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TB CARE I

Kazakhstan

Year 1

Annual Report

May 1, 2011 – February 29, 2012

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List of Abbreviations

CAR	Central Asian Republics
DOT	Directly Observed Treatment
DR-TB	Drug Resistant Tuberculosis
DST	Drug Susceptibility Test
EKO	East Kazakhstan Oblast
GFATM	Global Fund to fight AIDS, Tuberculosis and Malaria
IC	Infection Control
MDR-TB	Multi-drug resistant Tuberculosis
M&E	Monitoring and Evaluation
MOH	Ministry of Health
MoIA	Ministry of Internal Affairs
MoJ	Ministry of Justice
NCTP	National Center for Tuberculosis Problems
NKO	North Kazakhstan Oblast
NTP	National Tuberculosis Program
OR	Operational Research
OTBD	Oblast Tuberculosis Dispensary
PIH	Partners in Health
SES	Sanitary and Epidemiological Service
SLD	Second Line Drug
SKO	South Kazakhstan Oblast
SOP	Standard operational procedure
TB	Tuberculosis
TB CAP	Tuberculosis Control Assistance Program
USAID	United States Agency for International Development
XDR-TB	Extensively Drug Resistant Tuberculosis

Executive Summary

The USAID supported five-year (2010 -2015) TB CARE I project is implemented in Central Asian countries by KNCV Representative Office in Central Asia. During the first project year, since May 2011, the TB CARE I program has been implemented in three Central Asian countries – Kazakhstan, Kyrgyzstan and Uzbekistan.

TB CARE I is implemented in collaboration with NTP/MoH, the prison system, PIU GFATM, USAID Quality Healthcare and Dialogue on HIV and Tuberculosis projects, and other local and international partners working in TB control in Kazakhstan.

Four oblasts of Kazakhstan have been selected for the implementation of TB CARE I project: East-Kazakhstan (continuation of TB CAP project), North-Kazakhstan, Akmola and South-Kazakhstan. The selection was determined by the fact that four out of seven TB prisons are located in these four regions.

In Year 1 the TB CARE I program worked in eight technical areas:

1. Universal Access
2. Laboratories
3. Infection control
4. Programmatic Management of Drug Resistant TB
5. TB HIV
6. Health system strengthening
7. Monitoring & Evaluation, Surveillance and OR
8. Drug supply management

Below is the summary of major achievements and challenges by technical areas:

Laboratory:

Key achievements:

- GeneXpert MTB/Rif implementation plan was developed by the Xpert Coordination Working Group (Xpert CWG) with technical assistance from PMUs Technical Officer Manuela Rehr. Diagnostic algorithm and clinical protocols were adjusted for the use in pilot sites. TB CARE I also developed recording and reporting forms for GeneXpert MTB/Rif. Draft MoU on implementation of Xpert in Kazakhstan was developed and will be signed with NTP to ensure their responsibility in utilization of GeneXpert MTB/Rif machines and their maintenance, as well as provision of adequate treatment for detected TB and MDR TB cases.
- All preparations for the procurement of four GeneXpert MTB/Rif machines have been already made. The machines and cartridges will be shipped to Kazakhstan APA2.

Infection control:

Key achievements:

- TB CARE I established a thematic working group on TB-IC. TB CARE I provided technical assistance (via Vlad Furman, Regional TB-IC consultant) in the development of national TB-IC guideline and the TB-IC assessment tool. TA was also provided in the development of the national TB-IC plan that was submitted to the MoH for approval.

PMDT:

Key achievements:

- Senior KNCV PMDT consultant and TB CARE I Regional Technical Officer conducted PMDT assessments in four project sites. Results of the assessments were used for the development of PMDT plans.
- PMDT action plans were developed and submitted to the oblast healthcare authorities for approval. The action plans have been approved and signed in NKO, SKO and Akmola oblasts. PMDT plan has been submitted to local administration of EKO and is under approval.
- TB CARE I drafted PMDT protocols in accordance with the latest WHO recommendations. Protocols will be a part of the revised National Guideline on PMDT.

TB-HIV:

Key achievements:

- TB CARE I staff provided technical assistance for the revision of TB-HIV national policy. National TB-HIV order was updated in line with the latest WHO recommendations. The national TB-HIV plan for the period 2012-2013 was developed based on the National Program Salamaty Kazakhstan for 2011-2015. The national order and the Plan on TB-HIV were submitted to the MoH for approval.

HSS:

Key achievements:

- Establishment of patient support system was initiated in SKO and NKO during one-day meetings conducted by the Regional Technical Officer. As a result, preliminary agreement was reached to establish a multi-disciplinary working group on the development of patient support system under Oblasts Akimats (local governments).
- Psychosocial support was provided by patient support groups to 243 TB/MDR-TB patients in East Kazakhstan oblast. There are no treatment defaults reported up to date.
- A tool for assessment of social support was revised and sent to new project sites (Akmola, NKO and SKO) to collect information about situation with provision of social support, current needs, available funding and legal basis. The findings will be used for the development of patient-centered support programs in project sites.

M&E:

Key achievements:

- 106 specialists responsible for data collection, recording and reporting from prison and civil TB services of four project sites (oblast and rayon levels) have been trained in data management and analysis during one-day workshops and on the job trainings conducted during monitoring visits. The training covered all concerned specialists involved in data management.
- TB CARE I revised the recording and reporting forms (laboratory and drug management parts) and developed an algorithm for reporting system for electronic surveillance.

Drug management:

Key achievements:

- A three-day training was conducted by the National TB Drugs Coordinator and an international consultant for specialists responsible for forecasting TB drug needs in four project sites from both civil and prison TB services, to improve their skills in forecasting the procurement for first line and second line drugs.

Table 1: Completion of TB CARE I Technical areas

Technical Areas	% Completion
1. Universal and Early Access	78%
2. Laboratories	70%
3. Infection Control	88%
4. PMDT	89%
5. TB/HIV	100%
6. Health Systems Strengthening	86%
7. M&E, OR and Surveillance	75%

8. Drug supply and management	100%
Overall work plan completion	86%

Below is the summary of baseline data for TB CARE I indicators that are used to measure TB CARE I's contribution to the targets:

TA laboratories:

1. Developed National laboratory strategic plan.
 - National Laboratory plan is close to being finalized and will be submitted to NTP in March. The development of the National Laboratory Plan has been delayed as it took additional time to incorporate the Xpert implementation plan in the National Laboratory plan.

TA PMDT:

1. MDR TB cases put on treatment (number and percentage of diagnosed MDR TB cases).
 - Coverage with SLD treatment in civil sector increased in Akmola province from 62,3% to 72,0%, in NKO from 68% to 67,5%. This indicator decreased in SKO from 80,9% to 42,0%, in EKO from 64,8% to 52,1% due to wrong estimation of SLDs needs.
 - Coverage of SLD treatment in prison sector increased only in Akmola oblast from 77,8% to 82,0%.
2. Number of children put on MDR TB treatment in accordance with international guidelines (number and percentage out of all children diagnosed with MDRTB) disaggregated by oblasts.
 - Detection of MDR TB in children is the priority and is at 100%.

TA TB/HIV:

1. The country has a national plan on TB/HIV collaborative activities in line with WHO standards.
 - Country has a national plan on TB/HIV collaborative activities and an updated Order on Strengthening TB-HIV collaborative activities in line with the latest WHO recommendations.
2. People living with HIV, screened for TB in HIV care settings (VCT, ANC, PMTCT, MCNH and ART clinics) (number and percent).
 - 75% out of targeted 95% were achieved in all project sites.

TA HSS:

1. Number of local trainers trained.
 - 12 trainers have been trained.
2. Default rate among TB patients.
 - Default rates in three project sites were decreased. Default rates among MDR-TB patients increased in SKO from 6,4% to 6,6% and default rates among TB patients increased in EKO from 4,3% to 4,8%. It is explained by a small number of patients taken on treatment where individual defaults can account for large changes in % proportions.

TA M&E:

1. Reporting units at all levels of data flow submitting timely reports according to national guidelines (number and percentage).
 - Reporting units at all levels of data flow submitting timely reports according to national guidelines is at 100%.
2. Feedback from systematic analysis of surveillance and programmatic data and related recommendations provided by central to lower levels.
 - Feedback from systematic analysis of surveillance and programmatic data and related recommendations provided by central to lower levels increased from 0% to 50%.

TA Drug supply and management:

1. Number of oblast with quarterly oblast stock information available for both first and second line drugs.
 - Number of oblast with quarterly oblast stock information available for both first and second line drugs is in all 4 project sites.

Introduction

In Kazakhstan, TB CARE I project is implemented by KNCV Representative Office for Central Asia in four out of 14 oblasts of Kazakhstan – Eastern Kazakhstan, Northern Kazakhstan, Southern Kazakhstan and Akmola oblasts, with some interventions at the national level. KNCV has a Regional Representative Office based in Almaty, Kazakhstan.

In Year 1 TB CARE I worked in eight technical areas in the following scope:

Universal and Early Access: under this technical area TB CARE I project focused on improvement of TB control in prisons, securing commitment to TB control in migrants, and introduction of international recommendations on childhood TB.

Laboratories: technical assistance was provided for the development of National Laboratory Plan, Laboratory Maintenance Guide and SOPs, and implementation of new diagnostic tool (Xpert MTB/Rif).

Infection control: TB CARE I provided technical support for the development of national TB-IC plan and National Guideline based on the results of TB-IC assessment. TB CARE I also contributed to the development of TB-IC capacities in local engineering companies.

PMDT: TB CARE I focused on the development of PMDT plans, revision of clinical protocols and development of training curricula on management of (X)MDRTB including management of (X)MDRTB in children.

TB/HIV: technical assistance was provided for the revision of TB-HIV policy, including the National Order, National Plan and the TB/HIV Guideline).

Health Systems Strengthening: TB CARE I project contributed to strengthening local capacity in strategic planning and training on different aspects of TB control. Under this technical area, the project also focused on the development of patient support system in new project sites replicating the experience of Eastern Kazakhstan oblast, and supporting further institutionalization of patient support system in Eastern Kazakhstan.

M&E, OR and Surveillance: TB CARE I focused on the improvement of surveillance and monitoring systems in project sites, including prison system and designing protocol for operational research on the effectiveness of patient support system in East Kazakhstan oblast.

Drug supply and management: the main focus of TB CARE I was to improve local capacity in project sites to forecast the demand for first and second line drugs.

TB CARE I assistance was made possible through existing technical working groups, involvement of specialists from civil and prison TB services, SES and HIV/AIDS services. For specific technical assistance, the project involved international consultants and experts (KNCV HQ, WHO Europe, Latvian WHO Collaborative Center, and other international consultants). TB CARE I activities were implemented in close collaboration with NTP, Prison Service, GFATM project and other USAID projects (Quality healthcare and Dialogue on HIV and TB).

Universal Access

Technical Outcomes

Expected Outcomes	Outcome Indicators	Indicator Definition	Baseline	Target	Result	Comments
				Y1	Y1	
1	Improved TB control in prisons	Bacteriologically confirmed TB cases in prisons reported to NTP	Bacteriologically confirmed TB cases reported in prisons in project sites (indicator for case detection), disaggregated by culture and DST results (indicator for access to bacteriological examinations in prison)	<p>Case detection: South Kazakhstan (SKO) - 64,2% North Kazakhstan (NKO) - 27% Akmolinska ya (Akm) - 37,2% East Kazakhstan (EKO) - 27,2%</p> <p>Culture coverage: SKO - 61% NKO - 62% Akm - 0% EKO - 68,2%</p> <p>DST coverage: SKO - 100% NKO - 100% Akm - 0% EKO - 100%</p>	<p>Case detection: SKO - 57,8% NKO - 28% Akm - 43,8% EKO - 24,7%</p> <p>Culture coverage: SKO - 90% NKO - 75% Akm - 54% EKO - 70,7%</p> <p>DST coverage: SKO - 100% NKO - 100% Akm - 100% EKO - 100%</p>	Data received from official report of prison system. Data changes are not attributed to TB CARE I activities since implementation of project activities was postponed because of transfer from the MoJ to the MoIA.
2	Strengthened TB control in migrants	TB cases in migrants reported to NTP among the total number of TB patients	TB cases in migrants reported to NTP among the total number of TB patients	<p>Akm - 3,3% SKO - 2,1%</p> <p>0,2% 0,2%</p>	<p>Akm - 1,1% SKO - 1,5% NKO - 0,6% EKO - 4,0%</p>	Implementation of activities was postponed until approval by USAID mission the TB CARE I strategy on TB in migrants

3	International standards on TB management in children introduced in country	Number of childhood TB cases	Number of childhood TB cases disaggregated by active (contact, risk group examination) and passive case finding	Active: Akm - 22 (58,3%) SKO - 35 (51,7%) NKO - 14 (80%) EKO - 59 (69,7%) Passive: Akm - 11 (41,7%) SKO - 46 (48,3%) NKO - 5 (20%) EKO - 24 (30,4%)	Active: Akm - 20 (64,5%) SKO - 41 (51,9%) NKO - 14 (77,8%) EKO - 60 (72,3%) Passive: Akm - 11 (35,5%) SKO - 38 (48,1%) NKO - 4 (22,2%) EKO - 23 (27,7%)	Clinical protocols on childhood (MDR)TB were drafted and will be finalized in May.
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Key Achievements

- TB CARE I facilitated the development of joint PMDT plans between the civilian and prison TB services that address utilization of new rapid diagnostic tests and uninterrupted treatment.
- TB CARE secured commitment of the MoH and NTP to address TB in migrants.
- TB CARE I strengthened local capacity in childhood TB management in line with international standards by training four childhood TB specialists at the WHO Collaborative Training Center in Latvia. Also, a chapter on childhood TB of the national guideline was developed in accordance with international recommendations.

Challenges:

- Implementation of prison activities was delayed due to the transfer of Prison Service from MOJ to MoIA in the summer of 2011, resulting in the need to secure a new agreement with MoIA. TB CARE submitted required paperwork to gain access to prisons to MoIA and currently awaits MoIA's response.

Next Steps

- KNCV Representative Office expects to receive the official confirmation from the MoIA on continuation of collaboration with prison system.

Laboratories

Technical Outcomes

Expected Outcomes	Outcome Indicators	Indicator Definition	Baseline	Target	Result	Comments
				Y1	Y1	
1 Laboratory strategic planning capacity improved	Developed National laboratory strategic plan	National laboratory strategic plan is developed Yes/No	No		No	National Laboratory plan is close to being drafted and will be submitted to NTP in March. There were long discussions with NTP on algorithm of Xpert MTB/RIF implementation in Kazakhstan, which is a part of National Lab Plan.
2 Management of laboratory services improved	Number of laboratories that have updated laboratory SOPs in line with WHO standards (number and percent)	Number of culture laboratories that have SOPs in line with WHO standards out of total number of culture laboratories in project sites (number and percent)	0		0	Oblast laboratory specialists will test adapted maintenance SOPs in APA2 since each laboratory has own specifics. After testing, SOPs will be approved by the NTP.
3 TB diagnostic capability enhanced through introduction of new diagnostic tools	TB patients diagnosed by GeneExpert (number and percent)	TB patients diagnosed by GenExpert in project sites (number and percent out of all TB patients in project sites) disaggregated by TB/MDR TB	0		0	Procurement of Xpert machines to the country is postponed until the end of March 2012 due to extended holiday period. Xpert MTB/RIF machines will be put in use after the trainings.

Key Achievements

- TB CARE I facilitated the development of a draft National Laboratory Plan, Implementation Plan, GeneXpert protocol, as well as lab and diagnostic algorithms by the team of laboratory specialists from NRL, Akmolra and EKO project sites, department of laboratory diagnosis of State Medical University, USAID Healthcare Quality project and CDC. It is expected to submit this plan to NTP for approval in March of 2012 and adopt in APA2.
- Five day supportive supervision visits were conducted by the Regional Laboratory Officer in South Kazakhstan, North Kazakhstan, and four day visits were conducted in East Kazakhstan

and Akmola oblasts. As a result of these assessment missions, sites for Xpert MTB/RIF implementation were selected.

Challenges

- Import of four GeneXpert machines was delayed due to ongoing field assessment and preparation of sites. It is planned to import the machines in APA2.

Next Steps

- TB CARE I expects to secure the approval from NTP on the National Laboratory Plan.

Infection Control

Technical Outcomes

	Expected Outcomes	Outcome Indicators	Indicator Definition	Baseline	Target	Result	Comments
					Y1	Y1	
1	Introduce and scaled-up of minimum package of IC interventions in key facilities in project sites	Ratio of TB notification rate in health care staff	Ratio of TB notification rate in health care staff over the TB notification rate in general population, adjusted by age and sex in project sites	310,1 by 100 000 health care staff		306,1 by 100 000 health care staff	TB IC guideline and adapted toolkit are finalized and will be presented at the NTP level in APA2.
2	Developed local capacity on TB IC	Key facilities with a designated TB IC focal person in each project site including prison sector (number and percent)	Key facilities with a designated TB IC focal person in each project site including prison sector (number and percent) disaggregated by prison and civil sector	Local engineers trained in TB-IC - 0	5	4	It was planned to send 5 engineers for training but only four participated in trainings. Trained engineers will be involved in the development and facilitation of training on TB-IC.

Key Achievements

- TB CARE I facilitated the establishment of a thematic working group on TB-IC under the National TB Center. National TB-IC plan and Guideline were drafted by established thematic working group with technical assistance of Vlad Furman, Regional TB-IC consultant.
- TB CARE project contributed to the development of TB-IC capacities among local engineers. Three engineers from selected ventilation companies have been identified and trained in TB-IC in Vladimir, together with the National TB-IC Coordinator. MoU on collaboration and use of services of trained engineers was signed between NTP, engineering companies and KNCV.

Programmatic Management of Drug Resistant TB (PMDT)

Technical Outcomes

	Expected Outcomes	Outcome Indicators	Indicator Definition	Baseline	Target	Result	Comments
					Y1	Y1	
1	PMDT scale up in civilian and prison sectors	MDR TB cases put on treatment (number and percentage of diagnosed MDR TB cases)	Number and % of lab-confirmed MDR-TB patients enrolled on 2nd-line anti-TB treatment among all lab-confirmed MDR-TB cases during reporting period in project sites disaggregated by civil and prison sector	Civil Akm - 324 (62,3%) SKO - 470 (80,9%) NKO - 285 (58%) EKO - 473 (64,8%) Prison: Akm - 28 (77,8%) NKO - 27 (42%) SKO - 28 (33%) EKO - 30 (22%)	85% in 2015	Civil, whole country - 5311 (72%) Akm - 351 (94,9%) SKO - 227 (42,0%) NKO - 276 (67,5%) EKO - 319 (52,1%) Prison, whole country - 128 (29,9%) Akm - 26 (82,0%) NKO - 23 (44%) SKO - 23 (30%) EKO - 28 (22,0%)	PMDT protocols will be finalized in May after the NTP shall update the national TB/MDRTB order, to make sure they are consistent with the national order. Occasional drops in MDR patients on treatment are attributed to the temporary lack of drugs due to poorly estimated drug demand.
2	Improved X/MDR TB management in children	Number of children put on MDR TB treatment in accordance with international guidelines (number and percentage out of all children diagnosed with MDRTB)	Number of children put on MDR TB treatment in accordance with international guidelines (number and percentage out of all children diagnosed with MDRTB) disaggregated by oblasts	Akm - 2 (100%) SKO - 1 (100%) NKO - 1 (100%) EKO - 2 (100%)		Akm - 4 (100%) SKO - 4 (100%) NKO - 3 (100%) EKO - 2 (100%)	Draft protocol on TB in children will be finalized after the update of national order and guideline in APA2.

Key Achievements

- PMDT action plans developed and approved by oblast healthcare authorities in SKO, NKO and Akmola oblast.
- PMDT protocols are being finalized in accordance with the latest WHO recommendations.
- PMDT training curricula was developed and finalized.
- Four specialists on childhood TB from project sites (Akmola, East Kazakhstan, South Kazakhstan and North Kazakhstan) trained in Riga participated in two workshops on PMDT action plans and clinical protocols in September. The design of protocols on childhood TB has been discussed and agreed.
- Protocols on X/MDRTB in children were drafted and will be finalized within APA2.

Challenges

- National policies provide insufficient guidance on TB in children. TB CARE is providing TA in developing a protocol on TB in children to be introduced countrywide in APA2, including in project regions, with the assistance of the NTP team.

Next Steps

- PMDT protocols will be finalized in May after the NTP shall update the national TB/MDRTB order, to make sure they are consistent with the national order.
- Development of protocols on childhood TB will be finalized in May.

TB/HIV

Technical Outcomes

Expected Outcomes		Outcome Indicators	Indicator Definition	Baseline	Target Y1	Result Y1	Comments
1	Increased demand for TB/HIV activities	Country has a National strategic plan on TB/HIV collaborative activities in line with WHO standards	National strategic plan on TB/HIV collaborative activities is in line with WHO standards and available in country (yes/no)	No		1	Final order and national plan on TB-HIV will be submitted to MoH for approval in April of 2012.
2	Increased number of TB and HIV patients that are receiving care and treatment	People living with HIV, screened for TB in HIV care settings (VCT, ANC, PMTCT, MCNH and ART clinics) (number and percent)	People living with HIV, screened for TB in HIV care settings (VCT, ANC, PMTCT, MCNH and ART clinics) (number and percent) in project sites	75%	95%	75%	TB CARE I plans to implement TB/HIV activities under APA2 after the existing national order on TB/HIV will be revised and adopted. The new order will specify how various care providers will ensure a coordinated provision of care

Key Achievements

- The Order and National Plan on TB-HIV were finalized and will be presented to MOH in April of 2012.
- TB-HIV National Order has been updated in line with the latest WHO recommendations following recently revised National TB-HIV policy documents.

Challenges:

- National policies on TB/HIV were outdated (2009) and did not meet current international standards. TB CARE provided technical assistance in the development of National HIV/TB Plan and relevant MOH Order that include joint activities and division of responsibilities between different health services, such as TB, HIV, SES, PHC and Narcology services in TB/HIV prevention and care.

Next Steps

- At the TWG meeting in February 2012, NTP and AIDS services requested TA to develop algorithm on TB diagnostic among people living with HIV. The draft of the document is being developed by a technical group with involvement of TB-HIV coordinators at national and city levels from TB, HIV and SES services.

Health System Strengthening (HSS)

Technical Outcomes

Expected Outcomes	Outcome Indicators	Indicator Definition	Baseline	Target	Result	Comments	
				Y1	Y1		
2	Improved local human resource capacity	Number of local trainers trained	Number local trainers trained in each project site	12		12 (all females)	
2	Improved patient adherence to treatment	Default rate among TB patients	Default rate among TB patients in project sites disaggregated by TB and MDR TB	Sens TB Akm - 1,8% SKO - 3.7% NKO - 2,4% EKO - 4,3% MDR TB Akm - 0% SKO - 6,4% NKO - 3,6% EKO - 4,7%		Sens TB Akm - 1,1% SKO - 2.3% NKO - 1,2% EKO - 4.8% MDR TB Akm - 0% SKO - 6,6% NKO - 3,5% EKO - 4,6%	Information on social support in new project sites will be collected and analyzed in APA2.

Key Achievements

- Recommendations on the establishment of e-library in Russian and English languages at NTP were prepared by an HR consultant. Recommendations for creating an e-library were translated into Russian and sent to NTP for consideration.
- A tool for monitoring patient support activities has been developed, tested in East Kazakhstan oblast, and finalized. This tool will be presented for the use by NTP.
- Another tool for assessment of social support was sent to new project sites (Akmola, NKO and SKO) for gathering detailed feedback about social support provision, needs, available funding, and legal implications. This tool will be used by the project to develop customized social support programs in select sites.
- Psychosocial support was provided by patient support groups to 243 TB/MDR-TB patients in East Kazakhstan oblast on a monthly basis. There are no defaulters among beneficiaries of the project.
- Two round tables were conducted on patients support issues with representatives of TB services, social departments, health care departments, local governments and other local partners in two new project sites (South Kazakhstan and North Kazakhstan oblasts). An agreement was achieved with key partners (oblast government, TB service, prison system, Department of Social Affairs, Department of Labor, migration police and others) to establish oblast working group on the development of patient support system in two new project sites - North Kazakhstan and South Kazakhstan. Detailed information on social support in new project sites provided by governments and other partners was collected and analyzed.

Next Steps

- Continuation of work on institutionalization of patients support system in East Kazakhstan
- Establishment of working groups on the development of patients' support system in new project sites (Akmola, SKO, NKO).
- Collection and analysis of information on social support in new project sites.
- Replication of experience of East Kazakhstan on patient support in new project sites.

Monitoring & Evaluation, Surveillance and OR

Technical Outcomes

	Expected Outcomes	Outcome Indicators	Indicator Definition	Baseline	Target	Result	Comments
					Y1	Y1	
1	Improved surveillance system (including MDR TB and TB/HIV)	1)Reporting units at all levels of data flow submitting timely reports according to national guidelines (number and percentage) 2)Feedback from systematic analysis of surveillance and programmatic data and related recommendations provided by central to lower levels	1)Reporting units at all levels of data flow in project sites submitting timely reports according to national guidelines (number and percentage) 2)Reporting units that have received feedback from central level (number and	1) 4 (100%) 2) 0 (0%)		1) 4 (100%) 2) 2 (50%)	Finalization of recording and reporting forms.

			percentage)				
2	Strengthened local capacities on OR	Operations research studies completed & results disseminated (number)	Number of operations research studies completed & results disseminated	0		0	Finalization of OR protocol on effectiveness of patient support in EKO in September 2013.

Key Achievements

- Supportive supervision visits have been conducted to four project sites to assess the surveillance system. On-the-job trainings were delivered for 106 specialists responsible for data entry, data analysis and reporting.
- A working group from NTP and international organizations was established.
- Recording and reporting forms (laboratory and drug management parts) have been revised and algorithm of reporting system for electronic surveillance has been developed.
- A two-day workshop on the development of National TB research agenda for the period of 2012 - 2015 was conducted in September 2011. During the workshop, the basics for the national research agenda and a list of potential ORs have been developed. 15 people (4 males, 11 females) from NTP, four project sites, SES, NAP and partner organizations participated in the workshop.

Next Steps

- Finalization of OR protocol on effectiveness of patient support in EKO.

Drug supply and management

Technical Outcomes

	Expected Outcomes	Outcome Indicators	Indicator Definition	Baseline	Target	Result	Comments
					Y1	Y1	
1	Improved drug management in project sites	Number of oblast with quarterly oblast stock information available for both first and second line drugs	Number of oblast in TB CARE I project sites with quarterly oblast stock information available (both for first and second line drugs)/total number of oblasts in project sites	4	4	4	

Key Achievements

- A two-day training on practical skills in forecasting TB drugs needs for oblast drug management coordinators from four project sites (Akmola, EKO, NKO, SKO) was conducted by

Anastasia Samoilova, Drug Management Consultant and NTP National Coordinator on November 24-25 for civil and prison sectors.

- TB CARE I consultant developed a forecasting tool for calculation of needs in first and second line drugs. The tool was further adapted to Kazakhstan regulations during a drug management training in October of 2011.