a regional Coordination Council workshop in Y5 to support regional exchange and learning; however, based on the wide variety of experiences and successes between different Coordination Councils, it is clear that opportunities for regional learning exist. In Y5, It is recommended that regional Council exchange opportunities be considered for future projects.

3.4.3 COMMUNITY ADVISORY BOARDS

Throughout years one and two, the Quality Project repeatedly heard and witnessed reports of substandard care for PLHIV and for MAT clients; PLHIV would report lack of access to essential clinical monitoring services, breaches of confidentiality, and lack satisfaction with available ART regimens and adherence support. Likewise, MAT clients would report sub-optimal methadone dosages, police harassment onsite at the clinic, difficulty in accessing methadone during the narrow range of clinic working hours, and other grievances. However, when addressing these concerns with government service providers, a frequent response was: "We don't hear anyone complaining about these things." Seeing an opportunity to both build the capacity of PLHIV and MAT client communities, while simultaneously addressing these issues in access to and quality of care, the Quality Project developed the Community Advisory Board model for Central Asia in Y3.

Adapted from Community Advisory Boards at work throughout the United States and elsewhere, the model calls for an advisory board of patients at a specific facility to give feedback on needed improvements, and work collaboratively with service providers to find solutions. While the Coordination Council model, described above, focuses on issues of access to care and flow of key populations between services in a certain locality, the CAB model narrows focus even further, addressing issues at a single facility. This allows for not only hyper-pragmatic removal of barriers in access to care, but also for the development of mutual respect and cooperation between a clinic's administrators and the patient population they serve – a key element in creating more patient-centered care.

Understanding the unique variations in cultural context, service provision, and strength of stigma towards HIV and drug use in various settings, a CAB guidance document was developed to facilitate Kazakhstan, Kyrgyzstan and Tajikistan in forming CABs, while allowing flexibility as this new model took hold. Within the first year (project Y3), six CABs were formed: 3 HIV CABs, based at City AIDS Centers; and 3 MAT CABs, based at MAT clinics. In their first year of implementation, the Quality Project provided quarterly mentoring from an international specialist, as well as coordination support for monthly CAB meetings. After the first year of implementation, all CABs were convened for two regional exchange and learning events: an HIV CAB workshop in Almaty, and a MAT CAB workshop in Bishkek.

At these regional events, existing CABs, as well as select guest from Karaganda and Uralsk (Kazakhstan) as well as Khujand (Tajikistan) who were interested in forming new CABs in their areas, took part in a multi-day workshop focused on further capacity-building, planning for the next year's implementation, and exchange of successes and lessons learned. More details about successes and lessons learned can be seen in Box E, below/on the facing page.

At the end of the project, 13 CABs had been formed and were meeting regularly, with minimal coordination support from the Quality Project. With an eye towards sustainability, several CABs

have incorporated as non-profit, non-governmental organizations, with hopes of achieving additional funding resources.

While the CABs are immensely important to the future of PLHIV and MAT client engagement in Central Asia, caution should be used in how these mechanisms are sustained, by USAID and others; CABs are set up to be entities that perform in an advisory capacity to health care facilities, and not to work as stand-alone NGOs that provide services to key populations (a type of entity of which there are already many). It is advised that USAID, Global Fund, or other that may support CABs going forward remain mindful of the mandatory, mutual relationship between CABs and the facilities they are tied to, in order to maintain their integrity as advisory boards.

3.4.4 COMPREHENSIVE PACKAGE POLICY-MAKING

Though Y1 and Y2, the Quality Project used international guidance from PEPFAR and WHO/UNODC/UNAIDS as the basis for all training curricula and technical support interventions. In Y3, the PEPFAR ROP called for greater engagement from the Quality Project on high-level policy issues, and the project began providing technical assistance for the development and implementation of national-level policies on comprehensive packages of services.

Utilizing the PEPFAR model of policy change, the Quality Project undertook the following steps in each country:

1. Conduct situation assessment to determine baseline situation and need for policy changes or updates
2. Engage stakeholders in developing common policy agenda (in this case, based on international guidance already available)
3. Develop policy, based on situation assessment and stakeholder input
4. Submit for government endorsement
5. Prepare framework for implementation of the policy, including development of costed action plans and awareness raising of policy changes

As of May 2015, a full set of comprehensive packages for PWID, MSM and SW had been developed in Kazakhstan, Kyrgyzstan and Tajikistan, and endorsed by government officials (as well as, in Kyrgyzstan, the Country Coordinating Mechanism) achieving steps 1-4, above.

Plans for and progress towards implementation vary by country. In Kazakhstan, the approved packages will be used in the development of larger, over-arching health systems planning, through the new Health Care Program Densaulyk (2016-2020). In Kyrgyzstan, the final policy documents have been formally presented to partners at a series of roundtables, and were utilized in the preparation of Global Fund Concept Note (proposal for funding) in early 2015. In Tajikistan, the final policies were similarly used to guide development of the next Global Fund Concept Note, as well as in the development of the National Strategic Plan on HIV and AIDS for 2015-2018. In addition, Tajikistan has completed a detailed implementation plan for the PWID package; implementation plans for SW and MSM will be developed by other partners.

It should be noted that realizing the full implementation of comprehensive packages will be a multi-year process, which will necessitate ongoing technical support. It is recommended that support for these activities continue into future projects.

3.4.5 COMMUNITY-BASED RAPID TESTING

Recognizing that lack of knowledge of HIV status is a primary barrier to getting PLHIV effectively engaged in care and onto treatment, the Quality Project sought opportunities in each local context to expand access to testing. International literature and WHO/UNODC/UNAIDS guidance all support community-based rapid testing for HIV as the most effective way to reach key populations. At the start of the Quality Project, rapid testing was only accessible to pregnant women and for surveillance purposes; thus the project worked with local partners to find opportunities to expand access to key populations, in settings that were more accessible and convenient – preferably, based at NGOs where key population communities experience a higher level of trust and willingness to engage in care.

In Kyrgyzstan, this was made possible by partnership with the Global Fund Grant Implementation Unit (a role filled by the United Nations Development Programme, or UNDP), which had budgeted for up to 100,000 rapid tests to be made available in the country, but had no concrete plans for their use. The Quality Project provided technical assistance in developing a plan for community-based rapid testing, utilizing the expertise of consultants from Vancouver, Canada, where rapid testing has been available in community-based settings for over a decade. Consultants, along with the local Quality Project HIV team, assisted in developing a plan for procurement and storage of rapid test kits, a system of identifying and assessing the readiness of interested NGO partners, and a communications system by which NGOs would report testing results to and link patients with government health services in the event of a preliminary positive result. The Quality Project also supported the drafting of a prikaz to provide the policy basis for a pilot of NGO-based rapid testing.

While initially supportive of the project playing an active technical assistance role in improving access to rapid HIV testing in the country, USAID later limited the Quality Project's further engagement in this issue, and the Project was unable to provide an international consultant to carry out training for NGOs to conduct testing. The Global Fund Grant Implementation Unit in Kyrgyzstan was able to hire the same consultant who had done earlier work under the Quality Project to carry out training on rapid testing for NGOs, and several local Quality Project staff assisted the consultant in mentoring NGO testers to assure appropriate linkage to care for preliminary positives.

However, despite reduced engagement of the Quality Project in Y3-Y5, community-based rapid testing has maintained a presence in Kyrgyzstan, and has expanded to being offered by an original 11 NGOs in 3 oblasts (Chui, Osh, Jalalabad) and 2 cities (Bishkek and Osh), to now being offered by 19 NGOs in 4 oblasts (adding Issyk-kul) and 2 cities. As of May 2015, a total of 10,964 individuals from key populations have been tested using community-based rapid testing.

In Tajikistan, opportunities for NGO-based rapid testing were not as abundant, and resistance on the part of Ministry of Health officials to the idea of non-medical staff performing testing necessitated a different

approach. Working through the Coordination Councils, as described above, the Quality Project was able to facilitate the introduction of rapid testing within existing, Global Fund-funded mobile units, which had previously focused on distributing prevention commodities. Between May 2013 and May 2015, over 700 individuals were tested at City Health Center #4, and over 750 individuals were tested in mobile units visiting NGOs Marvorid, Legal Support, Spin Plus, AntiSPID, Dina, Equal Opportunities and Guli Surh. In addition to rapid testing, mobile units provided a full spectrum of STI, TB, infectious disease, reproductive and family health consultation, assuring that HIV testing and support is integrated into broader health support for key populations.

Unfortunately, during the life of the Quality Project, the environment in Kazakhstan was not conducive introducing or expanding rapid testing for key populations. Without designated Global Fund funding for procurement of test kits, the Quality Project was not able to provide the technical support needed to develop a system for scaling up community-based testing.

3.4.6 SOCIAL CONTRACTING

With trends of decreasing donor funding for HIV NGOs throughout the region, several countries are exploring the idea of 'social contracting', by which the government may grant money to NGOs to provide particular public health services. In Y1, the Quality Project conducted operational research in Kazakhstan to assess legal and other barriers for NGOs in obtaining state funds for HIV-related activities. Findings included a lack of capacity and knowledge amongst NGOs in how to apply for and manage contracts; sub-optimal contracting mechanisms for NGOs without core funding (e.g. funding is reimbursed, not provided up-front like a grant, limiting some organizations' ability to participate); and lack of designated pools of funding for HIV-related activities, meaning that HIV NGOs might compete against a wide array of other social causes for funding. To begin to address the policy-level issues, the Quality Project conducted oblast-level roundtables in Shymkent, Ust-Kameonogorsk and Karaganda, to raise awareness of local official to the demand for support in the HIV field due to Global Fund funding transitions. In addition, the Quality Project response to capacity building is further detailed below, and in Box B.

In Kyrgyzstan in Y3, an analysis of laws and regulations related to social contracting was conducted, in order to report on potential areas for improvement. The analysis was presented to stakeholders, along with a draft reference guide, highlighting some international best practices in government funding of NGOs to implement HIV response activities. However, there was no significant political will to move this issue forward, likely due to the continued availability of Global Fund funding, and no further progress was achieved.

3.5 STRENGTHENING CAPACITY

The Quality Project approach to capacity building tracks closely with the overall approach to improving access: the HIV team focused on building capacity discretely within the technical areas outlined in the comprehensive packages prescribed by WHO/UNODC/UNAIDS, for both public sector and civil society providers. A unique feature of this approach was to recognize the importance of both groups in providing full access to a continuum of HIV care, and to build capacity of both governmental and NGO employees alongside each other, in the same trainings and workshops. This multi-sectoral approach was unique to the history of the HIV response in Central Asia, and received positive feedback from both sides. Early experience in capacity-building using this approach was what drove the creation of Coordination Councils,

to allow continued feedback and collaboration between sectors, and in Y2-Y5 of the project, these mixed audience events helped to reinforce and strengthen the work being done by Coordination Councils to improve access to services for key populations.

3.5.1 NGO CAPACITY

As noted above, NGOs working with key populations took part in capacity-building training on a number of core elements under the comprehensive packages of services. Across Kazakhstan, Kyrgyzstan, Tajikistan and Turkmenistan, over 150 NGOs took part in these trainings, which included:

- **Technical management trainings for HIV prevention, care and treatment programs for PWID, SW and MSM** – three separate trainings, each focusing on building the technical competency and capacity of organization or program managers to oversee service provision in-line with international standards. These trainings included government counterparts, as well.
- **ART support** – a training just for NGOs on the basics of ART: when it should be started (so that NGO staff can encourage patients to engage with medical providers on the issue), what indications a layperson might see that treatment is not working well for a patient (necessitating a check-up with a medical professional), how to support adherence, and how to support patients during lapses in adherence.
- **Reaching women who inject drugs** – including a regional workshop introducing models used successfully in Ukraine, as well as national workshops on family-based approaches, including couples counseling and how to provide complementary services for women who have children.
- **Overdose prevention** – training for both NGO and public sector service providers on how to manage overdoses and prevent overdose death, through both first aid techniques and administration of naloxone. Overdose prevention (particularly through naloxone) is considered a high-demand service, which can more effectively engage PWID who would otherwise not be interested in HIV prevention and testing services; overdose prevention was added to the list of essential services for PWID as part of the 2014 international guidance updates[3].
- **Interpersonal communication skills for HIV test counseling (Kyrgyzstan only)** – where NGOs are involved in front-line provision of rapid HIV testing, this training provided more extensive practice and background on sensitive communication during pre- and post-test counseling.

In addition to trainings and workshops to increase technical capacity, the Quality Project provided training for 154 NGO directors and managers on improved human resources management for outreach programs. This training was aimed at addressing the high levels of staff burnout and turnover that that been noted by implementing partners, including the USAID Dialogue Project, and provided managers with tools to professionalize their staff management practices through the introduction or strengthening

[3] Consolidated guidelines on HIV prevention, diagnosis, treatment and care for key populations. World Health Organization. July 2014. Accessible at: http://www.who.int/hiv/pub/guidelines/keypopulations/en/

of standardized interview processes, formal job descriptions, regular performance reviews, constructive coaching and supervision of staff, and active prevention of and interventions for burnout faced by staff in high-stress environments. This training curriculum was initially introduced by a master trainer at the country level in Y1, but seeing the need for ongoing and refresher trainings, a training of trainers was organized, and in Y2-Y5 trainings and mentoring on this topic were conducted by local trainers.

3.5.2 PUBLIC SECTOR HEALTH CARE WORKER CAPACITY

Alongside strengthening the capacity of NGO service providers, the Quality Project worked to build the capacity of public sector health care workers. Baseline assessments of key population and NGO needs showed that while AIDS Centers had some highly-trained specialists who were well-versed on HIV and key population issues, the primary care system was less competent in managing prevention, testing (or referral to testing) and care for key populations and PLHIV. Recognizing the immense importance of the front-line primary care system for key populations to access the broader health care system, the Quality Project focused on training front-line health care workers who regularly interface with key populations, to improve their competency and comfort in managing issues related to risk assessment, risk counseling, referral to testing and/or pre- and post-test counseling (depending on the setting and where testing takes place), and referral to other related health services that are part of comprehensive care. In total, these trainings reached 4,870 individuals, with topics including:

- **Basic introduction to HIV** – for many health care workers, a basic review of HIV, and its testing and treatment, had not been included in their medical education, or was significantly out-of-date. While this topic had not been initially planned as a separate training, it quickly became clear that any cadre of trainees would need this basic review before moving to more advanced topics.
- **Interpersonal communication skills for working with key populations** – in addition to understanding the medical science of HIV risks, diagnosis and treatment, providers needed expanded understanding of the multiple and complex risk factors faced by many key populations, including social and environmental risks of violence, fear of arrest and prosecution, etc. This training helped health care providers to grasp and become comfortable with taboo topics such as drug use and commercial sex and sex between men, and provided health care workers with an opportunity to practice risk assessment and pre- and post-test counseling of patients through ample role-playing and other practical activities. Critically, these trainings also included relevant nurses and feldshers (as well as physicians), as these professionals have often been excluded from trainings on HIV and key populations in the past.
- **Special topics in the comprehensive package –** these topics varied by country and according to local needs, but included basics of harm reduction (particularly the evidence base for needle/syringe programs and MAT), overdose prevention using first aid and naloxone (for more information, see above under NGO Capacity), managing coinfections of TB and Hepatitis C Virus, and management and treatment of STIs as an HIV prevention measure. Select front-line health care workers also took part in regional and national activities on engaging women in harm reduction services (for more information, see above under NGO Capacity).

To support the transition from theory to practice, Quality Project HIV teams also provided on-going mentoring to targeted primary care facilities. Mentorship structures took various roles, depending on resources (both human and financial) available. In Tajikistan, each targeted City Health Center had one

mentor, for a total of 6 trained mentors working with 700 primary care workers to provide quarterly mentoring; the Quality Project team also used special occasions, such as International Women's Day and World AIDS Day, to host friendly competitions between cadres of trainees, to challenge their knowledge retention. In Kyrgyzstan, project trainers provided regular mentoring to Family Health Centers and AIDS Centers that hosted cadres of trainees, and trainers observed interactions with patients and provided practical suggestions for improvement.

In addition to this work with front-line health care workers, the Quality Project also engaged cadres of managers of programs that serve key populations, and engaged them in trainings on technical management of HIV prevention, diagnosis, treatment and care, alongside their civil society counterparts (as described more above in NGO Capacity).

In years one and two of the Quality Project, the HIV component also placed emphasis on improving the quality of MAT services, as a critical but underperforming aspect of PWID prevention and treatment. While USAID was very supportive of this work This work was curtailed in year three through the end of the life of the project, upon instruction from USAID. .

3.5.3 CAPACITY FOR SOCIAL CONTRACTING

As described above in the Access section, the Quality Project HIV team identified a lack of capacity on the part of HIV NGOs to apply for and manage available government funding for public health services. In response to this, the Quality Project partnered with Zholdas, an NGO based in Shymkent with a successful record of winning government social contracts. Working with Zholdas trainers, over 90 participants from 42 NGOs were trained to improve their capacity to apply for, and obtain, state social funding. With expanded funding becoming available, government contracts to NGOs, or state "social order grants" present a key opportunity for improving the sustainability of services. Eighteen of the 42 NGOs that participated in the training have successfully won contracts totaling $1.3 million.

3.5.4 MEDICAL EDUCATION

Based partly on the heavy involvement of civil society in the HIV response, and partly on the emergence of HIV in the post-Soviet era, most medical education curricula in Central Asia devote very little time to HIV, and to the risk behaviors and environments associated with it. While continuing medical education is critical, improved knowledge of key population issues and HIV prevention, diagnosis, treatment and care need to be instilled at the medical institute level. With this in mind, and taking into account the variety of medical education structures across Kazakhstan, Kyrgyzstan and Tajikistan, the Quality Project worked with local partners to find opportunities to improve medical education curricula.

In Kazakhstan, in collaboration with the National Medical University, an innovative HIV training module was developed for primary care doctors, to include interpersonal communication skills for working with key populations; issues of stigma, discrimination and gender-sensitivity; and the role and importance of harm reduction in HIV prevention. The module has been integrated into Karaganda Medical University programs, as well as in continuing medical education curricula for primary care specialists. To accompany this module, a practical flipchart was also developed, to support primary care physicians and nurses in

providing pre- and post-test HIV counseling for key populations; 400 copies have been distributed to date. An estimated 1500 students and practicing physicians will benefit from this module, annually.

In Kyrgyzstan, the HIV team worked with the Kyrgyz State Medical Institute for Retraining and Continuing Medical Education (KSMIRCE) to integrate content from multiple training curricula into the post-graduate training offerings: basic HIV for primary care and non-infectious disease specialists; interpersonal communication skills for HIV testing with key populations; and harm reduction. In addition, the Quality Project supported the revision of the unified training modules on infectious diseases for primary care physicians and nurses, to include HIV, HIV testing and counseling, harm reduction, sexually transmitted infections (STIs), TB, and malaria.

In Tajikistan, a full update to the HIV clinical guidelines accompanied the development of the comprehensive packages, as described above. Along with these updates, the Quality Project supported the initiation of development of an in-service training module on HIV clinical and preventative services for primary care doctors, to be available through the Post-Graduate Medical Institute (this will be finalized beyond the life of the Quality Project).

3.6 IMPROVING DATA USE FOR DECISION-MAKING

3.6.1 OVERALL APPROACH TO DATA

Under the PEPFAR ROP, other implementing partners, including the USAID Dialogue Project and CDC SUPPORT Project, had a mandate to focus on strengthening data systems for coverage and surveillance. The Quality Project worked to complement these efforts by responding to local partners needs related to data. These needs were along two major tracks, as described in further detail below: support for national assessments and reviews; and strengthening ARV forecasting systems.

3.6.2 SUPPORT FOR NATIONAL ASSESSMENTS AND REVIEWS

While significant work has been done by USAID, PEPFAR and other partners to strengthen data collection systems in Central Asia, countries are still in need of periodic assessments and reviews, which can synthesize broader analyses and provide recommendations for future program implementation. The Quality Project, in keeping with its overall approach of response to partner needs, provided technical support for complex assessment and review tasks in Kazakhstan, Kyrgyzstan and Tajikistan. As these exercises were highly specific to country contexts, they are described in further detail in the Country Specifics section, below.

3.6.3 STRENGTHENING ARV FORECASTING

Based on the HIV team members' interactions with partners prior to the Quality Project's launch, the project's HIV component was aware of sub-optimal planning of antiretroviral stocks throughout the region. In response, in Y1 of the Quality Project, a physician-friendly antiretroviral (ARV) tracking software was introduced to address long-standing issues with inaccurate medication forecasting. This software was introduced to Republican/National AIDS Centers in Kazakhstan, Kyrgyzstan and Tajikistan, and a core cadre of 5-6 staff were trained on its use in each country.

Within the year, the Republican AIDS Center in Kyrgyzstan made the request for installation of the software at the Osh AIDS Center, in order to effectively track ARV stocks from one of the country's largest distribution points. This request was fulfilled by the Quality Project, and at the same time partners in Tajikistan requested expansion of the system throughout the country. In order to effectively expand the software's use to multiple sites, a networked version was needed, and planned for development in Y2 of the Quality Project. However, in the second half of Y2, the regional USAID office requested that all activities related to ARV forecasting be halted, so as not to duplicate the work of the PEPFAR/CDC SUPPORT Project.

By year four of the Quality Project, it became apparent that the SUPPORT Project's mandate in Tajikistan would not include any duplicative activities, and USAID Tajikistan requested that the project once again engage on this issue. In year four, a networked version of the software was delivered to Tajikistan.

COUNTRY SPECIFIC APPROACHES ON HIV

Kazakhstan

The Quality Project in Kazakhstan counts among its successes three Coordination Councils, well institutionalized within Akimat Health Councils; five Community Advisory Boards, including three HIV CABs and two MAT CABs; 60 NGOs and 1173 health care workers reached for capacity-building; and strong additions to post-graduate offerings for HIV-related topics.

In addition to this, the Kazakhstan HIV team saw particularly strong achievements in the strengthening of civil society to engage more key populations in care. Expansion of family-centered services at 5 NGOs after participation in Quality Project training; all services were expanded using existing funding, or through successful application for targeted funding from local governments after completing training. NGOs reported reaching 300 new clients through these initiatives in the first year.

Local 'enrollment campaigns' in partnership with NGOs also helped to register over 420 individuals from key population at primary care facilities – a step that should help them access timely care when in need, rather than being turned away for lack of registration documents.

In addition, the Kazakhstan HIV team implemented extensive social contracting support activities, as described above. As a result, over $1.3m was raised from local funds for implementation of HIV prevention, care and support activities by 18 NGOs – a truly remarkable step towards sustainability of the HIV response in Kazakhstan.

COUNTRY SPECIFIC APPROACHES ON HIV

Kyrgyzstan

Kyrgyzstan's HIV component claims as its core successes four Coordination Councils; three Community Advisory Boards, including 2 HIV CABs and 1 MAT CAB); capacity-building for 59 NGOs and 1590 health care workers; the introduction of community-based rapid testing; and the development and institutionalization of a thorough set of training curricula for primary care physicians, nurses and feldshers.

Beyond these achievements in increased access and capacity, the Kyrgyzstan team also supported strategic planning training and mentorship for 6 NGOs. The project also engaged in select activities to build capacity for HIV prevention, diagnosis, treatment and care in the penitentiary system.

In addition, the Kyrgyzstan HIV component provided extensive support for data collection and utilization to improve the national HIV response, including support for two major assessments: a quality of harm reduction services assessment, conducted in partnership with UNAIDS and the DfID Central Asian HIV/AIDS Programme (CARHAP); and a national adherence assessment, conducted at the request of the Global Fund Grant Implementation Unit as a precondition to resume frozen Global Fund funding. Both assessments were critical in assisting the Global Fund HIV grant – the single largest funding source for the HIV response – to become unfrozen and re-engage in productive programming. In addition, the results of both assessments continue to be cited and used as part of national planning processes.

In support of community-based rapid testing, the Kyrgyzstan HIV component also supported the initial review of the rapid testing pilot program in Y3. The project provided expertise in methodology development, as well as seconding a staff member to conduct a portion of the assessment addressing linkage to care from NGO testing sites to AIDS Centers for follow-up. The major findings from this assessment were improved linkages to care and increased collaboration between NGOs and AIDS Centers – evidence pointing to the valuable effects of community-based testing, beyond direct increases in accessibility of testing.

Finally, the Quality Project provided technical assistance to the Republican AIDS Center on development policies and procedures for monitoring and audit of data collection under the national M&E guidelines on HIV.

COUNTRY SPECIFIC APPROACHES ON HIV

Tajikistan

Tajikistan's successes include three highly effective Coordination Councils; five Community Advisory Boards, including three HIV CABs and two MAT CABs; capacity building for 35 NGOs and 2107 health care workers; strengthened ARV forecasting capacity throughout the country; expansion of rapid testing in mobile units and primary care centers; and a promising track laid out for full implementation of comprehensive package policies.

In addition, the Tajikistan HIV component provided technical support for the revision of the National HIV Monitoring and Evaluation Guideline, at the request of the Republican AIDS Center, assuring that Tajikistan will be able to accurately monitor progress as it moves forward to implement a strengthened, more comprehensive response.

The Tajikistan HIV component also provided ongoing support to the Country Coordinating Mechanism (known locally as the National Coordinating Committee, or NCC) Secretariat, throughout the life of the project. Through a seconded specialist, the Quality Project supported the maintenance of the CCM/NCC website, facilitation of the previously-defunct harm reduction working group, and the organization of both the transitional funding mechanism support application as well as the most recent Concept Note (proposal for funding) to the Global Fund. This support for the CCM/NCC is critical to the function of the Global Fund grant, fulfilling PEPFAR's global mandate to support the efficient and effective implementation of Global Fund grants.

Support to the CCM/NCC was complemented by a rapid assessment, conducted by a Quality Project consultant, on procurement and supply chain management in Y2; the assessment, requested by the Principle Recipient of the Global Fund HIV grant, summarized strengths and weaknesses in procurement and supply management, and provided suggestions for strengthening these systems to better utilize Global Fund funds.

COUNTRY SPECIFIC APPROACHES ON HIV

Turkmenistan

Turkmenistan has not registered a case of HIV in over a decade; according to official statistics, there are no people living with HIV within the country's borders. However, the Ministry of Health acknowledges the need to continue prevention activities, and the Quality Project HIV component was able to provide technical assistance and training to local partners between July 2011 and November 2013.

The chief emphasis of The Quality Project's HIV work in Turkmenistan was technical support to the Ministry of Health to draft and finalize the National HIV Strategy and Plan of Action for 2012-2016. Assisting with the preparation of this document was an opportunity to support Turkmenistan in moving towards increased compliance with international standards for HIV testing, diagnosis, care and treatment. Project specialists also provided support for the monitoring and evaluation (M&E) plan accompanying the national strategy, in collaboration with UNAIDS. This input allowed for updating of national M&E practices to utilize standard international indicators, developed by UNAIDS and PEPFAR, and called for the development of a second-generation surveillance system to provide more accurate data on HIV incidence among PWID and SW. In accordance with international guidance from WHO/UNODC/UNAIDS, and in line with the National HIV Strategy, the Quality Project also supported the updating of HIV clinical protocols, including provisions to assure access to ART for PWID who test positive for HIV; updated treatment protocols for coinfection with TB and Hepatitis C Virus; updated treatment protocols for pregnant women; and revised indications for the use of efavirenz (EFV) and rifampicin.

Despite extreme limitations on civil society activity and HIV prevention outreach, the project was also able to make significant contributions to staff and key populations capacity for HIV programming. Tthe Quality Project trained 1,221 health care workers and had a total reach of over 4,286 individuals, including health care workers, key populations, and community members included in capacity-building activities.

Selected Highlights of the Project's HIV Activities

Expanding Social Contracting of HIV NGOs in Kazakhstan

Given that the final round of Global Fund support for NGOs is coming to an end in Kazakhstan, it is imperative to find a more sustainable mechanism for funding HIV prevention and care activities through civil society. The Quality Project HIV component partnered with NGO Association Zholdas, from Shymkent, in order to train 42 HIV service organizations on how to apply for and successfully manage government contracts.

Out of the 42 NGOs trained, all of them submitted applications for funding to their local Akimats (municipal governments) or AIDS Centers, and 18 (43%) have successfully won contracts since participating in the training. Awarded contracts, which total $1.3 million, include:

- Support to multi-disciplinary teams in Karaganda and Temirtau;
- Support to key populations in Temirtau to restore lost IDs, enabling them to officially enroll with primary care providers and gain access to government services within the State Guaranteed Benefits Package;
- Improvement of social services for female PWID in Ust-Kamenogorsk;
- Realization of the harm reduction program in South Kazakhstan (support to needle exchange trust points);
- Implementation of informational campaigns in South Kazakhstan;
- Support to PLHIV and HIV-infected children in South Kazakhstan.

Figure 5

In years four and five, the Quality Project conducted annual workshops on state social contract funding for all interested NGOs, providing an opportunity for organizations to exchange their experiences in social contracting and gain more information and guidance from a more advanced South Kazakhstan Association. At these workshops, NGO representatives discussed possible ways of improving

collaboration with the government, and developed recommendations on a draft of new law on government support to NGOs which is currently under discussion. These recommendations were subsequently sent to the Legal Working Group for consideration.

Selected Highlights of the Project's HIV Activities

Support for Penitentiary-Based HIV Programming in Kyrgyzstan

Globally, penitentiary settings experience higher rates of HIV than the general population, and Central Asia is no exception. In Kyrgyzstan, some basic harm reduction services, such as needle/syringe exchange, MAT, and condoms, are available at some prison sites. However, health care providers are not routinely provided with training on HIV, and resources are scarce.

In addition to the MAT Dialogues aimed at improving prison-based MAT care, in year four the Project engaged prison medical staff in a series of trainings. Over the course of 3 trainings, 60 prison medical professionals from across the country improved their knowledge on harm reduction, HIV, and interpersonal communication and counseling skills.

As a complement to this, the Quality Project conducted World AIDS Day events aimed at reaching 300 female prisoners at Colony #2 with HIV prevention knowledge, and donated a computer and office equipment to the colony to assist in conducting regular HIV and TB prevention workshops.

Selected Highlights of the Project's HIV Activities

Improving the ARV Supply Chain in Tajikistan

In Tajikistan, the Quality Project has worked to build the capacity of government partners to manage HIV prevention and supply chain issues, to assure sustainable changes that support a strengthened national HIV response. In response to a request from the National AIDS Center and the Global Fund Principle Recipient (UNDP), which is a GFATM PR, the Quality Project supported the development and installation of an ARV forecasting software system, to assist in the appropriate management and procurement of ARVs.

The system, which utilizes barcode scanners to minimize both human error and time required from physicians, contains a hierarchical structure that allows remote oversight of peripheral pharmacy stocks by the central (national) AIDS Center. Medication stocks can be overseen daily, allowing central managers to intervene and support or guide peripheral stock managers, as needed. All potential ARVs stock outs are flagged to central level in advance, preventing treatment interruptions.

To support the implementation of this system, Quality Project specialists led the modification of the internal computer network of Republican AIDS Center to include a ARV forecasting database server. To assure that supporting technology was sufficient, the Quality Project provided an equipment upgrade, including a computer and modem with WiMAX connection. A special 'manager' software module of the network was installed at the National AIDS Center. Two specialists responsible for the ARVs management and ART in Tajikistan were trained to use and manage software, and a one-day training was provided for an additional specialists from 11 Oblast and City level AIDS Centers. Participants were provided with the networked 'pharmacy' module of the software, and instructions on pharmacy registration.

Operation of this networked software will significantly increase the quality of ARV management, and allow proper distribution of ARV stocks throughout the country – assuring that all AIDS Centers have the same high-quality access to ART. It will allow all patients receiving ART to be registered and their treatment tracked regularly, without adding a significant burden to physicians or patients in terms of appointment times. As of May 2015, local partners were still working on completing enrollment of all patients into the system; to date, 1,300 of Tajikistan's 2,167 ART patients were being tracked using the software.

Selected Highlights of the Project's HIV Activities

Community Advisory Boards Driving Change

Community Advisory Boards (CABs) were introduced in Central Asia to address the many and specific problems that could only be addressed by the people experiencing them: the patients. With major shortcomings in quality of care being apparent for both PLHIV and MAT clients, the Quality Project adapted an international model to Central Asian context, and introduced it to both health care providers and patients in early Y3. Feedback from both sides was positive: both doctors and patients wanted a better way to work towards making care more client-centered. Some of the most important achievements of the region's 13 functioning CABs are as follows.

HIV CABs, which focus on improving the quality of care a single AIDS Centers, have:

- Advocated, successfully, for new laboratory equipment for CD4 monitoring and lipid profile testing (purchased using existing local budget) (Almaty);
- Hold, jointly with clinic staff, monthly ART education sessions for PLHIV (Almaty);
- Developed educational materials on ART and stigma and discrimination (Almaty);
- Assessed community opinions and experiences of ART, and hosted a roundtable with medical providers to share the results (Bishkek);
- Advocated, successfully, for regular access to CD4 testing on-site, preventing patients from incurring unnecessary transport and time costs (Bishkek);
- Worked with clinical liaison to streamline CD4 testing check-in procedures, leading to reduced wait times and less crowding of the facility (Osh);
- Provided peer-to-peer consultations, by phone and in person, for newly diagnosed individuals or those starting on treatment; over 1,000 consultations provided (Dushanbe, Khujand, Sogd);
- Advocated, successfully, for regular access to CD4 and VL testing (previously, stock-out of reagents was routine) (Dushanbe);
- Maintained informational bulletin boards to help inform other patients about upcoming events, how to reach the CAB members (Sogd, Almaty)

MAT CABs, which focus on improving the quality of MAT at a single MAT clinic (Kazakhstan and Tajikistan), or city-wide (Bishkek, Kyrgyzstan) have:

- Held monthly education sessions on MAT; as a result, MAT adherence has increased and 2/3 of MAT clients have found employment (Ust-Kamenogorsk);
- Achieved extended working hours of the MAT clinic (Dushanbe, Ust-Kamenogorsk);
- Increased interaction between MAT clinic and AIDS Center (Ust-Kamenogorsk);
- Increased the level of explanation of lab results reported back to clients (Dushanbe);
- Arranged for increased availability of consultations with HIV and TB specialists, on-site (Dushanbe);
- Worked with clinical liaisons to reduce police presence inside MAT clinic grounds, while also assisting MAT clients to reduce loitering (Dushanbe);
- Increased provider awareness of sensitivity to dosage adjustment (Khujand);
- Conducted education sessions for MAT clients on the importance of following rules and procedures, in order to protect the integrity of MAT programs (Bishkek)

Selected Highlights of the Project's HIV Activities

A Unique Approach to Strengthening HIV Prevention in Turkmenistan

Turkmenistan's official HIV prevalence is zero; however, risk factors, such as injecting drug use and the commercial sex trade, are present within the country and necessitate the strengthening of both prevention and testing systems. With civil society being extremely limited, Central Asia's traditional workhorses of HIV prevention – non-governmental organizations – are unavailable to do widespread outreach and distribution of prevention commodities, such as needles/syringes and condoms. Instead, AIDS Centers and Narcology Centers serve as the front-lines of HIV prevention, creating several challenges to reaching often mobile and inaccessible populations from a facility-based service model. In addition, select Health Houses (primary care facilities serving general population needs) host drop-in centers for people who use drugs (injecting and non-injecting), as well as SW.

Within this context, which is unique in Central Asia, the Quality Project HIV team was able to navigate political sensitivities and provide on-going technical assistance to four drop-in centers, located at the Akhal Velayat AIDS Center, the Turkmenabat Narcology Center (Lebap Velayat), and Ashgabat-based Health Houses #4 and #9. Technical assistance provided at these sites included group educational sessions for key populations with a Quality Project; training and mentoring on peer-to-peer outreach approaches, including family-based and couples-based approaches for PWID; training for health care workers on key elements of the comprehensive package of services, including risk assessment and risk counseling, referrals for supportive health services (e.g. STI diagnosis and treatment, reproductive and sexual health); and on-going mentoring of service provision to support an enabling environment.

In addition to working within government health care settings, the Quality Project provided technical support to several local NGOs to improve their capacity for outreach, and envision a realistic public sector-NGO collaboration under the National HIV Strategy and Plan of Action for 2012-2016.

For a limited period of time (July 2011-November 2013), in a challenging environment, the total outputs and outcomes from Quality Project technical support and limited financial support to drop-in centers were substantial:

- 1221 health care workers trained on improved provision of services for key populations
- 1124 individuals from key populations reached at 4 drop-in centers; 48% reported HIV testing
- 216 peer educators trained at the Akhal AIDS Center and Health House drop-in centers
- 108 PWID provided with relapse prevention counseling; a further 155 reached through vocational classes (sewing and computer classes) at the Turkmenabat Narcology Center drop-in Center

While the evolution of the national HIV response ultimately depends on political will to address quality of diagnosis and reporting, and work towards a system that makes treatment readily available for people living with HIV, Quality Project efforts have left Turkmenistan with a significantly strengthened framework for addressing HIV.

Selected Highlights of the Project's HIV Activities

Strategic Planning Capacity of NGOs in Kyrgyzstan

Over the course of Y3 and Y4, the HIV component provided strategic planning workshops for six NGOs. Among them, the greatest progress was demonstrated by Plus Centre and Alternative to Narcology. As part of Plus Centre's strategic planning workshop, the community-based organization set a goal to achieve programmatic and financial sustainability through revision of its mission, approach to provision of quality services for key populations, and regular budget analysis. At the time of last monitoring (September 2014), Plus Centre staff had adhered precisely the strategic plan developed for 3 years, and almost 70% of the Action Plan was accomplished/implemented, including:

- Nearly 20% of their clients practice safe behavior and participate in activities on HIV prevention;
- Quality of services provided has improved: the half-way house can host 8 more clients (in total 15 clients simultaneously) as a result of repair work done by the clients and staff efforts;
- Communication with local partners, including Osh AIDS center, TB hospital, Narcology and Dermatovenerology Centers has improved, leading to smoother referrals of clients; communication has also improved with local law enforcement, leading to reduced stigma and discrimination;
- Financial sustainability has improved substantially, including purchase of a minivan through fundraising; repair works on drop-in center and half-way house and its farm facilities; increased number of domestic animals (cows, goats, pigs, chickens, rabbits, turkeys), and a pedigree dog breeding operation has been added as a source of revenue; and a garden has been started for both subsistence needs and revenue generation.
- Overall organizational capacity has improved through development and implementation of internal policies and procedures.
- NGO image has strengthened: Plus Centre has become a member of Eurasian Network of PWID; they regularly update and manage own Facebook page; they collaborate with local media and have strong collaborative relations with local authorities' press centers.

Alternative to Narcology has also experienced significant progress, including:

- Increased coverage of PWID with services and advocacy activities: expanded activities to south through Osh initiative group (IG) of MAT clients
- Advocacy: produced video to promote MAT program; staff have joined thematic working groups, works with law enforcement bodies and local governments to inform and raise awareness about MAT.
- Engagement on decision making process: participation in public hearings, parliamentary hearings to discuss rights and freedoms of PWID, member of CCM, signed memorandum of collaboration with Republican Narcology Center, Chui Oblast Hospital.
- Organizational development: optimized the structure of the organization, reelected Advisory Board, implemented short-term planning of activities, started to produce PR materials, rebranding.

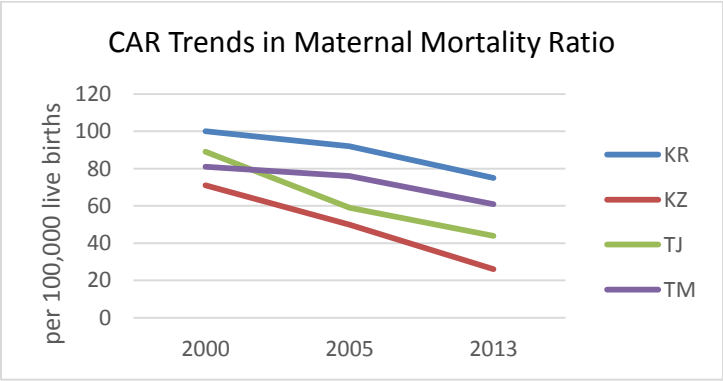
4. MATERNAL AND CHILD HEALTH

The Quality Project's Maternal and Child Health work focused on improving prenatal care, labor and delivery including addressing obstetric emergencies, neonatal care, and integrated management of childhood illnesses (IMCI). The Project undertook MCH activities in Kazakhstan, Kyrgyzstan, Tajikistan, and Turkmenistan.

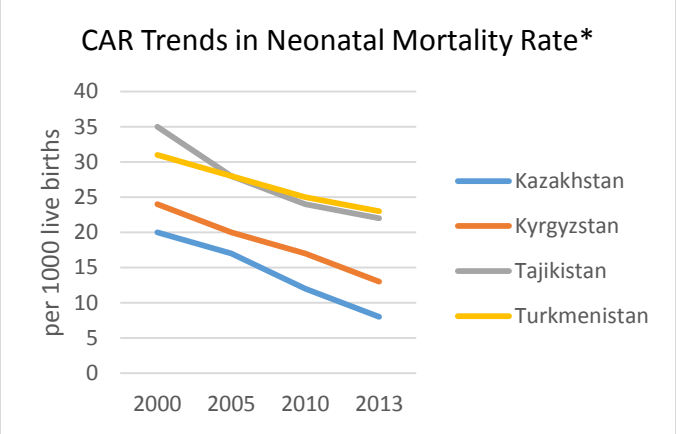
MCH activities were coordinated on the national level in each country with not only country partners, but with other international partners as well, such as WHO, UNICEF, and GIZ.

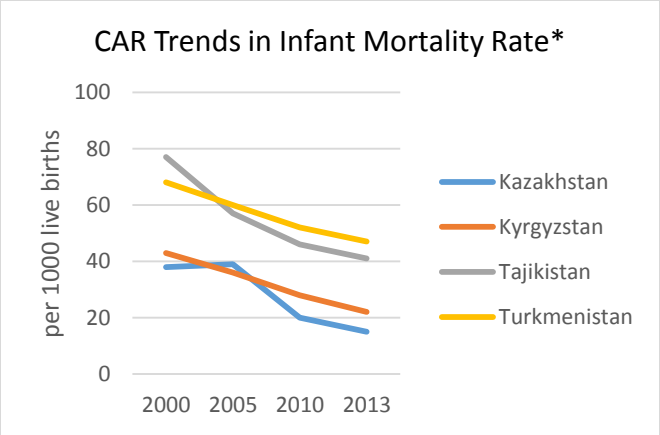
a. Key results

Figures 6-9



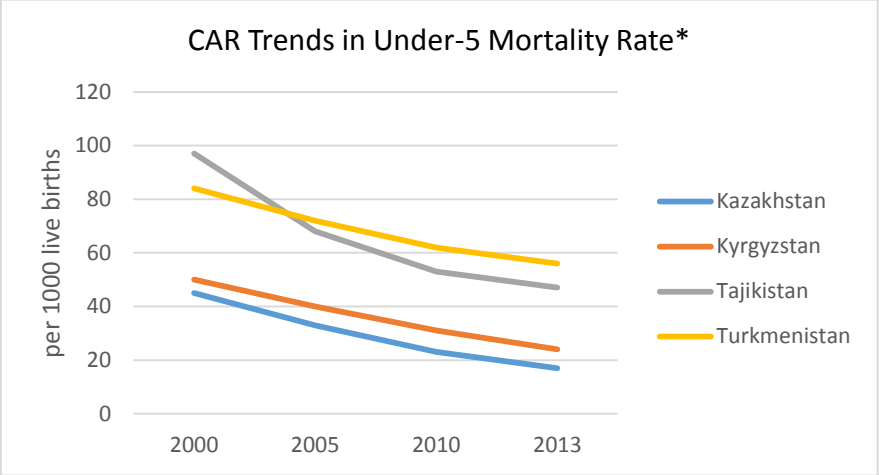
From: Trends in maternal mortality: 1990 to 2013; Estimates by WHO, UNICEF, UNFPA, The World Bank and the United Nations Population Division





*From "Child Mortality Estimates (UN Interagency group for child mortality estimation), http://www.childmortality.org/index.php?r=site/graph&ID=KGZ_Kyrgyzstan#ID=KGZ_Kyrgyzstan

Figure 10



*From "Child Mortality Estimates (UN Interagency group for child mortality estimation), http://www.childmortality.org/index.php?r=site/graph&ID=KGZ_Kyrgyzstan#ID=KGZ_Kyrgyzstan

Goals and Objectives

The goal of the quality health care project was to assist countries of Central Asia in improving access to quality maternal and child health services. Despite high-level commitment and strong collaboration between Ministries of Health and development partners to implement key MCH programs over the decade before the Quality Project began, the countries continued to struggle with high maternal and infant mortality. Although socio-economic factors contribute to high mortality rates, significant quality gaps in service delivery remained. The Quality Project sought to work closely with other international partners focused on MCH (UNICEF, UNFPA, GIZ) to achieve broad scale-up of programs with proven effectiveness such as IMCI, hospital-IMCI, and EPC, as coverage gaps remained in all countries for all programs with the exception of IMCI at the PHC level in Kyrgyzstan. The project also sought to assist countries in developing and implementing additional evidence-based, modular training programs to address gaps in knowledge and skills not covered by EPC and IMCI, such as evidence-based ANC and Emergency Management of Obstetric Complications.

Major approaches/tools

The project used an approach proven effective in previous health projects implemented by Abt Associates in countries of Central Asia; namely, developing the capacity of national trainers to train target populations and then supporting trainers to conduct monitoring visits using a manageable set of assessment tools with indicators that can be tracked over time and used to measure impact and provide targeted mentoring. The project was also committed to ensuring each country had a set of evidence-based clinical protocols covering priority MCH topics and that training programs at the undergraduate, post-graduate and CME levels were using updated curricula. In select facilities, The Quality Project conducted training on quality improvement methodologies to develop the capacity of health care managers and providers to prioritize quality gaps, conduct problem analyses, and develop concrete

improvement plans including indicators and tools to measure change over time. Program-specific approaches were as follows:

- **Antenatal Care (ANC).** Supported in Kazakhstan, Kyrgyzstan, Tajikistan, and Turkmenistan. As the WHO does not have a modular training package for ANC, The Quality Project supported each country to develop evidence-based standards (in the form of clinical guidelines, standards, or MOH orders, depending on the country environment) on ANC and a corresponding training package. In KR and TJ, The Quality Project conducted baseline and periodic monitoring of ANC quality using a pre-selected set of indicators and monitoring instruments.
- **Effective Perinatal Care (EPC).** Supported in Kazakhstan, Kyrgyzstan, Tajikistan, and Turkmenistan. When the Quality Project began, each country was already in the process of scaling up EPC training to achieve national coverage. The Quality Project used the above outlined approach in collaboration with other development partners to help each country move closer to this goal.
- **Effective Management of Obstetric Complications (EmOC).** Supported in Kyrgyzstan and Tajikistan Following scale-up of EPC, national and international partners in each country turned their attention to addressing quality gaps in the management of obstetric emergencies to further reduce maternal mortality. The top three causes of maternal mortality (post-partum hemorrhage, preeclampsia/eclampsia, and post-partum septic complications) all require timely recognition and a rapid response by a team of providers whose skills in managing such conditions have become second-nature. As with ANC, there is no WHO-endorsed training package on EmOC. In KR and TJ, The Quality Project worked with local partners to develop a competency-based training package that would be feasible to scale up nationally, using an approach similar to that used for EPC where national capacity is developed to implement and sustain the training.
- **Integrated Management of Childhood Illnesses (IMCI).** Supported in Kyrgyzstan, Tajikistan, and Turkmenistan The Quality Project supported scale-up of PHC level IMCI in TJ and TM, including the use of ICATT, the computer-based, interactive IMCI training that has greater flexibility for learners and consumes fewer training resources. In KR and TJ, The Quality Project also supported the piloting and scale-up of hospital IMCI, a WHO-endorsed program, using the general approach outlined above.

For each program area, the project also supported key local institutes and MCH leaders to develop and implement monitoring programs that would help track the impact of training programs and reveal the need for refresher training, supportive supervision of providers, or other measures to improve quality. In Tajikistan, this included developing capacity to use the “Beyond the Numbers” approach advocated by the WHO.

4.1 IMPROVING ACCESS TO QUALITY CARE

In Kazakhstan, the project contributed to the revision and development of a range of national policies and regulations which contribute to the improvement of the MCH delivery system and access to quality services: regulations on ANC and EPC mentoring; regulations on organization of services in health facilities providing obstetrician-gynecologist services (MOH order #593, Aug 27, 2012); MOH orders on ANC/EPC and SES and their realignment with the national ANC/EPC guidelines and protocols; and revision of the national infection control protocol. The project also provided recommendations to improve regionalization of EPC as recommended by WHO. The project worked with the Republican Coordination Center under the National Center for Maternal and Child Health Research to improve processes for the development and updating of clinical protocols. Until recently, clinical protocols were generally developed by one assigned author and approved by one reviewer—an approach that did not allow for transparency and in some cases resulted in questionable recommendations. The Republican Coordination Center, with technical support from the Quality Project, suggested organizing working groups, which include a panel of specialists – physicians, nurses, and experts from the National Coordination Center who solicit and process feedback from oblasts on the existing protocols and practices. The revision of MCH protocols using this approach is scheduled for 2015. In addition, the project provided specific recommendations to update the existing clinical protocol on management of physiological pregnancy, which will be completed in 2015.

In Kyrgyzstan, in addition to training and monitoring of the key interventions (ANC, EPC, EmOC, IMCI), the Project promoted integration of evidence-based national guidelines on antenatal and obstetric care into pre-service curricula at both medical schools and nursing schools. The Quality Project worked closely with GIZ and national partners, including medical schools and the MOH, to analyze existing medical school curricula related to EPC and EmOC.

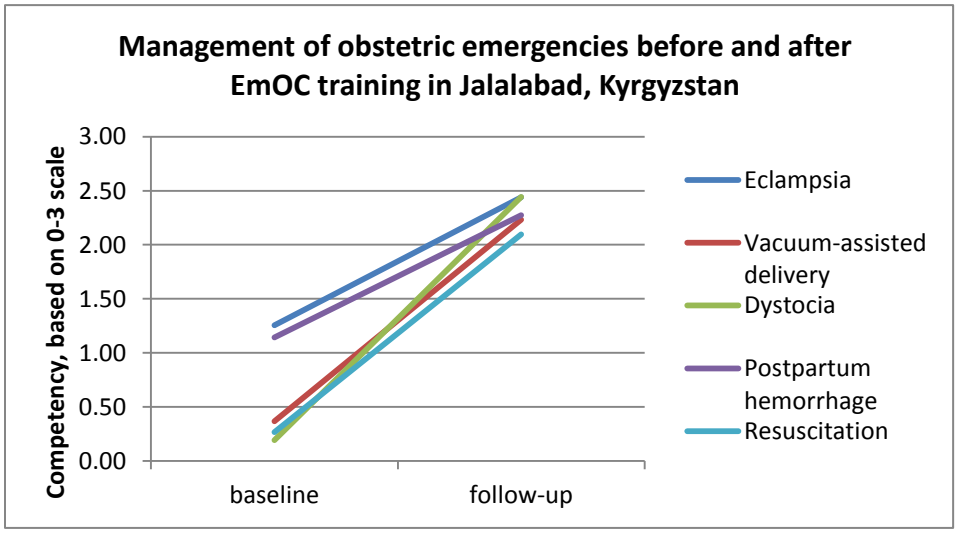
In Kyrgyzstan, The Quality Project worked with KSMIRCE trainers to conduct ANC training and monitoring of 239 providers from 40 FGPs in Bishkek and 8 in Naryn Oblast, which provide ANC to 19,500 women per year. Monitoring results showed a decrease in non-evidence-based use of medicines, increase in gravidogram use, and a reduction in specialist referrals. Other improvements include

- Doctor follow-up on patient adherence to prescribed iron/folate increased from 0% to 25%;
- FP counseling increased from 31% to 64%
- The percent of women who chose a contraceptive method based on health provider's counseling increased from 0% to 27%;
- Counseling on danger signs of pregnancy increased from 59% to 78%;
- Referral to birth preparedness schools increased from 17% to 45%.
- Use of gravidogram increased from 73% to 86%;
- Use of non-evidence-based drugs decreased from 22% to 19%

The Quality Project supported the development and testing of the first comprehensive training package on EmOC for Kyrgyz health care providers. The training was aimed at improving obstetricians' and midwives' capacity to manage obstetric emergencies such as postpartum hemorrhage and severe preeclampsia. EmOC training materials included a participant's guide, trainer's guide, presentations, written exams, and skill set checklists. An international expert facilitated a TOT to build the training

capacity and clinical skills of 18 national trainers, who subsequently trained 234 providers from 16 maternity facilities in Jalalabad and Bishkek. The curriculum was approved by KSMIRCE and integrated into its residency and CME programs. To measure the effectiveness of the new training program, baseline and follow-up skill and knowledge assessments were conducted in pilot sites. Competencies were scored on a 0-3 scale, where zero indicates no ability to manage the scenario and 3 indicates the learner skillfully directed a team to manage the simulated emergency using the correct steps in the correct order. Results, shown in Figure XX, demonstrated the effectiveness of this much-needed training. UNFPA will continue to support scale-up of EmOC training using the curriculum developed by the project.

Figure 11



In Kyrgyzstan, where IMCI had been scaled up at the PHC level nationwide during previous USAID projects, the Quality Project turned its attention to supporting scale-up of hospital-level IMCI, which was important in ensuring continuity of care for patients requiring hospitalization and developing the capacity of hospital providers to manage illnesses responsible for the majority of infant and child deaths: pneumonia and diarrheal disease. A small team of national trainers had been trained in hospital-level IMCI three years prior to the start of the Quality Project, but due to an absence of funding, the program was never implemented at the facility level and the trainers' skills waned. The Quality Project facilitated refresher training of national trainers, who were then able to train 86 providers from all 5 rayon hospitals in Naryn oblast and 109 providers from the national ID hospital in Bishkek. The project also supported national trainers to conduct monitoring and mentoring visits in all pilot facilities. Using WHO tools, a baseline quality assessment was conducted prior to the trainings and a follow-up assessment was completed one year later, results of which are shown in Figures W-Z.

MOH statistics from Naryn Oblast showed a decrease in the child mortality rate from 25 (2010) to 20.1 (2011) and infant mortality from 19.2 (2010) to 15.4 (2011). Similarly, in Naryn Oblast, child mortality from pneumonia decreased from 23.1% to 20.8% between 2011 and 2012 diarrhea-associated mortality declined from and 7.7% to 5.8%.

1.

The Project helped achieve similarly strong results in the other countries, as well. For example, in Tajikistan, workers knowledge and skills on IMCI-related topics increased, as follows (results from four Central District Hospitals in Tajikistan):

Indicator	Baseline Jan 2014	Follow-up Jun 2014
Admission to hospital justified	25%	66%
Correct diagnosis	25%	65%
Correct treatment	41.7%	46%
Invasive procedure(s) justified	25%	50%
Painful procedure(s) justified	25%	46%
Adequate monitoring	0%	65%
Nutrition status assessed	0%	47%
Correct use of intravenous fluids/meds	0%	54%

The Project collaborated with the MOH and other national institutions to contribute to national MCH strategy documents, and also supported revision and development of numerous clinical protocols and clinical practice guidelines in support of improved MCH outcomes.

Clinical protocols and guidelines developed/revised with Quality Project support

Kyrgyzstan

- CP on ANC in physiological pregnancy
- CP on ANC in multiple pregnancy
- CP on ANC in pregnancies complicated by pyelonephritis
- Service delivery packages on ANC
- CP on placenta previa
- CP on placental abruption
- CP on antepartum and intrapartum assessment of fetal health
- CP on Forceps delivery
- CP on Vacuum extractions
- CP on Thromboembolism in pregnancy
- CP on Shoulder dystocia
- CP on preterm delivery
- CP on sexually transmitted infections and pregnancy
- CP on anemia in pregnancy

• CP on thromboembolic diseases of pregnancy • CP on managing post-dates pregnancy • CP on managing Rh conflict in pregnancy • CP on assessment of perinatal risk factors • CP on managing breech presentations • CP on managing miscarriage • CP on managing dysfunctional labor • CP on fever in infants • CP on urinary tract infection in children • CP on pediatric sepsis • CPG on anemia in children
Turkmenistan
• Five MCH/PMTCT protocols • 12 clinical protocols on pediatric conditions

4.2 IMPROVED CAPACITY TO PLAN, MANAGE, AND MONITOR ENHANCED PROGRAMS AND SERVICES

The Quality Project based its approach in all four countries on developing national capacity to train, monitor, mentor, and support target populations of health care workers in priority program areas (ANC, EPC, EmOC, and IMCI). Where possible, the Project also worked with stakeholders responsible for conducting quality assurance reviews on MCH topics. The Project also trained faculty members and integrated training topics into undergraduate and CME curricula to ensure sustainability. In Kazakhstan, trained faculty will teach advanced clinical approaches in ANC to 4500 students each year. Additionally, the Quality Project supported development of national MCH strategies in accordance with EBM and WHO-recommended approaches.

In Kazakhstan, the project contributed to the finalization of national regulations on regional ANC/EPC coordinators/mentors specifying their roles and functions. The MOH has approved the regulations along with the list of national ANC and EPC coordinators/trainers institutionalizing them in the health system. According to the Regulations, oblast coordinators conduct external audits of MCH organizations semi-annually, collect and analyze data based on standard indicators and submit the information to the Republican Coordination Center, and provide training to health workers within the assigned oblast.

In Kyrgyzstan, the Quality Project facilitated training seminars for MOH and oblast-level health administrators on implementation of the priority programs of the national health strategy, Den Sooluk, including MCH. Logical frameworks, monitoring indicators, and concrete action plans were discussed, strengthening the capacity of health leaders to coordinate and monitor implementation of ANC, EPC, IMCI, and EmOC initiatives.

The Quality Project also provided technical assistance to MHIF and MOH in Kyrgyzstan to develop 10 PCH-level and two hospital-level indicators on priority MCH topics, which will be used in payment contracts between MHIF and health facilities to promote adherence to priority MCH standards of care.

ANC

As a result of The Quality Project interventions, Kyrgyzstan now has an updated, evidence based clinical protocol on ANC that governs management of normal-risk pregnancies and covers key topics including recommended screening, prevention of Rh-isoimmunization in Rh-negative women, iron/folate supplementation, and counseling on key topics (danger signs of pregnancy, preparation of a birth plan, breastfeeding, and post-partum family planning). In addition, KSRMICE family medicine trainers have the capacity to train PHC providers on the new protocol and have incorporated the new recommendations into residency and CME curricula.

In Turkmenistan, the project provided equipment and training to birth preparedness schools in Ashgabat House of Health #1 and in Rukhabat etrap House of Health in the Akhal velayat in order to increase the population's access to high quality ANC and FP/RH counseling. These Houses of Health provide health services to a significant proportion of the population in Ashgabat and in the Akhal velayat.

In Tajikistan, increased knowledge and skills of PHC workers has improved access to quality antenatal care. In established Birth Preparedness Schools (9 BPSs) trained midwives and family doctors provide counseling to pregnant women individually and for couples as well. Additionally in Tajikistan, the project developed guidelines for PHC workers to provide pregravid and antenatal counseling and standards of the management of pathological conditions and infection in pregnancy.

EPC

In Kazakhstan, the Project trained up 16 EPC trainers as part of the national team of trainers. These trainers supervise; provide trainings and mentoring to all 16 administrative- geographical units of the country and all perinatal centers established in the country.

In Kyrgyzstan, The Quality Project supported scale-up of EPC in Jalalabad by teaming international consultants with four national trainers and several junior trainers to develop their capacity as master trainers. In addition, the project collaborated with other development partners to conduct a TOT for 28 new national trainers and oblast specialists in May 2012. The Quality Project continued to support these trainers to conduct follow-up monitoring visits to all scale-up facilities, ensuring they had the capacity to assess program implementation and service quality using checklists, providing constructive feedback to providers in a supportive atmosphere.

In Tajikistan, the Project implemented EPC principles in 6 pilot rayons (Tursun-zade, Hissar, Vakhdat, Rudaki, Faizabad, Rogun). This work included the following:

- Effective Perinatal Care (EPC) training course - a tool designed to improve the quality of perinatal care. The purpose of the training course on effective perinatal care is to improve quality and outcomes for mothers, babies and their families at the expense of updating and upgrading of professional and managerial knowledge and skills of health workers.

- After conducted country-level assessment of hospital perinatal care to improve capacity of hospital level ob/gyns and midwives Quality Project conducted EPC trainings.
- To increase capacity of MOH specialist who involved in developing National Standards and clinical recommendations QP conducted EBM and CQI trainings.
- To improve quality of medical service, the Quality Project supported in pilot maternity wards trainings on implementation of national standards to ensure safe motherhood and neonatology standards.
- The Project also supported regular mentoring/monitoring follow-up visits to pilot maternity wards and on-job trainings helped to achieve sustainable results. The maternity staffs independently developed local protocols based on National SM standards.
- To implement Continuous Medical Education, the Project established training rooms in each pilot facility and has trained local trainers. Local trainers regularly provide trainings for maternity staff and for medical workers from rural maternity wards.

In Turkmenistan, through joint efforts with MOHMIT, MCHI, and UNFPA, the Quality Project supported the training of 71 obstetrician-gynecologists, neonatologists, midwives, and neonatal nurses through two ten-day EPC training courses in Akhal and Balkan Velayats. Each EPC training course was followed by a one-day EPC roundtable discussion at which 51 health facility managers, senior health department officials, and SES specialists learned about WHO EPC/ANC standards and discussed plans of action for introducing EPC technologies in their respective etrap maternities.

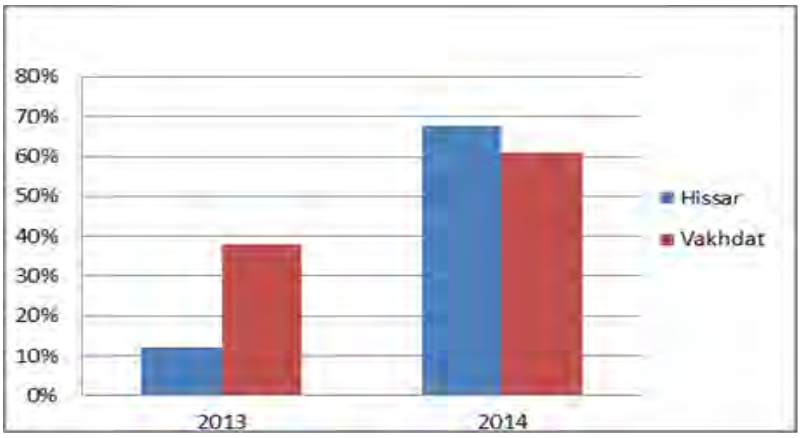
EMOC

Because of Quality Project activities, Kyrgyzstan now has an approved EmOC curriculum, an experience team of national EmOC trainers, and a set of monitoring instruments by which the trainers can assess critical competencies among providers working in maternity facilities. The Quality Project also partnered with UNFPA to train 46 nursing school trainers using the new EmOC curriculum.

In Tajikistan, the Quality Project developed EmOC clinical guideline for midwives; improved providers' clinical skills for routine perinatal care; increased the availability and quality of emergency obstetric services, including management of obstructed labor prevention and management of postpartum hemorrhage; and motivated of health care workers to provide counseling regarding recognize danger signs and timely hospitalization. The Project provided basic equipment necessary for EmOC implementation. EmOC activities resulted in increased adherence to safer methods, such as use of regional anesthesia during caesarian sections.

Figure 12

% use of regional anesthesia during C sections



IMCI

In Kyrgyzstan, The Quality Project facilitated refresher training for national-level hospital IMCI trainers and supported them to conduct cascade training in Naryn Oblast hospitals. These trainers are now conducting IMCI hospital training in other oblasts funded by UNICEF and other development partners. To increase national trainers' capacity to mentor providers to better adhere to IMCI standards, the project provided technical assistance to a working group to adapt the EPC mentoring tool for use in IMCI program implementation and conducted training and on-the-job mentoring of 8 national IMCI trainers.

In Kyrgyzstan, the project trained faculty of medical education institutes on hospital-level IMCI approaches to ensure medical and nursing students are familiar with IMCI recommendations when they join the health work force.

In Tajikistan, the Project adopted and introduced the ICATT tool for IMCI in Vakhdat and Tursunzade CHCs. The Project supported implementation of Hospital IMCI in four pilot CDHs (Tursun-zade, Hissar, Vakhdat, Rudaki). To reduce death, illness and disability among children by applying the combined treatment of the major childhood illnesses such as pneumonia, diarrhea, malaria, measles and malnutrition, through improvement of health workers' skills to management sick child at PHC level QP has adapted and implemented the Integrated Computerized Adapted Training Tool WHO IMCI. Quality Project trained trainers conducted 4 ICATT IMCI trainings for family doctors using this tool. In the Quality Project- equipped IMCI Training Centre in the Vakhdat rayon PHC workers, according administration prikaz, should pass ICATT IMCI training. The trainings are conducting by QP trained trainers. After the introduction of EPC in the maternity wards and IMCI on the PHC level, it was decided to implement Hospital IMCI program as a missed part in the provision of quality health care for children. QP supported trained 81 medical workers from 4 CDH. Follow-up visits showed that the use of a pocket guide for IMCI helped health care workers pay more attention on preventive measures, counseling and prescribe of cost-effective, evidence-based medical treatments

In Turkmenistan, jointly with the UNICEF the Quality Project supported the introduction of the ICATT e-learning tool for pre- and in-service training. UNICEF and the Quality Project trained 32 TSMU teachers, MCHI specialists, and 12 teachers from five Turkmen nursing schools to use the tool for adapting and integrating IMCI into the medical curriculum. In the context of the overall computerization of the health sector in accordance with the presidential decrees of 2010, ICATT will significantly increase MOHMIT's potential to rapidly scale up the WHO IMCI program throughout the country in a cost-effective and sustainable manner. The project also provided two computers to the TSMU family medicine faculty to support scale-up of ICATT training at the post-graduate level. The Quality Project engaged TSMU teachers to evaluate ICATT implementation in medical schools. During the assessment, they found adequate knowledge of IMCI topics among students and reported that between February-May 2013, 30% of medical school students completed ICATT training. In Turkmenistan, the Quality Project also supported implementation of the new WHO IMCI "0 to 2 months" Training Program, using national trainers. 100 family physicians form five velayats were trained to use new WHO "0 to 2 months" treatment standards.

Additionally, in Turkmenistan, the Quality Project, in collaboration with MCHI, velayat health authorities, and UNICEF, trained 159 House of Health nurses in Turkmenabad and Sakhar Etrap in Lebap Velayat and 160 – in Akhal velayats, on the KCH/ECD module and organized these KCH/ECD educational campaigns in June and September 2013 in Lebap velayat. The MCHI team measured the impact of the KCH/ECD campaigns by conducting knowledge assessments on key IMCI/ECD/HIV/TB messages among 1,600 community members and about 1,300 mothers with children under five years of age. In 2013 the population's knowledge of k To improve training of nursing students to provide evidence-based pediatric care and promote and strengthen the integration of IMCI into pre- and in-service training, the Quality Project organized an ICATT TOT for 15 teachers from five nursing schools across the country. TSMU ICATT trainers, trained by the Quality Project in 2012, conducted the TOT. The project also provided two computers to the TSMU family medicine faculty to support scale-up of ICATT training at the post-graduate level.

4.3 STRENGTHENED USE OF DATA FOR DECISION-MAKING

For each MCH program area, The Quality Project supported the respective national trainers in each country to conduct monitoring visits using quality checklists and then to provide constructive feedback and targeted in-service training to monitored healthcare workers based on the results. In this way, The Quality Project developed the capacity of local partners to collect and use data to strengthen program implementation and improve the quality of MCH service delivery.

In Kazakhstan, the Quality Project supported the national EPC center to develop an online database that is enabling the country to collect and analyze MCH program quality data in a systematic way from the rayon level up to the national level (see below, under "country-specific activities"). The new system enables staff from an individual provider level up to the MOH to undertake prompt improvements based

on the collected data and analysis. Trained oblast coordinators do regular data entry into the database by oblast; using the online database, a subset of prioritized indicators are now automatically categorized according to pre-defined targets as green/yellow/red and mapped. Using these dash-board data MCH facilities can now analyze quickly and compare their performance results addressing quality improvement issues immediately. Data from these monitoring assessments guided the capacity building and quality improvement strategies including focused on-the-job training programs, dissemination of new protocols and guidelines, regular analysis of data collected through the monitoring system and development of management decisions; all these comprehensive measures contributed to the improved performance by health professionals that leads to strengthened implementation and effectiveness of national programs. The Quality Project conducted trainings and workshops to strengthen the capacity of national coordinators to analyze data, derive conclusions and make valid decisions. Oblast coordinators are now using nationally approved facility and equipment checklists and conduct chart audits and patient interviews according to standards, which are in accordance with national protocols. All maternal hospitals participate in the external (semi-annual) and internal (quarterly) evaluation process. The project supported the MOH to develop and introduce a process for regular data collection and update throughout Kazakhstan. The graph below prepared by the Republican Coordination Center features the overall process.

BTN

In Tajikistan, implemented Behind the Numbers (BTN) methodology in 5 pilot Maternity Houses. (Tursun-zade, Hissar, Vakhdat, Rudaki, Faizabad). BTN is an audit methodology aimed at improving the quality of care in maternities, through confidential, evidence based, professional case reviews. Instead of the traditional approach of finding a person to blame for any bad outcome, BTN uses a quality improvement approach to look at how current systems of care are failing to produce quality results, focusing on issues such as technical capacity, the existence of clear clinical protocols, tools and guidelines as well as adequate supervision. BTN is successfully implemented in 5 pilot maternities (Tursunzade, Hissar, Vakhdat, Rudaki and Faizabad) QP supported BTN training and follow-up support visits, cross-visits between facility teams in pilots. The purpose of the visits is mutual learning through exchange of successes and challenges among those implementing BTN.

In Turkmenistan, in response to the government of Turkmenistan's recognition of the importance of health information systems (HIS) capable of generating reliable data, and its persistent efforts to establish a unified HIS that ensures the flow and use of accurate and timely information for evidence-based decision-making and improved management, the Quality Project continued to provide MOHMIT and the MCH Institute with TA in designing plans for M&E activities and developing standardized indicators for assessing data quality and the overall performance of the HIS. Data collected during IMCI, Keeping Children Healthy (KCH)/ Early Child Development (ECD) ANC, EPC and RH monitoring activities conducted with the Quality Project's technical and financial support during September 2011- July 2014 were included in the drafts strategic documents above mentioned. MCH situational analysis, was also used to inform the new "Mother, Newborn, Child and Adolescent Health Program for 2014-2018." One

of the key provisions of this strategy is improvement of health education at the pre- and post-graduate levels aimed at increasing the knowledge and skills of Turkmenistan's health workers.

The project provided technical support to theTurkmenistan MCHI in developing an Individual Perinatal Card (Maternity Passport) for women of reproductive age to ensure better documentation of their health status, including information about pregnancy, delivery and immunization. These cards have been distributed to pregnant women in five velayats and are expected to significantly improve data collection, thereby helping to improve decision-making and quality of service delivery.

MCH HIGHLIGHTS

KAZAKHSTAN

As Kazakhstan is at a relatively advanced stage of implementing WHO recommendations in EPC and FP, the project focused on full institutionalization of WHO approaches in the health care system. To increase access of population to high quality MCH/FP/RH services, improve the health system capacity to plan, manage and monitor improved MCH/FP/RH programs, and strengthen the use of data for decision-making at all system levels, the project focused its technical effort on strengthening and realigning policies regulating delivery of MCH/FP/RH services, development of human resources capacity to effectively implement these policies in a standardized way and strengthening data collection processes; improvement of the content and quality of data compliant with approved policies; building analytical capacities of health and management personnel at all levels of the health systems to use the data, and, finally, supporting quality improvement efforts at all levels of the system through the national external quality assurance and provider level quality improvement mechanisms institutionalized in the system.

In Kazakhstan, the project contributed to developing over 15 key policy documents in the MCH and FP/RH areas, including the National MCH/FP/RH Roadmap and Implementation Plan for 2013-2015. All project activities supported the National MCH/FP/RH Roadmap. The project developed an ANC training module based on WHO approaches and institutionalized them in in-service, post-graduate, and under-graduate medical education.

The project worked with the MOH to improve the external quality assurance system in Kazakhstan, which now includes a menu of refined quality assurance indicators, a team of trained coordinators with clearly defined responsibilities approved by the MOH, and a standardized monitoring process. The Quality Project assisted the MOH in designing and implementing a range of tools, methodologies, approaches and interventions to organize and support the improved quality assurance systems and tools.

Introduction of the institute of mentors versus traditional controllers, as a legacy of the old Soviet system and mentality, is one of the important achievements in the MCH system in the country. In support of these new collegiate provider-friendly practices and attitudes the project in collaboration with the MOH trained a national team of trainers/mentors/coordinators institutionalized in the system by #445 Order of the MOH and equipped them with monitoring instruments such as health provider checklists, patient interview forms, a menu of standard indicators compliant with the new ANC/EPC/FP/RH guidelines, protocols and algorithms supporting a standardized approach to implementing the new technologies and their consistency throughout various levels of the health system and across the vertical MCH/RH/FP and PHC systems. One of the key tasks of mentors is to provide feedback and required support to health providers to improve quality of health services they provide.

In collaboration with the national partners, the Quality Project implements a strategy to shift from heavy reliance on international Safe Motherhood consultants to local specialists. The Quality Project focused its effort on building the capacity of national trainers to effectively conduct trainings, mentoring and supportive supervision visits after training, collect and analyze standardized data using appropriate indictors for management decisions

The project trained 38 lecturers representing all medical universities in the country, and nursing schools to use the ANC Module. The project trained 48 ANC, EPC and FP/RH trainers to effectively conduct on-job trainings, mentoring and supportive supervision for doctors; collect and analyze standardized data using appropriate indicators for management decisions. By July 2014, the national team of trainers had trained 728 Ob/gyns and PHC practicing physicians on ANC/EPC. In collaboration with the MOH the project implemented the national ANC/EPC/FP on-line quality monitoring system which includes a set of indicators, monitoring tools, and methodological instructions on conducting ANC and EPC audits in a standardized manner. The new system enables staff at all levels to make management decisions based on reliable prompt data.

The project trained 18 lecturers representing all medical universities in the country, 20 lecturers of medical and nursing colleges to use the ANC Module. Annually estimated 4500 students will be educated on new approaches in the medical education system

MCH HIGHLIGHTS

KYRGYZSTAN

Since the start of the Quality Project in 2010, Kyrgyzstan succeeding in sustaining a remarkable reduction of infant and child mortality. Reductions in maternal mortality have been slower. There is a healthy environment for program implementation in Kyrgyzstan, with strong cooperation between MOH and development partners, including the Quality Project, UNICEF, UNFPA, and GIZ. Each development organization uses a common approach in scaling up MOH-approved priority programs in their respective geographic coverage areas. When targeting new program areas, one or more development partners take responsibility for facilitating development of training materials and monitoring instruments. Once tested and approved by MOH, other development partners collaborate in scaling up the interventions.

The Quality Project also used a CQI approach to improve outcomes in select facilities, taking advantage of national-level capacity in CQI developed under previous USAID projects and training capacity on The Quality Project's Kyrgyzstan team. CQI activities were supported in the following facilities:

- ANC: Koch-Kor rayon (Naryn Oblast)
- EPC: Bishkek perinatal center; Koch-Kor territorial hospital; Naryn oblast hospital.
- Hospital-level IMCI: National infectious disease hospital; Koch-Kor territorial hospital; Naryn oblast hospital.

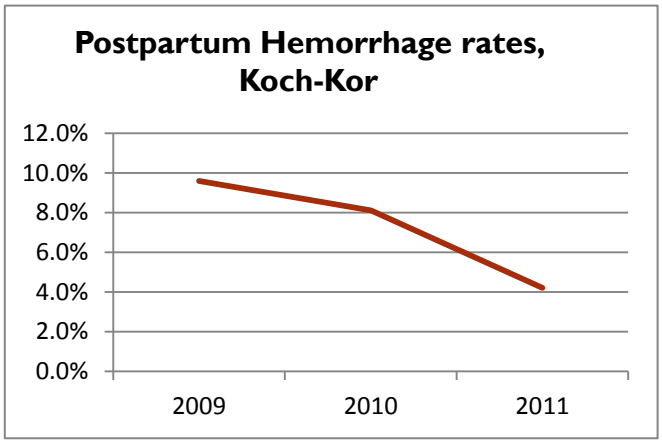
In each facility, the Quality Project partnered with local CQI trainers to train healthcare workers and managers on the principles of quality improvement. The facility teams then prioritized gaps in quality of service delivery and conducted root-cause analysis to help them develop targeted improvement plans to address each quality gap. Indicators were developed to monitor improvement and the Quality Project made periodic facility visits to support facilities to analyze results of internal audits and revise improvement plans accordingly. Remarkable improvements were seen in almost all monitored indicators with corresponding impacts on corresponding morbidity and mortality indicators:

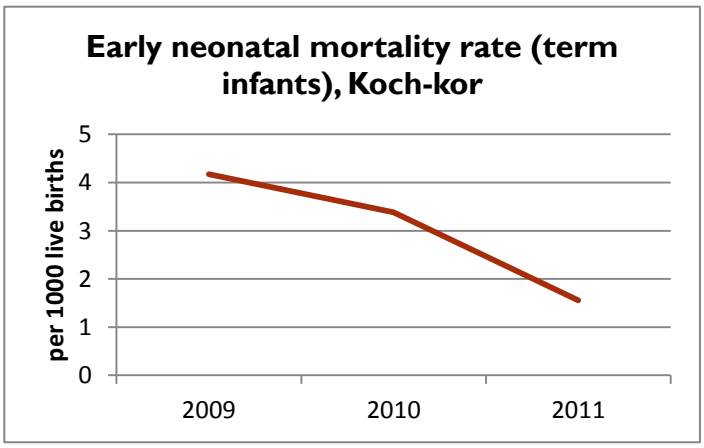
- Koch-Kor rayon (EPC)
  - increased use of partograph to assess fetal health and labor progress increased from 40% to 70%. To accomplish this, management eliminated duplicate recording requirements, creating a form that could be completed at the patient's bedside and then inserted into the permanent record. They also trained untrained providers in partograph use.
  - Increased competencies in neonatal resuscitation (correctly performed steps in resuscitation increased from 30% to 71%). To reduce early neonatal mortality, the quality team organized training in neonatal resuscitation for all maternity department providers (both didactic- and skills-based training). The Quality Project provided a newborn simulator for these team-based drills. The facility team developed hypothermia monitoring forms that post-partum mothers would help to complete during the post-partum hospital stay. The hospital also remodeled the heating system to help prevent hypothermia.

- Improved management of postpartum hemorrhages (correctly performed steps in managing PPH increased from 54% to 80%). To reduce PPH, the quality team procured misoprostol as a second-line drug for managing PPH developed and posted a clear algorithm for managing PPH at each delivery station. They also conducted team-based training on the algorithm.

- Bishkek Perinatal Center (EPC)
  - Reduction in severe hemorrhage rates from 77% of cases of postpartum hemorrhage in 2010 to 44% in 2011;

Figures 13-14





  - Reduction in cesarean sections for severe preeclampsia from 68% in 2010 to 44% in 2011.
  - Decrease in overall cesarean section rate from 17% (2009) to 13.5% (2011).
  - Marked reduction in percent of cases of severe preeclampsia which led to eclampsia from 4.8% in 2010 to 0.4% in 2011.

- Hospital IMCI
  - Prescription of antibiotics for watery diarrhea decreased from 80% to 21%
  - The average length of hospital stay for patients with croup or acute viral respiratory infections decreased from 8.5 to 4.8 days
  - hospital expenditures for medicines in the infectious disease and pediatric wards decreased by almost half

b. Tajikistan

- EPC principles were implemented in 6 pilot rayons (Tursun-zade, Hissar, Vakhdat, Rudaki, Faizabad, Rogun). The percentage of deliveries with active management of third stage of labor increased from 46% in year 1 to 99% in year 5.
- The percentage of women receiving key ANC counseling messages increased from 22% in year 1 to 64% in year five. In addition the percentage of women screened for preeclampsia during each ANC visit increased from 24.5% to 88%. The Project undertook active participation in assessment of the quality of antenatal and postnatal care in Tajikistan and significantly contributed to the development of the Management of Physiological Pregnancy National standards. Other policy documents and implemented include, Infection Control National guidelines, Pathological conditions and infection in

pregnancy National standards, EmOC clinical recommendations for midwives, ob/gyns and anesthesiologists and FP methods National standards. The Quality Project developed FP comprehensive competency based training package as well as adopted ICATT IMCI and implemented in Vakhdat and Tursunzade CHCs.

Hospital IMCI was also implemented in 4 pilot CDH (Tursun-zade, Hissar, Vakhdat, Rudaki). The Project continued to assist the MoHSP to implement the Behind the Numbers (BTN) methodology in 5 Maternity Hospitials (Tursun-zade, Hissar, Vakhdat, Rudaki, Faizabad). This work is essential in addressing Tajikistan's alarming maternal mortality rate.

MCH HIGHLIGHTS

TURKMENISTAN

The Quality Project's activities focused on improving the policy and legal environment in Turkmenistan in order to increase the population's access to quality, evidence-based MCH services in line with the Turkmen government's priorities, which were highlighted in the key strategic document Health Care Development Program for 2012-2016 and in a related plan of action developed by the MOHMIT. In line with this, commencing with 2011, the Quality Project worked with WHO, UNICEF, and UNFPA, MOHMIT to develop a new "Mother, Newborn Child and Adolescent Health Program for 2014-2018."

Working together with WHOM, UNICEF, and UNFPA the Project achieved significant success in introducing IMCI at both the PHC and hospital levels in 14 pilot etraps, while also promoting the use of IMCI approaches throughout the county. Significant steps were taken toward institutionalization of IMCI when MOHMIT mandated inclusion of IMCI into the curriculum of TSMU and five other medical schools, and promoted national-level IMCI guideline development. The IMCI Strategy was included in the MOHMIT MCH Strategy for 2008-2010, 2011-2013, and for 2013-2015.

In order to ensure institutionalization of WHO child health programs, including IMCI, early child development, and exclusive breastfeeding, the Quality Project, UNICEF, and UNFPA contributed to a number of activities with a view to informing policymaking in the country. These activities included a Home Visiting System Assessment, cost benefit analysis of child health interventions, countrywide MCH situational analysis, and the development of a prikaz # 115 on family medicine with a provision to scale up IMCI, EPC/ANC, and FP/RH throughout Turkmenistan. In addition, the Quality Project provided technical support to the MCHI in developing the MCH Strategy for 2013-2015, which was approved by MOHMIT at the beginning of 2013.

5. FAMILY PLANNING/REPRODUCTIVE HEALTH

Within the context of reproductive health, the Quality Health Care Project sought to assist the countries of Central Asia to improve their provision of effective family planning services, to improve access to quality family planning services for the population. Prior to the Quality Project, USAID and other international development organizations (UNFPA, GIZ) put many years of effort into ensuring that women of reproductive age throughout CAR had access to modern FP commodities and the knowledge to select and use the method that best meets their needs.

Throughout CAR, very few women use contraception prior to marriage. There is a strong cultural expectation that young women will bear children shortly after marrying and few women consider the use of contraception until their first child is born. With this in mind, the Quality Project focused strongly on informing women of contraceptive choices during antenatal care visits and supporting them to select a specific method prior to leaving the maternity hospital after the birth of their child. Similarly, providers were educated on counseling women on family planning following abortions to minimize the likelihood of subsequent unplanned pregnancies. As in other program areas, the Quality Project aimed to ensure that clear, evidence-based guidelines on contraceptive use were in place in each country, that curricula used at the undergraduate and post-graduate levels were up to date, and that providers were adequately skilled and equipped to provide comprehensive FP counseling to women. Quality Project supported UNFPA in advocating for gradual increases in the assumption of reproductive commodity costs by governments of CAR countries.

The Quality Project integrated FP work into all of its maternal health activities, including ANC and EPC, to most effectively reach the largest target group expressing unmet need for contraception, meaning women who are looking to space their children, not have more children, or who have just had an abortion.

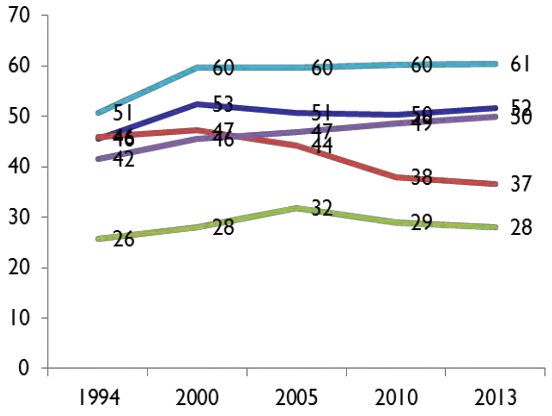
The use of modern contraceptive methods and unmet need for family planning did not experience dramatic changes over the project period, or, in fact, over the longer term, as in the graphs below. Initial increases in modern contraceptive use and decreases in unmet need for family planning between 1994 and 2000 may be the result of initial commodity shortages in the early 1990s, which were remedied through both donor provision of commodities and improvements in government purchasing and distribution.

While these numbers reported by the UN remained relatively flat, a Demographic and Health Survey (DHS) conducted in Kyrgyzstan in 2012 showed that the use of modern contraceptives by married women had declined from 60% in 1997 to 36% in 2012 without a clear explanation. The Multiple Indicator Cluster Survey coordinated by UNICEF (as indicated in the graphs above) shows a similar albeit less dramatic decline from 48% to 42% between 2006 and 2014 while the "unmet need" among women in a marriage or union increased from 1.1 to 19.1%. The overall fertility rate, however, has remained almost unchanged (3.4 in 1997 compared with 3.6 in 2012 [DHS data]) and the abortion rate has declined significantly. In Tajikistan, despite strong government commitment to FP in principle, the 2012 DHS showed a decrease in the use of modern contraceptive methods, from 38% (2005) to 28% (2012).

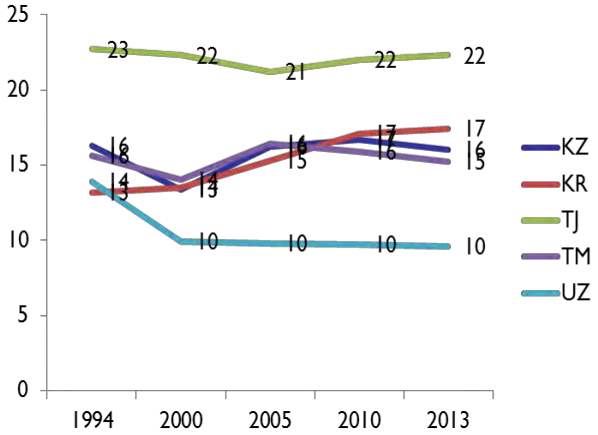
Still, geographic areas with direct Quality Project interventions demonstrate improved family planning indicators. In Kazakhstan, May 2013 monitoring in Kyzylorda Oblast, where the Quality Project had carried out extensive technical assistance on family planning, showed that 68% of outpatient charts included a record of family planning counseling during pregnancy, and 88% included a record of FP counseling postpartum. Based in part on TA (policy dialogue) from the Quality Project over several years, Kyzylorda PHC facilities have procured over $165,000 in contraceptive commodities. In Turkmenistan, according to an M&E report provided by the MCH Institute FP/RH coordinator in 2013, 69% of Turkmen women are satisfied with the quality of RH services provided in RH rooms located at PHC facilities.

Figures 15-16

Use of Modern Contraceptive Methods amongst Married Women, Ages 15-49



Unmet need for FP



United Nations, Department of Economic and Social Affairs, Population Division (2015). Model-based Estimates and Projections of Family Planning Indicators 2015. New York: United Nations.

Five indicators were reported by the monitoring and mentoring team: 62.2% of women were counseled on possible complications of contraceptive use; 100% of women received free contraceptives; 23.8% and 60.2% of women choosing modern methods of contraception used oral contraceptives and intrauterine devices, respectively.

Quality Project technical assistance, as outlined below, focused on improving family planning counseling, integration of family planning into medical school curricula, and support for evidence-based family planning policy. Quality Project activities also contributed to national strategy documents supporting improved family planning policy.

5.1 IMPROVING ACCESS TO QUALITY CARE

5.1.1 POLICY

In Kazakhstan, the Quality Project closely collaborated with the MOH and leading MCH/FP/RH agencies to improve evidence-based policies in the Reproductive Health and Family Planning areas prioritized by the MOH. The project contributed to 10 national working group sessions, policy and technical meetings and provided considerable technical assistance in developing key strategic policy documents. The core national programs and policies including a comprehensive "Roadmap of Strengthening Reproductive Health of Citizens of the Republic of Kazakhstan" which were developed with the projects' have created a platform for consistent improvement of access to FP/RH services across the country. Additionally, in Kazakhstan, the Project contributed to the development of key national methodologies including Instructions and tools for monitoring FP services and regulations on organization of FP consulting rooms. These regulations are practical guidelines aimed at standardizing FP/RH services across the country.

In Kyrgyzstan, the Quality Project contributed to the development of the MCH priority program within the national health reform strategy, Den Sooluk, which addressed reproductive health issues. The project also contributed to the development of yearly action plans, national monitoring indicators, and joint annual reviews of progress with implementation of the strategy.

In Tajikistan, Project-supported family planning awareness and access campaigns in selected rural areas of Sogd Oblast were scaled up by the Sogd Oblast Reproductive Health Center to cover all rayons of the oblast, reaching nearly 30,000 women of reproductive age with family planning counseling and providing specific family planning services to over 4500 women since September 2013.

In Turkmenistan, the Quality Project conducted all FP/RH activities in collaboration with other international organizations, including UNFPA, WHO, UNICEF. At the national level the project supported MOHMIT in improving FP/RH services in Turkmenistan within the framework of the National Reproductive Health Strategy for 2011-2015 and the MCH Institute Strategy for 2013-2015.The project provided technical assistance to the MCHI FP Center through 1) participation in WHO-led MCH/FP/RH Coordination Group activities, 2) promotion of sustainable FP monitoring and mentoring system; and 3) provision of FP/RH training as part of ANC training and KCH educational materials. The Quality Project provided technical and financial support to a FP/RH TWG in developing a 2013 and 2014-15 work plan

for implementing the 2011-2015 National RH Strategy. In addition, the Quality Project contributed to the development of the FP/RH sections of the MCH Strategy for 2013 -2015 and the "Mother, Newborn, Child and Adolescent Health Program for 2014-2018," which has been preliminarily approved by MOHMIT, pending translation of the document into Turkmen.

5.1.2 CPGS, CPS, CURRICULA

In Kyrgyzstan, the project supported national working groups to develop a clinical protocols on progesterone-only contraception for lactating women. Additionally, the Project supported a national working group in the country to analyze the content of existing curricula in medical and nursing schools, which resulted in a major revision of training content on family planning and reproductive health for medical colleges. The revised curricula was approved by the decision of the Methodological Council of Bishkek Medical College, institutionalizing the updated FP/RH program in all 14 nursing schools nationwide.

In Tajikistan, the Project contributed to development and implementation of FP methods National standards, developed FP Comprehensive competency based training package; FP counseling and methods training package, clinical protocols to provide contraceptives (3 in total including hormonal oral and injection, IUD).

To promote the delivery of consistent, evidence-based FP recommendations by Turkmenistan's family physicians to their enrolled populations, the Quality Project provided 100 WHO "medical eligibility criteria wheels for contraceptive use" to etrap-level RH offices and PHC facilities. The Quality Project collaborated with the MCHI to prepare sets of FP/RH educational materials for printing and distribution among velayat FP/RH centers, etrap FP/RH offices, and the general population. The Quality Project supported MCHI to conduct FP/RH training, monitoring and mentoring in all five velayats. After training thirty-seven family nurses from Turkmenabad city and Sahar etrap in Lebap velayat on postpartum counseling (including Lactational Amenorrhea Method and other safe FP methods for breastfeeding women), MCHI with limited financial support by the Quality Project surveyed 122 women of reproductive age to evaluate the effectiveness of FP/RH counseling provided during postpartum visits and found that 67% of surveyed women were aware of contraceptives appropriate for postpartum use.

5.1.3 SERVICE DELIVERY

Family planning counseling was included in the Project's ANC and EPC training throughout the region.

In Kazakhstan, the Project supported the MOH in building a national team of RH/FP trainers and mentors delineating their roles and responsibilities and institutionalizing their function in the system. These trainers/mentors execute external audits of health providers compliant with modern approaches in FP/RH, providing the required training and supportive supervision generate recommendations to local health authorities for management improvements the project affecting the quality of health services.

In Kyrgyzstan, the project facilitated training and monitoring on FP counseling for family physicians from 46 family group practices in Bishkek and Naryn Oblast, which collectively provide ANC services to around 19,500 pregnant women per year. The percent of women who selected a specific method of post-partum contraception prior to delivery increased from 18 to 56% in Bishkek.

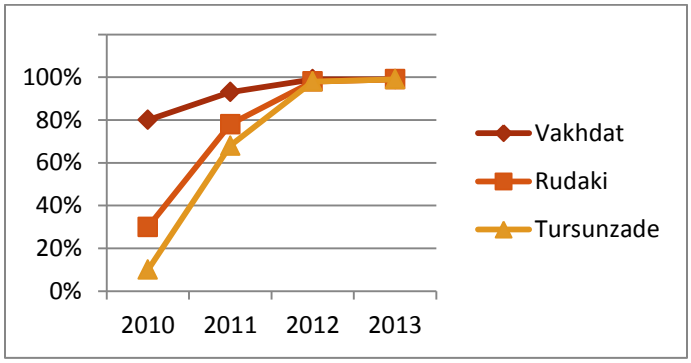
The Quality Project also facilitated training and monitoring of physicians and nurses from maternity hospitals in Bishkek, Naryn Oblast, and Jalalabad Oblast, Kyrgyzstan, to improve coverage and quality of post-partum FP counseling. In Jalalabad oblast, where Quality Project supported scale-up of the EPC program, post-partum/post-abortion FP training was conducted in addition to EPC training in 7 rayons and included IUD insertion/removal training for OB-GYN physicians. The percentage of women receiving FP counseling/services during postpartum/post-abortion period increased from 35% to 50%.

In Kyrgyzstan, the project facilitated training and monitoring of 22 rural midwives from Jalalabad Oblast on FP counseling and IUD insertion and removal, improving access to these important services in regions where there are inadequate numbers of physicians.

In Tajikistan, the Project supported the National Center for Reproductive Health to conduct family planning access and awareness campaigns in remote villages in Tursunzade and Rudaki. In Tajikistan, monitoring in three project sites showed nearly 100% coverage of family planning counseling, following training (as part of the EPC and ANC curricula), as shown in the chart below:

Figure 18

Coverage of Family Planning Counseling



In Turkmenistan, the Quality Project supported the distribution of contraceptives procured by UNFPA to facilities where national FP/RH trainers conducted FP monitoring: 30 of 72 etrap-level FP/RH offices in Akhal, Mary, Lebap, Dashoguz and Balkan velayats received commodities through Quality Project support. These facilities provide FP services to about over 492,000 women of reproductive age.

5.2 STRENGTHENING CAPACITY

In Kazakhstan, to build health provider capacity to deliver enhanced services, the Quality Project through the mentors' mechanism and ongoing monitoring process supported ongoing assessments of training needs among service providers. The project supported country efforts to strengthen the capacity the primary health care providers by supporting on-the -job focused trainings on ANC/FP/RH conducted by national trainers. The project assisted the MOH to establish a standard way of conducting on-site follow-up following training.

Building upon work carried out by the Quality Project and other international partners, Kazakhstan established a team of trainers, covering all 16 administrative units of the country served by 2230 PHC facilities. These trainers will provide on-the-job FP/RH training and supportive supervision to health providers and institutionalize this mechanism within the health system.

In Kyrgyzstan, the Quality Project facilitated training of 58 trainers from 14 nursing schools in the country, using a curriculum on family planning that was recently updated according to evidence-based national guidelines. All FP training curricula updated with Quality Project TA were incorporated into KSMIRCE's pre-service curriculum for family medicine residents. In Kyrgyzstan, the Project trained 27 providers in Jalalabad and Suzak maternities on post-abortion and post-partum family planning; this contributed to an increase in percentage of women receiving FP counseling/services during postpartum/post-abortion period from 35.4% to 50.2%.

In Turkmenistan, the Project trained 75 FP/RH specialists (88% of total in country). These physicians have been providing high-quality, evidence-based FP/RH services in facilities across the country. As a result of their work, the FP/RH coordinator at MCHI reported a 12% increase in patient satisfaction with services provided by FP/RH centers and offices in August 2013 as compared to May 2013. According to the result of Client's Satisfaction Assessment conducted by the Quality Project in collaboration with the UNFPA and WHO in 2014 77 % of women in Akhal, Mary, Balkan velayats and in the city of Ashgabat are satisfied with the FP/RH services provided to women in 12 health facilities engaged in FP/RH Clients Assessment. The Project also provided support to ensure a continuous supply of reproductive health commodities through implementation of a computerized logistics management and information system. Together with the UNFPA, the Project organized a national FP/RH working group focused on the development of a national plan of action for the governmental procurement of contraceptives including delivery mechanisms, storage and distribution. The assignment of gradually increasing responsibility for procurement of contraceptives by the government of Turkmenistan, reaching 100% of all procured contraceptives by 2017, was agreed upon during the FP/RH Working Group Meeting held on April 17th.

Additionally, in Turkmenistan, to improve capacity of health care workers to provide quality FP service Quality Project developed Training package to provide FP counseling, Comprehensive competency based FP training package, National Standards to use modern FP methods, and conducted FP trainings for hospital and PHC level medical workers. After FP trainings, QP trained trainers conducted regular M&M visits to help medical care workers to improve counseling skills. To increase awareness about FP methods and improve access to modern FP methods QP, in collaboration with Rayon Reproductive

Health Centers and local Jamoats (government administrations), supported FP information and access campaigns in rural villages.To improve quality of post-partum and post-abortion FP counseling QP has supported mentoring visits to Maternity wards and has implemented FP indicators to track during internal monitoring. QP has equipped Training Centers based on National and Sogd Oblast Reproductive Health Centers. In these centers the national and regional FP specialists provide continuous FP and ANC education for PHC workers.

5.3 IMPROVING DATA USE FOR DECISION-MAKING

In Kazakhstan, the project assisted the MOH to revise national FP/RH indicators included in the national information system. The new indicators are consistent with the modern approaches in FP/RH adopted by the country.

In Kyrgyzstan, the project collaborated with UNFPA on a study of contraceptives supply and access issues to address potential barriers in moving toward state-funded procurement of FP commodities, especially for low-income and vulnerable populations. This transition will be obligatory for the Kyrgyz Republic to continue to receive future UNFPA funding for FP commodities.

In Turkmenistan, In response to the government of Turkmenistan's recognition of the importance of health information systems (HIS) capable of generating reliable data, and its persistent efforts to establish a unified HIS that ensures the flow and use of accurate and timely information for evidence-based decision-making and improved management, the Quality Project provided MOHMIT and the MCH Institute with TA in designing annual plans for M&E activities and developing standardized indicators for assessing data quality and the overall performance of the HIS. The Quality Project collaborated with UNFPA to facilitate the development of indicators for M&E of the implementation of nine new CPs on key obstetric conditions. A two-day workshop led by the Quality Project Deputy Director followed by several months of periodic support to build capacity among local MCH leaders to develop quality indicators and monitoring instruments. The data collected by MCH Institute technical specialists during M&E activities throughout the entire life of the Project were used to draft "Mother, Newborn, Child and Adolescent Health Program for 2014-2018" (FP/RH section), thus increasing the government's use of data to improve the quality FP/RH services provided to the country's population.

In total in Turkmenistan, 571 FP/RH specialists, family physicians and nurses engaged in FP/RH monitoring activities, including those 129 who were taught how to use software for entering and processing data collected during FP/RH monitoring. This system will expedite the process of providing monitoring data to MOHMIT and will thereby facilitate better decision-making in the area of MCH and FP/RH. Data collected during these routine monitoring visits and through the FP/RH Client's Satisfaction Assessment are being used for the revision of prikaz #115 On Family Medicine which, once signed by MOHMIT, will serve to institutionalize modern approaches to FP/RH promoted by the Quality Project throughout the life of the project. Contraceptive use data are being entered and processed in all FP/RH offices through contraceptive LMIS software called CHANNEL installed by MOHMIT, in collaboration with UNFPA, to ensure appropriate distribution of contraceptives and to prevent stock-

outs. The MCHI M&E team reported a significant improvement in FP/RH data collection and processing in Mary Velayat following introduction of the LMIS software. The Project also supported the development of an FP consolidated database using results of the assessment, which will be used as a model for the FP/RH section of a country-wide electronic M&E system covering MCH and FP/RH services.

The Quality Project, UNFPA, and MOHMIT Health Reforms and Statistics Department revised and updated FP/RH reporting forms including new indicators for high-risk pregnancies. On April 1, 2013, these forms were officially approved through MOHMIT prikaz #118 on "Introduction of new FP/RH indicators and reporting forms for women, including women of high risk groups." These reporting forms will allow for better countrywide data collection on FP/RH care and conditions in Turkmenistan, which will inform policy decisions at the national level. To ensure that these new forms are used appropriately, the Quality Project, in collaboration with MOHMIT and UNFPA, organized trainings for 129 health workers and health managers from Ashgabat City and Akhal, Mary, Lebap, Dashoguz velayats.

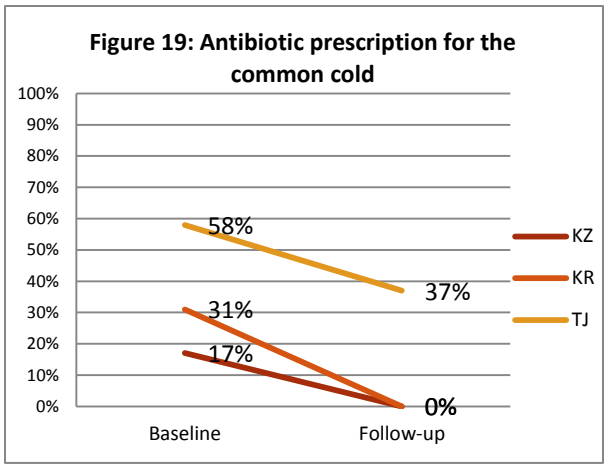
6. OTHER PUBLIC HEALTH THREATS

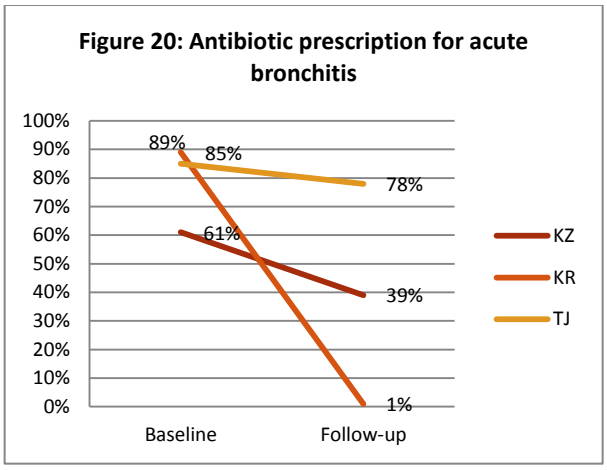
6.1 RATIONAL USE OF ANTIBIOTICS

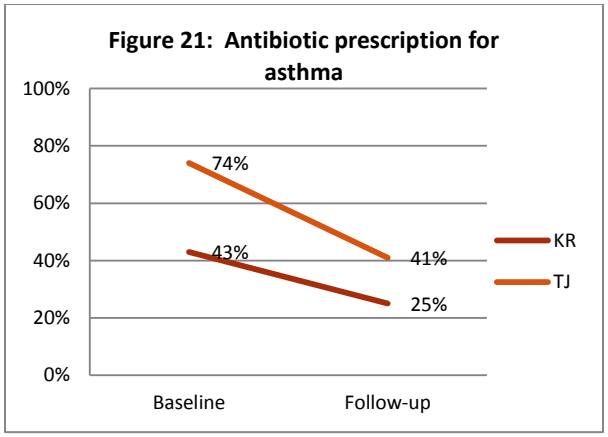
Over-prescription of antibiotics is a well-known quality gap throughout Central Asia. In many cases, clinical guidelines with evidence-based antibiotic recommendations are lacking, but even in countries with evidence-based guidelines on antibiotic use, physicians frequently over-prescribe them, suggesting the presence of attitudes or beliefs which limit providers' adherence to prescribing standards. In addition, antibiotics are available in pharmacies without prescription and patients frequently self-medicate with antibiotics for undefined febrile illnesses and acute respiratory infections which do not require antimicrobial treatment. Studies show clear correlations between antibiotic overuse and development of microbial resistance. For this reason, the promotion of rational antibiotic use among prescribers and consumers is considered essential for slowing the development of multi-resistant strains of common pathogens. The Quality Project began addressing this issue in year three under the OPHT funding element following discontinuation of activities on cardiovascular disease. A unified approach was successfully used in all countries except UZ, where the lack of an implementation agreement with government precluded us from carrying out OPHT activities.

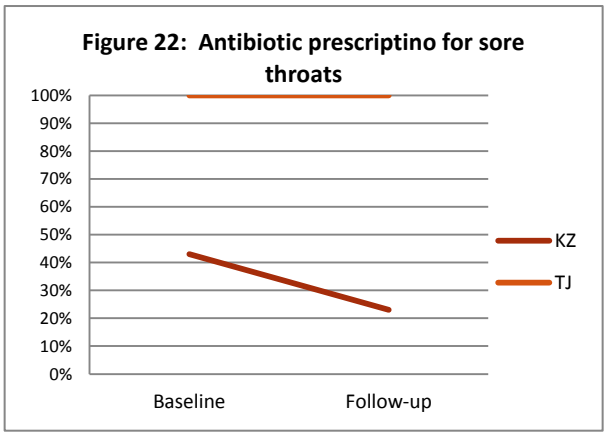
Key Results

- Reduced rates of unjustified prescription of antibiotics for common respiratory illnesses in health facilities in pilot rayons, as demonstrated by baseline and follow-up monitoring.
- Conducted KAP survey among consumers, prescribers, and pharmacists in 4 countries and used the results to develop informational posters for consumers and job aids for physicians to promote rational antibiotic use.
- Developed evidence-based clinical protocols on index conditions in KR (10 conditions) and TJ (13 conditions) which were approved by MOH, printed, and distributed. Protocols contain clear recommendations on when and how to prescribe antibiotics.
- Developed in-service training programs and prepared national trainers to lead training on rational antibiotic use related to index conditions in KZ, KR, TJ, TM. Trained over 7800 providers.
- Developed an online database for health organizations to track and analyze antibiotic prescription practices of providers (institutionalized in Kyrgyzstan).









6.1.1 IMPROVING ACCESS TO QUALITY CARE

Quality Project focused on promoting appropriate antibiotic use among **consumers** by developing effective informational/educational materials. A KAP survey was designed and conducted among consumers in each country to better understand attitudes, beliefs, and practices leading to excessive antibiotic use. With this information, informational posters were developed and a focus group used to assess consumers' response and retention of key messages based on various formats. Final versions were then adapted for use in each country, approved by the necessary government organization, and distributed to all pilot facilities. In Kyrgyzstan, Quality Project experts and local consultants were featured on several television programs and radio spots which highlighted the problem of antibiotic resistance and its relation to overuse of antibiotics.

KR Poster

KZ Poster

TJ Poster

To promote rational antibiotic prescription among **providers**, focus groups were convened to prioritize a set of "index conditions"—diseases or conditions for which antibiotics are most often unnecessarily or incorrectly prescribed. These conditions were remarkably similar between the four countries and included common viral respiratory conditions, acute diarrheal disease, and urologic infections which are often over-diagnosed or over-treated with antibiotics. A survey was then conducted in each country to determine if evidence-based clinical guidelines on each index condition already existed. If not, Quality Project supported the development of the needed guidelines. As with consumers, a KAP survey was also conducted among physician and pharmacists to better characterize existing practices and to identify commonly held beliefs or attitudes contributing to overuse of antibiotics. The project then supported local partners to develop a training program on the index conditions, train physicians in pilot facilities, and then conduct monitoring/support visits to promote adherence to the guidelines, resulting in significant improvements in prescription practices.

Kyrgyz Clinical Protocols

FM trainer leads session on RUA

6.1.2 STRENGTHENING CAPACITY

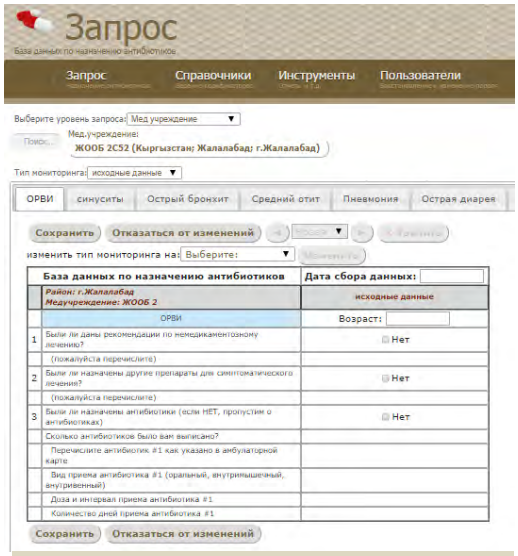
In each country, Quality Project worked with local partners that have institutionalized or long term roles in educating healthcare workers. Educational materials were developed in collaboration with these partners and in KR, TJ, and TM, national trainers were trained to ensure capacity existed for national scale up. In KZ, KR,

and TJ the training programs were approved and integrated into the post-graduate curricula.

Quality Project also worked closely with local partners (professional associations in KZ and KR; FM trainer network in TJ; national trainers in TM) to develop their capacity to conduct monitoring and provide constructive feedback to healthcare workers to encourage adherence to antibiotic prescribing guidelines. KAFP in Kazakhstan, FGPNA and HAKR in Kyrgyzstan, and the network of family medicine trainers in Tajikistan were all independently conducting audits of antibiotic prescription practices, entering results into a database, and providing feedback to health facilities. In Kyrgyzstan, quality committees in pilot hospitals were trained by HAKR to conduct internal audits of antibiotic prescribing practices independently and, by order of the MOH, are now required to continue conducting such audits on a quarterly basis.

6.1.3 IMPROVING DATA USE FOR DECISION MAKING

Promoting rational prescription of antibiotics by providers is a long-term task best managed at the health facility level. Very few health facilities, however, conduct audits of antibiotic use and even fewer have the capacity to systematically analyze the results of such audits and provide constructive feedback to providers. With this in mind, the Quality Project first developed audit instruments for each index condition selected by the countries, focusing on known quality issues including accuracy of diagnosis, the decision to prescribe antibiotics, and selection of antibiotics. To assist healthcare leaders with data analysis, a database was developed that would automatically generate graphs of indicator results, including run charts showing change over time that could be analyzed at the individual provider, facility, district, regional, or country level. Local partners (professional associations and FM trainers) used these automatically generated reports after conducting audits to provide feedback to the health facilities which allowed the providers to compare their performance with other facilities (and regions), serving as a motivator to improve adherence to standards of care. This database was eventually made available online and was/is accessible from any health facility with an Internet connection, allowing countries to implement antibiotic tracking at the facility level. In Kyrgyzstan, the database was installed on a server at the Republican Medical Information Center and five IT specialists trained to provide long-term support of the database.



Screen shot of the online database for tracking and analysis of RUA monitoring results (accessible at http://www.qhcp-db.com/)

6.1.4 COUNTRY-SPECIFIC ACHIEVEMENTS

- Kazakhstan
  - KAFP spearheaded the work on rational antibiotic use in Kazakhstan, playing an important role in the development of the KAP survey instruments and RUA monitoring tools used regionally.

- KAFP conducted the KAP surveys, 6 rounds of RUA monitoring in pilot facilities, and developed a 54-hour CME course covering all index conditions and trained over 240 PHC providers. Modules from this course were integrated into the 4-month postgraduate training course required for all general practitioners, internists, and pediatricians.
- KAFP presented Quality Project's results on improving rational antibiotic use at national conferences (2014 Central Asian Congress on Antibiotics and Antimicrobial Resistance; 2014 Congress of Family Physicians) and published two abstracts in the journal, "Medicine and Ecology".
- KAFP adapted the IEC materials for consumers and providers, printing and distributing 500 posters and 15,000 leaflets on RUA in 7 regions. Digital versions of all materials were given to the National Drug Information Center.

- Kyrgyzstan
  - FGPNA and HAKR were the primarily implementing partners in Kyrgyzstan, leading focus groups, conducting the KAP surveys, and conducting monitoring of RUA in 27 PHC facilities and 9 hospitals from 3 pilot rayons.
  - KSMIRCE's FM trainers and the MOH chief pulmonologist partnered with Quality to develop two 2-day training programs on index conditions that were used to train 92 PHC and 76 hospital providers. Thirty-one trainers from KSRMICE were then trained and the CME module integrated into the CME calendar of KSMIRCE.
  - Ten evidence-based clinical protocols on index conditions were developed in collaboration with KSMIRCE, the Kyrgyzstan Association of Urologists, and MOH chief pulmonologist. All CPs were approved by MOH and published as two collections of CPs (respiratory and urologic conditions). 3000 copies of each collection were printed and distributed.
  - Quality Project provided financial and technical support to the Kyrgyzstan Thoracic Society to conduct a study on antimicrobial resistance levels among strains of S. pneumoniae and E. coli (clinical material was still being collected at time of project closure), which will be the first time such data has ever been collected, allowing clinical protocols to be adjusted according to local resistance profiles.
- Tajikistan
  - Quality Project collaborated with its network of FM trainers and the DIC to implement RUA activities in Tajikistan. Dushanbe FM trainers were involved with the writing of clinical practice guidelines on index conditions and then helped to train FM trainers from peripheral centers of excellence on the content of the new guidelines.
  - FM trainers in Sogd Oblast and Vahdat coordinated four rounds of RUA monitoring and feedback in 15 PHC facilities.
  - On their own initiative, DIC and the Dushanbe City FM Center organized RUA monitoring and support visits using the approach and instruments developed by Quality Project. DIC supported 4 hospitals and the FM Center supported 14 health centers. Quality Project supported this initiative by coordinating training for these health facilities on the content of the new CPGs.
- Turkmenistan
  - Supported the development of a national Leishmaniasis control strategy that was approved by MOHMIT along with an accompanying set of clinical guidelines covering clinical management of Leishmaniasis and public health surveillance (epidemiological, entomological, and epizootological).
  - Supported the development of a national strategy on infection control
  - Trained national trainers on the diagnosis and management of index conditions, including evidence-based recommendations on antibiotic use. These trainers subsequently trained 288 health workers and conducted baseline and follow-up monitoring of RUA in 41 health facilities. Antibiotic prescription for

acute diarrheal disease dropped from 96% to 29%; for the common cold, antibiotic prescription dropped from 98 to 23%.

6.2 CVD

Non communicable diseases and cardiovascular diseases in particular, are a leading cause of death in all countries of CAR. Hypertension is a major contributor to cardiovascular morbidity and mortality and its detection and treatment is one of the cornerstones of reducing the burden of CVD. Hypertension is a "primary care sensitive" disease, meaning that in healthcare systems with a strong PHC sector, the vast majority of patients with hypertension will be detected and treated by PHC providers without being hospitalized. National statistics and operational research in CAR show that only a small fraction of patients with hypertension are detected and even fewer take blood pressure lowering medicines on a regular basis, leading to very low rates of hypertension control and leaving patients vulnerable to disability or death from heart attacks and strokes. The Quality Project focused on improving access to screening and treatment of hypertension in KZ, KR, and TJ; In Kyrgyzstan, attention was also given to improving the hospital treatment of patients suffering from acute myocardial infarction (AMI, or heart attack). CVD activities were carried out for only two years until USAID guidance required discontinuation of all CVD activities under the OPHT funding element. In UZ and TK, CVD activities were not approved by the respective governments.

Approach/methodologies

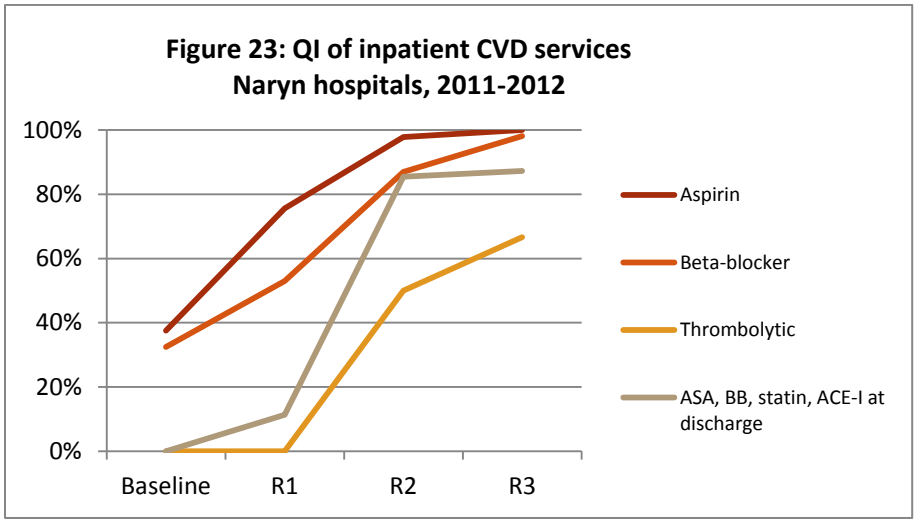
Thanks to previous USAID investments through the ZdravPlus projects, evidence-based standards on hypertension were already in place in Kazakhstan, Kyrgyzstan, and Tajikistan. The Quality Project focused on strengthening the capacity of PHC providers to screen for and effectively treat hypertension through training and the introduction of QI methodologies. In KR, the Quality Project worked closely with the MOH, leading cardiologists, and HAKR to develop and pilot a strategy to improve the quality of hospital-level treatment of AMI in Naryn Oblast, including the introduction of thrombolytic therapy, a low cost intervention which, when combined with aspirin, can reduce AMI-related mortality by 40% but which was only available in Bishkek.

Successes

In Kazakhstan, healthcare workers acquired the knowledge and skills necessary to prevent and treat arterial hypertension and other CVDs through trainings led by KAFP: forty-six PHC providers were trained through an e-learning course developed under ZdravPlus II, 109 providers participated in a 3-day in-service training, and 609 providers were trained on the diagnosis and management of hypertension urgencies/emergencies.

In TJ, as a result of Quality Project's interventions, the percent of patients whose blood pressure was measured during a visit to any of six pilot PHC facilities in Dushanbe increased from 6 to 91%. Among those diagnosed with hypertension, the quality of care delivered by PHC providers increased significantly, with 87% of health care workers providing treatment and follow up of hypertension in accordance with recommendations in the clinical guideline compared to a baseline rate of 25%.

As a result of Quality Project's hospital-level initiatives in Naryn, Kyrgyzstan, life-saving thrombolytic therapy was made available to 66% of the oblast's population. Likewise, use of other life-saving interventions to patients with AMI, such as aspirin, beta-blockers, and statins increased markedly in all pilot facilities. The number of providers correctly interpreting EKGs improved from 47 to 88% and demonstrating proper defibrillation technique from 18 to 82%. The success of the Naryn initiative led to the adoption of this approach in the national health strategy, Den Sooluk, with plans to expand it to all remaining oblasts.



7. CROSS-CUTTING ACTIVITIES

During the early part of the Quality Health Care Project, before the 2013 Contract Modification, the Project engaged in several cross-cutting activities aimed at strengthening health systems in order to improve outcomes in the specific health target areas of TB, HIV, MCH and RH. These included general support to the Ministries of Health on legal, policy, and health financing, as well as general support on CPGs, CPs, EBM, and FM training. By the time the 2013 Contract Modification was received, the Project had already gradually, based on verbal guidance from USAID, transitioned away from any cross-cutting HSS activities to carrying out institutional strengthening activities within the vertical program areas. From the time of the 2013 Contract Modification, the Project clearly transitioned to working within the specific health component areas with an HSS approach, but with the priority objective of achieving improved health outcomes in the specific health component areas.

While the Quality Project team was initially very reluctant to move away from the crosscutting HSS activities which had been a mainstay of the earlier successful *Zdrav* projects, both the Project team and

national partners proved very flexible and able to rethink what the project could support and should support in order to achieve improvements in TB, HIV, MCH, RH, and OPHT (antibiotic resistance).

The early health system reforms in CAR focused primarily on broad health system strengthening activities affecting health financing, payment systems, and organization of care in order to salvage systems that were collapsing under their own weight after the dissolution of the Soviet Union. Although largely successful in improving healthcare equity and reducing out-of-pocket expenses to patients, changes in quality of care were less apparent. During USAIDs ZdravPlus II Project, attention was directed toward modernizing *content of care* by introducing evidence-based medicine and promoting its integration at all levels of the healthcare systems and by introducing quality improvement methodologies. During Years 1-2, the Quality Project continued to provide general support to local partners working in the area of EBM and quality improvement at both the policy and service delivery levels as a means to achieve project goals in all program areas while simultaneously strengthening health systems to improve content of care more broadly. Where requested by national partners, the Quality Project also supported further health financing reform and strengthening of primary health care services to contribute to improved health outcomes in USAID priority health areas.

The Quality Project continued to provide essential support to EBM specialists in KR and TJ, who, although remarkably enthusiastic, were in need of ongoing technical input and moral support to work effectively as advocates to promote further strengthening of EBM and adherence to EBM principles among policy makers and opinion leaders. Quality Project supported operational research at different levels of the healthcare systems in KR and TJ to assess awareness and perception of EBM initiatives amongst a total of 1500 medical educators, opinion leaders, and clinicians in the two countries, providing results on which further strategic plans for EBM could be based. Through EBM centers in KR and TJ, Quality Project facilitated the training of hundreds of medical students, clinical residents, and clinicians on the foundational principles of EBM and its role in improving quality of care and provided access to evidence-based online resources for educational and clinical institutes in all five CAR countries through subscriptions to the Guidelines International Network. Quality Project also spearheaded the prioritization of clinical topics for CP/CPG development at the national level in KZ, KR, and TJ; in KR, this took the form of a 3-year CPG development calendar.

Another critical role played by the Quality Project was the provision of external technical reviews of draft CPs and CPGs. While EBM centers have had the capacity to provide methodologic guidance to CP/CPG developers for several years, capacity of leading clinicians in most CAR countries was often not sufficient to assess CP/CPG developers' interpretation and application of evidence. STLI and other Quality Project consultants provided detailed feedback on the content of over 100 clinical protocols and guidelines during the life of the Project , strengthening the capacity of local partners to use evidence-based approaches as they set standards of care in their respective fields and directly affecting the content of care of thousands of providers who will use these CP/CPGs in their daily practice for years to come. Quality Project also provided technical input for the development of national strategies on quality improvement and implementation of clinical guidelines.

Early in the project, Quality consultants recognized the need to strengthen the capacity of local partners to develop high quality indicators used for the purpose of monitoring quality at all levels of the healthcare system, with particular emphasis on indicators that can be used to assess the implementation of CP/CPGs. Quality Project developed training materials and trained over 300 local partners in KZ, KR, TJ, and TM, including CP/CPG developers, health policy makers, and representatives of health insurance funds or quality review boards. In Kyrgyzstan, it has now become routine to include a list of implementation indicators in all clinical guidelines to promote internal quality audits and facilitate external quality assurance reviews.

Quality Project supported the revision of essential drug lists in TJ and KR. An essential drug list is a key instrument for reducing widespread use of non-evidence based drugs and often forms the basis for selecting medications to include in state guaranteed benefit programs and/or lists of drugs discounted through public insurance plans. Quality Project provided evidence summaries for more than 17 controversial drugs in Kyrgyzstan and promoted a transparent process for making decisions on the inclusion or exclusion of drugs based on a critical assessment of existing evidence, leading to the removal of 70 drugs from the EDL.

A. Country-specific achievements

- Kazakhstan
  - As Kazakhstan reformed its health payment system to include pay-for-performance schemes, Quality Project invested considerable effort advising health policy makers on methodological and technical issues related to successfully deploying a P4P system, including a set of payment indicators on tuberculosis, which were approved by MOH and implemented nationally.
  - Reviewed the evidence-based medicine curriculum and provided training to students of the KSMU School of Public Health on CPG development and role of clinical guidelines, quality assurance reviews, and continuous quality improvement systems in improving quality of service delivery.
- Kyrgyzstan
  - Provided close technical support to the MOH to develop the national health sector strategy, Den Sooluk, and the accompanying M&E framework. Den Sooluk promotes general health system strengthening while focusing on improving clinical outcomes in four priority clinical areas: maternal child health, cardiovascular disease, TB, and HIV. Quality Project's consultants also provided ongoing support for implementation of Den Sooluk by helping to facilitate technical sessions during the "Joint Annual Reviews" where international and local partners come together to assess implementation progress and develop work plans and budgets.
  - Supported a number of cross-cutting quality improvement initiatives, including the development, approval and implementation of a new flow chart for the official ambulatory medical record which standardizes routine collection of essential health screening information during patient visits, including blood pressure, BMI, smoking status, alcohol abuse, sexually transmitted infections/HIV risk factors, and periodic cancer screening. The new flow sheet also eliminated outdated screening requirements that were in old ambulatory record and contains chronic disease management tools for hypertension, asthma, and diabetes based on new CPGs
  - Promoted integration of new evidence-based clinical guidelines into pre-service curricula by conducting a series of conferences for over 600 participants on the content of over 50 evidence-based CPGs.

Participants included the majority of clinical faculty from undergraduate and postgraduate institutes, quality auditors from MHIF, and leaders of professional associations.

  - Provided technical input on medical education reform designed to more broadly educate medical students as "general practitioners" and on the national post-graduate medical education reform strategy which now mandates general practice residency training for all medical school graduates. Input included detailed review and comments on revised residency curriculum including list of clinical competencies and learning objectives.
  - Provided technical support to strengthen KSMIRCE's distance learning initiatives for PHC providers, including provision of a hosting website; support for a national coordinator; training of trainers on development of online learning courses; and training of 16 FM trainers in course facilitation who are now leading online courses independently.
  - Collaborated on the World Bank's Results-Based Financing project by consulting on the selection of payment indicators (balanced score card) for the hospital and PHC levels.
- Tajikistan
  - Quality Project played a vital role in supporting ongoing strengthening of primary health care through a number of activities, including support for 4 FM training "centers of excellence" (3 in Sogd Oblast; one in Vakhdat), where over 142 physicians completed a 6-month FM retraining course. Quality Project provided regular trainings for the professional development of existing FM trainers and led quarterly CME sessions for PHC providers from Dushanbe. Through the peripheral centers of excellence, CME was provided to over ___ providers.
  - Provided technical input into a national Family Medicine Program that established FM as the core of PHC reform and prioritized integration of vertical health systems into PHC. Also provided technical input on the national CME concept paper to promote adoption of a sustainable and effective model of CME delivery for PHC providers.
  - Quality Project continued USAID's support of the national EBM center and Drug Information Center, both housed within TSMU. The EBM center provided continuous training of medical students and clinical residents in EBM principles, impacting over 1000 young clinicians over the life of the Quality Project. Likewise, the DIC provided training on rational pharmaceutical use and evidence based approach to pharmacotherapy for over 1000 participants. The training provided by both centers has been fully institutionalized into the pre-service curricula of TSMU.
  - With technical support from the Quality Project, the Dushanbe City FM Center coordinated very successful quality improvement projects, forming QI teams in Dushanbe health centers, training on QI principles, and providing ongoing supportive supervision to strengthen the capacity of health centers to conduct internal quality audits, analyze results, and make QI plans. Topics included detection and management of hypertension, tuberculosis, and rational use of antibiotics.

8. LESSONS LEARNED & RECOMMENDATIONS

8.1 LESSONS LEARNED

The lessons described here go beyond the scope of only the Quality Health Care Project, and have been learned over the course of the four successive five-year USAID health projects which Abt has implemented in Central Asia. The insights gained through these many years of experience can be useful for future health systems strengthening work.

1. LOCAL PARTNERS MUST BE INVOLVED IN SOME WAY IN ALL ASPECTS OF THE DESIGN AND START UP.

This is crucial even though local partners usually do not have time to devote their full attention to health systems strengthening or service delivery improvement activities. Capacity building and change in mindset results in part from day-to-day implementation of new approaches and system interventions.

2. THE HEALTH SYSTEM NEEDS TO BE STRENGTHENED IN ORDER TO ACHIEVE SUSTAINABLE IMPROVEMENTS IN HEALTH OUTCOMES

Even with earmarked activities focused on achieving improvements specifically in HIV, TB, MCH, or RH, attention must be paid to overall system strengthening, including health financing, governance, and roles and relationships, in order to establish systems which allow improvements in service delivery to be sustainable.

3. CHANGES MUST BE IMPLEMENTED IN AN INTEGRATED MANNER WITH ATTENTION TO TIMING.

As changes were implemented in one area and changes began to occur, other parts of the health care system were affected, making it clear that steps must be carefully coordinated to ensure some elements do not progress too far ahead of others and that implementation does not get ahead of capacity.

4. STEP-BY-STEP IMPLEMENTATION ALLOWS FOR SUCCESS BY BREAKING LONG-TERM GOALS—WHICH CAN SEEM OVERWHELMING – INTO MANAGEABLE PIECES.

Accomplishment of each piece of the change allows for small successes which garner local support and gain momentum for more sweeping changes.

5. KEY POPULATIONS MUST HAVE A STRUCTURED AND UNDERSTOOD ROLE IN THEIR OWN HEALTH CARE.

The needs of beneficiaries of donor-funded projects often get pushed aside in favor of donor or implementer priorities. Key population representatives must be enabled to conduct their own advocacy and, where possible, participate in the provision of their own services.

6. GOVERNMENT-NGO COLLABORATION IS CENTRAL TO THE SUCCESS OF ANY PROGRAMMING THAT TARGETS KEY POPULATIONS.

The complexity of the government-NGO relationship should not be overlooked. USAID had significant success in improving relationships by training state health care workers and NGO staff together and by creating platforms for regular meetings between clinic and NGO leaders.

7. IN COUNTRIES WHERE NGOS ARE LESS STRONG OR NON-EXISTENT, IT IS IMPORTANT TO WORK WITH A VARIETY OF LOCAL PARTNERS TO INVOLVE THE POPULATION IN HEALTH CARE OUTCOMES.

Thanks to cooperation with religious leaders and organizations such as youth and women's committees, USAID was able to cover wider areas and reach more patients. Health care challenges remain in Central Asia, as in most of the world. However, thanks to the joint efforts of USAID, country counterparts, and other donors in setting the path for improved health systems over the past 20 years, the Central Asian countries now have a clear path to follow to continue strengthening health systems to benefit their populations. The sustainable, integrated changes in place from rural villages to big cities mean that as their institutions grow stronger, Central Asians will have better health care and fuller, more productive lives in the years to come.

8.2 RECOMMENDATIONS

The countries of Central Asia have made dramatic improvements in their health care provision over the past five years, and in fact, over the past two decades. However, the road will continue to be bumpy as the countries move forward and continue to strengthen their health systems and seek improvements in health outcomes. For over two decades, USAID has been an important force at the table, linking with other donor partners and national governments to support introduction and strengthening of evidence-based approaches and the strengthening of primary health care and community involvement in health. USAID has been a leading force in helping the countries in the region not only learn from international experience, but also play an active role in adapting it to their own realities, toward **sustainable** improved health outcomes. Even as USAID health funding has become strictly earmarked to TB, HIV, MCH, and RH for the region, the Project would strongly recommend that USAID stick to the principles it has espoused for the last twenty years, including the need for health systems strengthening, in order to achieve sustainable improvements within these health areas, and to ensure that the countries of the Central Asia region continue to move toward universal health coverage, improved quality of care, and improved health outcomes.

9. ANNEXES

ANNEX A: YEAR FIVE SUMMARY

The specific activities/results of Year Five activities are summarized here, since USAID authorized the contractor to include this information here, in lieu of a standalone Year Five Annual Report.

Key Accomplishments

- Contributed to 28 key policy documents and assessments
- 40 CPGs clinical practice guidelines developed and disseminated
- 9,900 health care workers and NGO representatives trained
- 1,199,635 hard copies and 2,285 DVDs of key products disseminated during the project closeout period.

In year five, the Quality Project continued implementation in Kazakhstan (TB, HIV), Kyrgyzstan (TB, HIV, and OPHT) and Tajikistan (TB, HIV, MCH, RH/FP, and OPHT). The TB component in Kazakhstan completed in end of quarter 1, the MCH Component in Tajikistan completed in end of quarter 2. All technical activities in all three countries completed in quarter three. Within all components the project made a concerted effort to finalize activities aimed at strengthening health systems and services, with a focus on HIV/AIDS and TB. In its final year, the Quality Project kept a sharpened focus on institutionalization toward sustainability of proven approaches introduced earlier in the Project and dissemination of the results.

In all three countries the project made a significant contribution to further development of health policy in priority areas. In summary, the project contributed to **156** TWG discussions, roundtables, and meetings on key policy issues; **28** policy documents and assessments including Comprehensive Packages for PWID, MSM and SW in Kazakhstan, approved by the National AIDS Center; policy documents on Quality Management System (QMS) and Internal Quality Control (IQC) for culture diagnostics in Tajikistan, a QMS Guideline and Drug management Standard Operating Procedures in Kyrgyzstan.

The project worked to improve the capacity of health workers and NGOs to provide quality health services and institutionalize new clinical approaches in medical practice and education for sustainability. In collaboration with national partners the project developed or revised **40** CPGs clinical practice guidelines. As an example, in Kyrgyzstan the project developed CPGs on MAT treatment including integrated services for clients (ART, TB, MAT); Hepatitis C for all levels of health care facilities; standards of services for SWs; two collections of CPGs on respiratory and urologic conditions. In Kazakhstan the project developed and institutionalized in medical education an innovative training module on HIV for PHC workers and facilitated integration of unified training modules on infection diseases (HIV, HTC, HR and STI TB, malaria) in trainings for PHC doctors and nurses in CME Kyrgyzstan. In year 5, **9,900** health care workers and NGO representatives were trained directly by the project or through rollout trainings

jointly supported by the project and government. The training topics included IPCS, Reproductive Health, Hep C, HTC, harm reduction, HIV prevention among population, stigma and discrimination, STI clinical guideline (gonorrhea, syphilis) and protocol (syndromic approach), basic public relations for NGOs, utilization of Enrolled Population Database and maintenance of antibiotics database (Kyrgyzstan).

The project focused on strengthening collaboration between the public sector and NGOs as a major prerequisite of sustainability of services provided by NGOs to key populations. The project continued to support **13** community advisory boards (CABs) created in Kazakhstan, Kyrgyzstan and Tajikistan with the project's support in the previous years and supported their further expansion. In Kazakhstan two new CABs were created in Pavlodar while the Almaty PLHIV CAB has been officially registered as a non-profit fund. Now the National CAB represents interests of all CABs in the country at a higher level and is eligible for social contracting. The PLHIV CAB under Bishkek City AIDS Center registered as a Country Council of Patients in accordance with local legislation for further financial and organizational sustainability. Legal registration was finalized this quarter with the Project support. In Kazakhstan in 2014, 18 NGOs received **$800,000 (a total of 1.300, 000 in 2013-2014)** to implement social contracts. In Tajikistan, as recommended by USAID, the project partnered with Mercy Corps International (MCI) to build national capacities to maintain and expand MCH/FP improvement interventions after the completion of Quality Project's activities. The project developed a comprehensive, competency-based FP training package; trained a team of national trainers to conduct quality family planning trainings using the training package. Completing the OPHT activities, the project finalized a regional technical report of the KAP survey of antibiotic consumers, conducted roundtables to share Quality Project's activities on RUA (national government, MOH, USAID CAR, USAD KR, local stakeholders. As part of the institutionalization process, the project conducted training for local partners in Kyrgyzstan on maintaining the antibiotics database, created by the project.

In its final implementation year the Quality Project focused on broad dissemination of project results in all components and consolidation of government and non-government efforts to rollout approaches introduced by the project. In the course of the year the project conducted a range of highly visible and successful national close-out and other public activities targeting ministries of health, health providers, medical education institutions, NGOs and general population. In the final dissemination effort, the project disseminated **1,199,635** hard copies and **2,285** DVDs of key products to the Ministries of Health, National TB, HIV, Healthy Lifestyles Centers, NGOs, professional Medical Associations, Patient-Friendly rooms and Trust Points for PWID, SW and MSM, medical workers (doctors, midwifes, family doctors and nurses), volunteers, general population and target population in pilots districts. Key products and information on project close out events were placed on the project website. In quarters 1-3 mass media placed around **95** news pieces on the project in newspapers and on the web.

The Project uploaded its deliverables and technical reports to the USAID Development Experience Clearinghouse, and conducted closeout events jointly with USAID in Kazakhstan, Kyrgyzstan, and Tajikistan. Additionally, the Project produced a Legacy Document, profiling the 20 years of USAID Health Systems Strengthening Activities through the three earlier *Zdrav* projects and the Quality Health Care

Project in Central Asia (http://abtassociates.com/CentralAsiaLegacy). A Legacy event was conducted in the Washington, DC area to profile the achievements and lessons learned. Opened by Deputy Assistant Adminstrator of the Global Health Bureau Jennifer Adams, with participation from Karen Cavanaugh (USAID Health Systems Office) and Manpreet Anand (USAID Asia Bureau), as well as many Abt staff who have been involved in the projects over the years, the event was an opportunity to recount the successes, challenges and specificities of work in the region, but also to draw broader lessons for future HSS work worldwide.

WHO AND UNODC GRANTS

In year five, upon USAID request, the project provided grants for activity implementation in Uzbekistan to UNODC (HIV) and WHO (MCH, RH/FP, and OPHT). The UNODC grants focused on improving the quality of health services and systems through an increased range and improved management of HIV-related services for PWIDs. Within the grant, a series of workshops for law enforcement agencies on HIV prevention, treatment and care for PWID with best practices from low-threshold and specialized services were conducted. Please see the UNODC grant reports for detail. The WHO grant focused in improving health services in MCH, FP and antibiotics use areas. The grant provided technical assistance to improve the organization and quality of MCH services through strengthening service norms and standards compliant with WHO/UNICEF recommendations, implemented a range of activities to increase knowledge and skills of health care providers, academia, and other stakeholders on family planning; and improve rational use of antibiotics including increased awareness of providers and public of threats related to abuse of antibiotics. The project contributed to the development of national strategies to contain antimicrobial resistance, and set-up of national monitoring of antimicrobial resistance and antibiotics use.

ANNEX B: YEAR FIVE TRAINING DATA

As per the contractual requirement, the Quality Health Care Project reported training data on a quarterly and annual basis. Year 5 data is reported below, given that USAID has authorized Abt to include a brief Year Five summary as an appendix to the final report, rather than producing a separate document.

Country	Kazakhstan			Kyrgyzstan			Tajikistan			TOTAL		
Field of Study	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
HIV total	547	144	403	545	180	365	1614	646	968	2706	970	1736
FP/RH total	0	0	0	0	0	0	455	45	410	455	45	410
MCH total	0	0	0	0	0	0	379	77	302	379	77	302
OPHT Total	0	0	0	16	4	12	2571	922	1649	2587	926	1661
TB total	408	51	357	1487	190	1297	1147	463	684	3042	704	2338
HIV/TB total	42	13	29	100	36	64	0	0	0	142	49	93
TOTAL	**997**	**208**	**789**	**2148**	**410**	**1738**	**6166**	**2153**	**4013**	**9311**	**2771**	**6540**

ANNEX C: AMEP

HIV Results

PERFORMACE INDICATOR	COUNTRY	BASELINE	ACTUAL Year 1	ACTUAL Year 2	ACTUAL Year 3	TARGET Year 4	ACTUAL Year 4	TARGETS Year 5	ACTUALS Year 5
Number of pilot or demonstration sites at which public and NGO/CBO collaborate to improve access to services by key populations	**Kazakhstan**	0	0	3	5	7	7	8	8
	Kyrgyzstan	0	0	7	9	11	14	14	14
	Tajikistan	0	0	3	11	14	14	14	14
Effectiveness of Community Advisory Boards (CABs)	**Kazakhstan**	0	-	-	2 CABs was created and work	CABs continue to work	4 CABs effectively work	5 CABs will effectively work	5 CABs effectively work
	Kyrgyzstan	0	-	-	2 CABs was created and work		3 CABs effectively work	3 CABs will effectively work	3 CABs effectively work
	Tajikistan	0	-	-	2 CABs was created and work		5 CABs effectively work	5 CABs will effectively work	5 CABs effectively work
Number of individuals who received Testing and Counseling (T&C) services for HIV and received their test results (TA-only) (new PEPFAR)	**Kazakhstan**	n/a	-	-	-	1200	1971	1300	1509
	Kyrgyzstan	n/a	-	-	-	2500	2617	1250	2121
	Tajikistan	n/a	-	-	-	600	1022	600	726
Number of sites offering HIV rapid testing for key populations	**Tajikistan**	0	0	3	6	6	6	6	6
Progress towards adoption of national Comprehensive Package of Services for PWID, MSM, SW	**Kazakhstan**	0	-	-	PWID, MSM – stage 3e (policy developed); SW – stage 1a (research policy analysis conducted)	PWID, MSM – stage 4a (government engaged to leadership); SW – stage 2d (policy's White paper developed)	PWID, MSM – Stage 4a (government engaged to leadership); SW – stage 2d (policy's White paper developed)	PWID, MSM, SW– stage 4c (Government act/approval)	PWID, MSM, SW– stage 4c (Government act/approval)

PERFORMACE INDICATOR	COUNTRY	BASELINE	ACTUAL Year 1	ACTUAL Year 2	ACTUAL Year 3	TARGET Year 4	ACTUAL Year 4	TARGETS Year 5	ACTUALS Year 5
	Kyrgyzstan	0	-	-	PWID, MSM/TG, SW -stage 3e (policy developed)	PWID, MSM/TG, SW- stage 4c (Government approval)	PWID, MSM/TG, SW- stage 4c (Government act/approval)	PWID, MSM/TG, SW – stage 5b (approved policy disseminated /education activities)	PWID, MSM/TG, SW – stage 5b (policy disseminated /education activities started)
	Tajikistan	0	-	-	PWID- stage 4a (government engaged) MSM- stage 3e (policy developed) SW – stage 2b (policy dialogue and advocacy)	PWID, MSM- stage 5a (implementation plan developed) SW – stage 4a (government engaged to leadership)	PWID, MSM, SW - stage 4c (Government act/approval)	PWID, MSM, SW – stage 5c (Strategy implementation/capacity strengthening activities)	PWID, MSM, SW – stage 5c (Strategy implementation/capacity strengthening activities carried out)
Number and percentage of NGOs that received funding from the government after training provided by the Quality Project	**Kazakhstan**	0	-	-	16 (38%)	18	18 (43%)	18	18
Number of health care workers who successfully completed an in-service training	**Kazakhstan**	0	0	464	319	200	197	50	48
	Kyrgyzstan	0	0	660	499	500	466	260	198
	Tajikistan	0	0	777	1137 (360)	263	268	150	229
	Turkmenistan	0	0	548	500	-	261	n/a	n/a

TB Results

PERFORMACE INDICATOR	COUNTRY	BASELINE	ACTUAL Year 1	ACTUAL Year 2	ACTUAL Year 3	TARGET Year 4	ACTUAL Year 4	TARGETS Year 5	ACTUALS Year 5
Number of PHC facilities which implement TB-IC system with F-A-S-T elements in line with international recommendations	**Kyrgyzstan**	0	0	45	577	800	775	775	794
	Tajikistan	0	-	-	-	14	14	18	18
Number of TB patient support groups established	**Kazakhstan**	0	0	2	4	4 (0 new)	5 (1 new)	n/a	n/a
	Kyrgyzstan	0	0	2	5	10 (5 new)	12 (7 new)	18 (6 new)	19 (7 new)
	Tajikistan	0	0	16	23	27(4 new)	29 (6 new)	31 (2 new)	33 (4 new)
	Uzbekistan	0	0	0	3	5 (2 new)	5 (2 new)	n/a	n/a
Percentage of sputum smear positive (SS+) cases detected among all pulmonary cases in pilot sites	**Kazakhstan**	27% Almaty oblast 17.7% East-Kazakhstan oblast	45.3% Almaty oblast 30.8% East-Kazakhstan oblast	33.8% Almaty oblast 24.4% East-Kazakhstan oblast	40% Almaty oblast 33% East-Kazakhstan oblast	40% Almaty oblast 33% East-Kazakhstan oblast	34.4% Almaty oblast 27.8% East-Kazakhstan oblast	n/a	n/a
	Kyrgyzstan	41% Chui oblast 51.6% Jalalabad oblast 32.4% Issykkul oblast	47.5% Chui oblast 51.6% Jalalabat oblast 53.6% Issykkul oblast	30.3% Chui oblast 51.5% Jalalabad oblast 43% Issykkul oblast	36.1% Chui oblast 48.8% Jalalabad oblast 49.5% Issykkul oblast	40% Chui oblast 50% Jalalabat oblast 50% Issykkul oblast	36% Chui oblast 48.6% Jalalabat oblast 49.5% Issykkul oblast	40 % Chui oblast 45 % Jalalabat oblast 45 % Issyk-Kul oblast	38.1% Chui oblast 51.5% Jalalabat oblast 54.8% Issyk-Kul
	Tajikistan	28% Dushanbe 37% Vakhdad	28% Dushanbe 37% Vakhdad	40% Dushanbe 52% Vakhdad 83% Khujand	42% Dushanbe 54% Vakhdad 75% Khujand	45% Dushanbe 55% Vakhdad 75% Khujand	50.5% Dushanbe 68 % Vakhdat 73% Khujand	45% Dushanbe 57% Vakhdat 65% Khujand	73% Dushanbe 71% Vakhdat 83% Khujand

PERFORMACE INDICATOR	COUNTRY	BASELINE	ACTUAL Year 1	ACTUAL Year 2	ACTUAL Year 3	TARGET Year 4	ACTUAL Year 4	TARGETS Year 5	ACTUALS Year 5
	Uzbekistan	35% Average for all pilots	42% Average for all pilots	39% Chilanzar district 25% Parkent district 64% Samarkand district	46% Chilanzar district 26% Parkent district 25% Samarkand district	40% Average for all pilots	43% Chilanzar district 35% Parkent district 25% Samarkand district	n/a	n/a
Percentage of labs with acceptable performance for EQA	**Kazakhstan**	36% (out of 31 implemented)	36% (out of 31 implemented)	48% (out of 47 implemented)	50% (out of 67 implemented)	85% Average for all pilots	93.5% (72 out of 77 implemented)	n/a	n/a
	Kyrgyzstan	n/a	n/a	35% (out of 42 implemented)	86% (43 out of 50 implemented)	90% Average for all pilots	79% (63 out of 80 implemented)	80% (97 out of 122 implemented)	77% (94 out of 122 implemented)
	Tajikistan	64% (out of 90 implemented)	80% (out of 80 implemented)	92% (out of 80 implemented)	99% (out of 87 implemented)	93% Average for all pilots	99% (86 out of 87 implemented)	90% (out of 87 implemented)	96% (out of 73 implemented)
	Uzbekistan	n/a	100% (out of 3 implemented)	86% (out of 7 implemented)	93% (out of 123 implemented)	95% Average for all pilots	94% (out of 119 implemented)	n/a	n/a
Number of TB policies/ regulations developed or changed as a result of project contribution/ recommendations	**Kazakhstan**	0	4	5	7	7	5	n/a	n/a
	Kyrgyzstan	0	3	3	8	6	14	3	6
	Tajikistan	0	-	-	8	8	5	1	1
	Uzbekistan	0	0	1	5	2	2	n/a	n/a
	Turkmenistan	0	7	30	5	n/a	n/a	n/a	n/a
Number of TB laboratories implementing >80% of QMS elements	**Kazakhstan**	0	0	0	4	0	0	n/a	n/a
	Kyrgyzstan	0	0	3	2	1	6	7	7
	Tajikistan	0	0	0	8	8	9	14	17

MCH Results

PERFORMACE INDICATOR	COUNTRY*	BASELINE	ACTUAL Year 1	ACTUAL Year 2	ACTUAL Year 3	TARGET Year 4	ACTUAL Year 4	TARGETS Year 5	ACTUALS Year 5
Number of health care workers trained on MCH topics	Kazakhstan	0	0	101	178	200	298	n/a	n/a
	Kyrgyzstan	0	781	1061	932	n/a	n/a	n/a	n/a
	Tajikistan	0	0	1024	1236	1100	1903	400	487
	Turkmenistan	0	620	1143	1112	n/a	n/a	n/a	n/a
Percentage of women screened for preeclampsia during each ANC visit	Kazakhstan	-	85%	98%	98%	98%	98%	n/a	n/a
	Kyrgyzstan	-	8%	10%	43%	n/a	n/a	n/a	n/a
	Tajikistan	-	24.5%	29%	63.1%	65%	60%	65%	88%
	Turkmenistan	-	45%	70%	99%	n/a	n/a	n/a	n/a
Percentage of women receiving key ANC counseling messages	Kazakhstan	-	80%	75%	85%	88%	83%	n/a	n/a
	Kyrgyzstan	-	8%	67%	78%	n/a	n/a	n/a	n/a
	Tajikistan	-	22%	25%	59%	68%	64%	65%	64%
	Turkmenistan	-	35%	70%	85%	n/a	n/a	n/a	n/a
Percentage of deliveries with active management of third stage of labor	Kazakhstan	-	80%	90%	98%	98%	99%	n/a	n/a
	Kyrgyzstan	-	65%	88%	77%	n/a	n/a	n/a	n/a
	Tajikistan	-	46%	51%	97%	97%	97.4%	97%	99%
	Turkmenistan	-	32%	40%	88%	n/a	n/a	n/a	n/a

PERFORMACE INDICATOR	COUNTRY*	BASELINE	ACTUAL Year 1	ACTUAL Year 2	ACTUAL Year 3	TARGET Year 4	ACTUAL Year 4	TARGETS Year 5	ACTUALS Year 5
Percentage of women requiring blood or blood product transfusion	**Kazakhstan**	-	-	2%	0.9%	0.9%	1.3%	n/a	n/a
	Kyrgyzstan	-	2.8%	1.4%	2%	n/a	n/a	n/a	n/a
	Tajikistan	-	6.9%	1.2%	0.08%	0.1%	0	0.5%	0.5%
	Turkmenistan	-	0.02%	0.02%	0.02%	n/a	n/a	n/a	n/a
Number of country-owned MCH evidence-based clinical protocols, standards, or guidelines developed with Quality Project technical support	**Kazakhstan**	0	0	1	1	1	1	n/a	n/a
	Kyrgyzstan	0	0	0	11	n/a	n/a	n/a	n/a
	Tajikistan	0	0	0	0	2	3	2	1
	Turkmenistan	0	0	9	1	n/a	n/a	n/a	n/a
Number of products designed to facilitate monitoring of MCH services (indicator sets, monitoring instruments) developed with Quality Project support	**Kazakhstan**	0	0	1	1	1	1	n/a	n/a
	Kyrgyzstan	0	0	0	0	n/a	n/a	n/a	n/a
	Tajikistan	0	0	0	0	1	1	1	0
	Turkmenistan	0	2	2	12	n/a	n/a	n/a	n/a

FP Results

PERFORMACE INDICATOR	COUNTRY	BASELINE	ACTUAL Year 1	ACTUAL Year 2	ACTUAL Year 3	TARGET Year 4	ACTUAL Year 4	TARGETS Year 5	ACTUALS Year 5
Number of health care workers trained on FP/RH topics	Kazakhstan	0	0	72	72	100	163	n/a	n/a
	Kyrgyzstan	0	114	27	81	70	197	n/a	n/a
	Tajikistan	0	0	549	617	670	537	260	231
	Turkmenistan	0	40	54	163	100	125	n/a	n/a
Number of country-owned FP/RH evidence-based clinical protocols, standards, or guidelines developed with Quality Project technical support	Kazakhstan	0	0	0	0	1	2	n/a	n/a
	Kyrgyzstan	0	0	0	0	1	2	n/a	n/a
	Tajikistan	0	0	0	0	2	1	2	2
	Turkmenistan	0	2	2	3	2	2	n/a	n/a
Number of products designed to facilitate monitoring of FP-RH services (indicator sets, monitoring instruments) developed with Quality Project support	Kazakhstan	0	-	-	-	1	1	n/a	n/a
	Kyrgyzstan	0	-	-	-	-	-	n/a	n/a
	Tajikistan	0	-	-	-	1	0	0	0
	Turkmenistan	0	-	-	-	0	1	0	n/a

OPHT Results

PERFORMACE INDICATOR	COUNTRY	BASELINE	ACTUAL Year 1	ACTUAL Year 2	ACTUAL Year 3	TARGET Year 4	ACTUAL Year 4	TARGETS Year 5	ACTUALS Year 5
Percent of charts in which antibiotics were prescribed according to evidence-based standards on index conditions	**Kazakhstan**	Common Cold: 74% Acute bronchitis:24% Pharyngitis: 55%	-	-	Common Cold: 84% Acute bronchitis: 50% Pharyngitis: 68%	25% relative increase in compliance with standards from baseline	Common cold: 98% Acute bronchitis: 43% Pharyngitis: 78%	targets met in year 4	targets met in year 4
	Kyrgyzstan	Common Cold: 69% Acute bronchitis: 11% Acute diarrhea: 54% Pneumonia: 100% Asthma: 58%	-	-	(Year of baseline data collection)	25% relative increase in compliance with standards from baseline	Common cold: 100% Acute bronchitis: 99% Acute diarrhea: 100% Pneumonia: 100% Asthma: 95%	targets met in year 4	targets met in year 4
	Tajikistan	Common Cold: 14% Acute bronchitis: 6% Acute diarrhea: 21%	-	-	Common cold (PHC): 80% Acute Bronchitis (PHC): 38% Acute diarrhea (PHC): 31%	25% relative increase in compliance with standards from baseline	Common cold: 94% Acute bronchitis: 43% Otitis Medium: 68% Sinusitis – 27%	targets met in year 4	targets met in year 4
	Turkmenistan	Common cold: 2% Acute diarrhea: 4%	-	-	Planned baseline data collection	25% relative increase in compliance with standards from baseline	Common cold: 77% Acute diarrhea: 75%	n/a	n/a
Number of evidence-	**Kazakhstan**	0	-	-	-	1	1	n/a	n/a

PERFORMACE INDICATOR	COUNTRY	BASELINE	ACTUAL Year 1	ACTUAL Year 2	ACTUAL Year 3	TARGET Year 4	ACTUAL Year 4	TARGETS Year 5	ACTUALS Year 5
based clinical guidelines and/or curricula (integrated into national training programs) developed/revised on index conditions for rational antibiotic use	**Kyrgyzstan**	0	-	-	-	5	7	10	10
	Tajikistan	0	-	-	4	5	5	0	0
	Turkmenistan	0	-	-	-	-	-	-	-

ANNEX D: TECHNICAL REPORTS PRODUCED BY THE QUALITY PROJECT

In addition to the countless working documents, such as presentations, forms, curricula, and IEC/BCC materials developed by the Quality Project, the Project produced a total of 38 technical documents analyzing the situation on the ground to allow for improved implementation by both the Project and other partners. These documents have been shared with USAID through the course of the project, and have been uploaded to the USAID Development Experience Clearinghouse (https://dec.usaid.gov/dec/home/Default.aspx).

ARV Forecasting Methodologies for AIDS Centers in Kyrgyzstan, Tajikistan and Kazakhstan	2011
Assessment of ARV Barriers and Adherence Plan in Kyrgyzstan	2011
Assessment of the safety and quality of hospital care for mothers and newborn babies in Tajikistan	2011
Assessment Report for TB Laboratory Quality Management System (QMS) in Tajikistan	2011
Assessment Report Harm Reduction in Kyrgyzstan	2011
Assessment Report LMIS for TB Drug Management in Kazakhstan	2011
Assessment Report on MDR-TB Case Management in Tajikistan pilots	2011
Assessment Report on Perinatal Care in Tajikistan	2011
MDR-TB Linkages Between Inpatient and Outpatient Care Kyrgyzstan, Tajikistan, Uzbekistan	2011
Operational Research Report Analysis of Legal Barriers for NGO on Social Contracting in Kazakhstan	2011
Technical Report HIV Counselling and Testing in Kazakhstan, Kyrgyzstan, Tajikistan	2011
Technical Report Medication Assisted Treatment in Kazakhstan, Kyrgyzstan, Tajikistan	2011
Technical Report Regional PLHIV Capacity Building	2011
Technical Report Warehousing Evaluation in Kyrgyzstan	2011
Technical Report Warehousing in Kyrgyzstan Follow-up	2011
Assessment Report on Quality of Maternal and Neonatal Services in PHC in Turkmenistan	2012
Quality Health Care Project - Rapid Assessment of ARV Procurement in Kazakhstan	2012
TB Consultancy Report for Kazakhstan and Tajikistan	2012
TB Hospital Efficiency in Tajikistan	2012
Technical Report Warehousing in Kyrgyzstan 2nd Follow-up	2012
Progress Report on Implementation TB Lab Quality Management System (QMS) in Kyrgyzstan	2013

Progress Report on Implementation TB Lab Quality Management System (QMS) in Kyrgyzstan	2013
Progress Report on Implementation TB Lab Quality Management System (QMS) in Tajikistan	2013
Quality Health Care Project - TB Consultancy Report Tajikistan -Kyrgyzstan	2013
Review of pilot NGO based voluntary counseling and rapid testing for HIV program in Kyrgystan	2013
TB Consultancy Report for Uzbekistan and Kyrgyzstan	2013
HIV Best Practice Briefer #1 - Quality Project Localities Model	2014
HIV Best Practice Briefer #2 - Quality Project Comprehensive Packages	2014
HIV Best Practice Briefer #3 - Quality Project Community Advisory Boards (CABs)	2014
HIV Best Practice Briefer #4 - Quality Project Procurement and Supply Management and ARVF	2014
HIV Best Practice Briefer #5 - Quality Project Access to Rapid Testing	2014
Quality Health Care Project - TB Consultancy Report for Kyrgyzstan	2014
Technical Report: 1st Year Implementation of HIV Community Advisory Boards in Central Asia	2014
Technical Report: KAP Survey Antibiotics Use in Kyrgyzstan	2014
Technical Report: KAP Survey Antibiotics Use in Kyrgyzstan	2014
Technical Report of TB Patients Survey on Experience and Satisfaction in Kyrgyzstan	2014
Technical Report: TB Patients Survey on Experience and Satisfaction in Kyrgyzstan	2014

ANNEX E: CLINICAL PROTOCOLS/ CLINICAL PRACTICE GUIDELINES DEVELOPED WITH TECHNICAL SUPPORT FROM THE QUALITY PROJECT

Part of the Quality Project's lasting impact in Central Asia will be the many national clinical protocols (CPs) and Clinical Practice Guidelines (CPGs) which were developed with technical assistance from the Project. These CPs and CPGs are evidence-based and all developed with significant participation and ownership from national partners, and will continue to guide clinical practice in Central Asia much beyond the life of the Quality Project.

KZ	• Clinical guidelines for management of XDR TB
KR	• CP on ANC in physiological pregnancy • CP on ANC in multiple pregnancy • CP on ANC in pregnancies complicated by pyelonephritis • Service delivery packages on ANC • CP on placenta previa • CP on placental abruption • CP on antepartum and intrapartum assessment of fetal health • CP on Forceps delivery • CP on Vacuum extractions • CP on Thromboembolism in pregnancy • CP on Shoulder dystocia • CP on preterm delivery • CP on sexually transmitted infections and pregnancy • CP on anemia in pregnancy • CP on thromboembolic diseases of pregnancy • CP on managing post-dates pregnancy • CP on managing Rh conflict in pregnancy • CP on assessment of perinatal risk factors • CP on managing breech presentations • CP on managing miscarriage • CP on managing dysfunctional labor • CP on fever in infants • CP on urinary tract infection in children • CP on pediatric sepsis • CPG on anemia in children • CPG on detection and management of TB for PHC providers • CPG on pediatric TB • CPG on MDR-TB • CPG on TB IC • CP on TB infection control at the PHC level • CP on detection and diagnosis of TB (PHC) • CP on classification and treatment of TB (PHC) • CP on TB in children

	• CP on management of patients with SS+ drug sensitive TB (hospital level) • CPG on syphilis, gonorrhea, and chlamydia • CPG on narcology • CP on narcological support for PHC level • CP on opioid overdose prevention • CPG on Hepatitis A/E • CPG on hepatitis B • CPG on hepatitis C • CP on hepatitis B (for different levels of service delivery) • CP on hepatitis C (for different levels of service delivery) • CP on MAT treatment and integrated services (awaiting approval) • CP on syndromic approach to managing STIs • CP on common cold • CP on acute bronchitis • CP on acute otitis media • CP on acute sinusitis • CP on acute tonsillo-pharyngitis • CP on structured approach to diagnosing and managing cough • CP on cystitis in non-pregnant women • CP on acute pyelonephritis • CP on chronic pyelonephritis • CP on prostatitis • CPG on iron-deficiency anemia • CPG on diagnosis and treatment of primary headache disorders • CPG on upper gastrointestinal bleeding • CPG on management of stroke at the pre-hospital level • CPG on stable angina • CPG on clinical depression • CPG on stroke for hospital level • CPG on Type 2 diabetes mellitus • CPG on dyspepsia • CPG on shock • CPG on community acquired pneumonia • CPG on acute heart failure • CPG on chronic heart failure • CPG on atopic dermatitis • CPG on hepatitis C • CP on MAT treatment and integrated services • CP on MDR TB • CPG on atrial fibrillation • CPG on hospital management of stroke (2nd CPG) • CP on pulmonary hypertension • CP on High altitude pulmonary hypertension • CP on Obstructive sleep apnea • CP on COPD • CP on Asthma • CP on Allergic rhinitis

	• CP on Pulmonary fibrosis • CP on Bronchiectasis • Service delivery package on provision of emergency services at the PHC, pre-hospital, and hospital levels
TJ	• CP on common cold • CP on asthma • CP on COPD • CP on tuberculosis • CP on pneumonia • CP on Acute prostatitis • CP on Chronic prostatitis • CP on Cystitis • CP on Urethritis • CP on Urolithiasis • CP on Pyelonephritis • CP on Glomerulonephritis • CP on Asymptomatic bacteriuria • CP on pelvic inflammatory disease • CP on acute otitis media • CP on external otitis • CP on low back pain • CPG on diagnosis and management of HIV for PHC providers • CPG on TB for PHC providers
TM	• National guidelines on HIV (etiology, clinic, diagnosis, ARV) • Five national HIV CPs • Five MCH/PMTCT protocols • 12 clinical protocols on pediatric conditions • CPG on epidemiological surveillance of cases of leishmaniasis in Turkmenistan • CP on epidemiological surveillance • CP on epizootological surveillance • CP on entomological surveillance • CP on the clinical presentation and diagnosis of leishmaniasis • CP on the treatment of leishmaniasis • Four clinical protocols on management of obstetric emergencies • National guideline on TB infection control