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## Ukraine Tuberculosis Control Partnership Project

IQC TASC 2 –  
Contract Number GHS-I-00-03-00034-00

Year IV Annual Report  
(October 1, 2010–September 30, 2011)

**Submitted to:**

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## **Introduction and key achievements**

PATH continues to implement the Tuberculosis (TB) Control Partnership Project in Ukraine under the USAID IQC TASC 2 contract GHS-I-00-00034-00, Delivery Order Three, started in October 2007. PATH provides support to Ukraine for improving the quality of TB services in ten administrative territories of Ukraine—seven regions (oblasts): Khersonska, Zaporizhska, Dnipropetrovska, Donetska, Odeska, Luganska, Kharkivska, and the Autonomous Republic of Crimea; and two cities, Kyiv and Sevastopol. To ensure sustainability of effective TB-control interventions at national and regional levels, the project seeks to enable the Government of Ukraine (GOU) to make critical, technically sound policy and program decisions to improve TB and TB/HIV control in accordance with the WHO-recommended STOP-TB strategy and international TB control standards and best practices.

Under this contract, Year Four (October 1, 2010 to September 30, 2011, with an approved extension to March 31, 2011) is the final project year. This report covers the project's progress and achievements during the project Year Four. During this period, the project continued to expand and improve the quality of basic DOTS TB-control services, with the aim of achieving the project's objective of making high-quality TB services available to the entire population in the target regions. The project has also intensified efforts to assist the GOU in building adequate capacity of the TB control system to address the growing burdens of multi-drug resistant TB (MDR-TB), extensively resistant TB (XDR-TB), and TB/HIV co-infection as part of up-to-date TB case management through training and technical assistance. In addition, the project continues to help Ukraine's civil society groups active in the TB and TB/HIV domains to bolster the establishment of GOU-civil society partnerships in monitoring and evaluating the implementation of the National TB Control Plan for 2007–2011.

### **DOTS Expansion**

PATH has approached completion of the bulk of the training and is moving toward monitoring activities and technical assistance to sustain quality improvement of TB services. Particular attention in Year IV has been paid to strengthening monitoring and evaluation activities as an essential part of TB control that enables Ukrainian specialists to analyze TB diagnosis and treatment outcomes in the project target regions. A wide range of on-site monitoring visits at oblast, rayon, and city levels were conducted by both oblast TB dispensaries and PATH staff. These visits were followed by review meetings in each project region, which were used to discuss the findings of monitoring visits and to identify key barriers and other issues needing action. Based on monitoring visit results, cohort analysis data, and laboratory data and other information, a series of general review meetings was conducted so that all involved stakeholders were engaged in the analysis of findings and in developing recommendations for program improvement in the oblasts. These review meetings also included a comprehensive analysis of the challenges and gaps, as well as positive lessons learned, a summary of which was then disseminated to each relevant oblast. At the same time, the enhanced focus on monitoring and evaluation allows for summarizing project results, assessing overall project progress as well as understanding the problems and challenges encountered during the project execution for learning and lesson sharing.

In the Year Four, PATH analyzed the experience gained during project implementation and focused its work on disseminating information about best practices, in particular in the MDR-TB and infection control, and on advocacy for TB/HIV collaborative activities that have proven to be effective.

### **Laboratory Services**

PATH is pleased to report that according to the results of the supervision, the national partners at the regional level have demonstrated adequate capacity for sustaining many aspects of the TB laboratory work that was previously supported by the project. Specifically, they have assumed full responsibility for on-the-job training, external quality control of smear microscopy and overall monitoring of the work.

### **Infection Control**

International recommendations for TB infection control and the newest national infection control guiding documents (“IC Standard”) aimed at improving infection control practices for TB control in Ukraine were presented at the national conference “Tuberculosis Infection Control in Healthcare Facilities” that was held on June 14–15, in Kyiv. The conference was organized within the PATH USAID TB Control Partnership Project in Ukraine in collaboration with the Ministry of Health (MOH) of Ukraine, Committee on HIV and Other Socially Dangerous Diseases, WHO, and the National Institute of Phthisiology and Pulmonology named after F. Yanovskyi.

### **MDR/XDR TB**

This approach was presented at the national conference on multi-drug resistant tuberculosis (MDR TB) diagnosis and treatment that was held on May 12, 2011 in Kyiv and was organized by the USAID TB Control Partnership Project in Ukraine in collaboration with the Ministry of Health of Ukraine, the World Health Organization, the National Institute of Phthisiology and Pulmonology named after F. Yanovskyi, and the State Department of Ukraine on HIV Infection and Other Socially Dangerous Diseases.

The day after the National Conference on MDR TB an ad-hoc meeting of project partners was conducted in which 37 representatives of TB services from project sites took part. The meeting was devoted to the experience of the regional Consultation Councils on MDR TB in providing adequate TB treatment to MDR and XDR TB patients according to the international anti-TB practices. Each project region presented their achievements, innovations, challenges, and suggested solutions. Participants reported that this meeting was very useful because of the possibility of the peer experience exchange and highlight the common challenges and consider lessons learned by the neighboring oblast to resolve particular issues.

### **TB/HIV Program Collaboration**

In the Year 4, PATH analyzed the experience gained during project implementation and focused its work on disseminating information about best practices and on advocacy for TB/HIV collaborative activities that have proven to be effective. This approach was presented at the “Current issues in TB/HIV co-infection control” conference convened by PATH March 29 to 30 in collaboration with the National Medical University, the National Center for Prevention and Control of AIDS, and the State Department of Ukraine on HIV infection and other Socially Dangerous Diseases.

To ensure the sustainability of implementing client-centered international approaches to TB/HIV case management, PATH provided technical assistance to the National Center for Prevention and Control of AIDS in developing a new decree on TB/HIV collaborative program and case management. This draft decree has been uploaded to the website of the State Department of Ukraine on HIV-infection and other Socially Dangerous Diseases for public discussion. PATH provided technical assistance to revise the draft of the decree. The revised document is now under the formal approval by the MOH.

During the reporting period, PATH provided on-going support to strengthen the monitoring and evaluation system of TB/HIV coinfection at the regional level. A plan of monitoring and supervisory visits with following on-site review meetings was developed in all Project oblasts. According to this plan, monitoring visits should be conducted jointly by oblast TB and HIV specialists who would then develop and present rayon-specific recommendations at a review meeting for specialists of a given rayon. This practice effectively addresses the need for integration of TB and HIV services at the rayon level, providing better opportunities for HIV-positive individuals to get referred and access high-quality medical care at the rayon level.

### **TB and TB/HIV Case Detection through NGOs**

Also during this quarter, PATH continued to implement efficient mechanisms for TB symptom screening, referral, and treatment support through local HIV service organizations and other groups affiliated with the All-Ukrainian Network of People Living with HIV (DIP 3, activity 3.9). In August 2010, PATH approved work plan for the Ukrainian Coalition of HIV-services organizations (“the Coalition”), developed for period from September, 1 2010 to September, 1 2011. PATH staff provided technical assistance to the Coalition to select local NGOs for implementation of TB/HIV projects, training of NGO staff, and monitoring and evaluation of project implementation. Final reports were received from the Coalition and from the selected NGOs, and the results achieved indicate that the proposed approach of using local NGOs to identify and refer TB suspects among vulnerable population who have very limited access and willingness to seek health care in the health facilities first of all, because of stigma, as well as provide treatment support to those diagnosed, is highly effective. Specifically, over the subcontract project period, since February to August 2011, a total of 10 local NGOs in Dnepropetrovska, Zaporizhska, and Kharkivska oblasts, as well as in AR Crimea, and Kyiv City, conducted TB counseling for 2,058 clients. Of these, 1,675 clients (81%) were directed to medical facilities for TB diagnostic testing. Of those referred, 1,189 clients (71%) were tested for TB, and 308 TB cases (26% of those tested, or 15% of total counseled) were detected and directed for treatment to TB facilities. Nearly all (305) started treatment.

### **Support for Treatment Adherence**

PATH also supported TB treatment adherence activities in the project oblasts, which are largely implemented by Ukrainian Red Cross Society (URCS) nurses, volunteers, and community-based organizations (CBOs) to ensure continuum-of-care and treatment adherence and completion among TB patients during the outpatient treatment in AR Crimea, Dnipropetrovska, Donetska, Zaporizhska, Luganska, Odeska, Kharkivska, Khersonska oblasts and in Kyiv and Sevastopol cities. In addition, PATH worked with these groups to develop an approach to ensure continuum-of-care and treatment adherence among released prisoners in Khersonska, Dnipropetrovska, and Zaporizhska Oblasts (DIP Year 4, activities 1.16 and 1.17). A key objective of the project has

been to sustain a system of supporting TB patients, who have various social problems, during the outpatient treatment stage using the existing network of Red Cross visiting nurses. The approaches developed under the project are now also being implemented under Ukraine’s Round Nine Global Fund grant.

### Treatment Outcomes

As shown in Table 1, surveillance data of drug resistance reveal a significant number of patients with MDR-TB in project oblasts. Fourteen percent of new TB cases are resistant to isoniazid and rifampicin, while seven percent of new TB cases have resistance to a combination of rifampicin and other TB drugs, which, in many cases, suggests unrevealed resistance to isoniazid. This has led to an increased number of treatment failures.

The number of TB patients with HIV co-infection is increasing as well. TB/HIV co-infected patients should receive ARV therapy along with TB treatment according to WHO recommendations. In Ukraine, these recommendations are not yet being implemented and were also not implemented in 2010 due to stock-outs of ARV and in 2011 also TB drugs. As a result, treatment outcomes were negatively affected as not all TB/HIV co-infected patients received adequate ARV and TB therapy.

According to the WHO draft report, “Review of the National Tuberculosis Program in Ukraine,” and information obtained from the PATH team monitoring visits, oblast facilities continued reporting stock-outs of ethambutol, rifampicin, and streptomycin, as well as second-line drugs. Patients and some of the providers interviewed reported interruptions in treatment lasting weeks. State Services for HIV and other Social Diseases reported successful national tender took place in August and expected supply of drugs should be distributed over the country in October – November.

All obstacles described above resulted in a worsening of treatment outcomes. For example, treatment outcome data for patients registered on treatment in 2009 show declining treatment success rates accompanied by increases in treatment failure rates.

**Table 1. TB Treatment Outcomes in Project’s Target Areas (2006–2009 cohorts)**

	Treatment success, %				Died, %				Failure, %				Default, %				Transferred, %			
	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
AR Crimea	70.4	62.4	71.3	59.4	9.4	9.7	8.8	15.3	9.8	14.2	11.6	15.8	5.9	8.2	5.3	6.7	4.5	5.5	3	2.7
Dnipropetrovska	49.9	51.5	53	51.0	13.9	16.9	14.1	16.8	16.5	12.1	14.3	18.9	13.9	12.6	12.8	10.0	5.6	6.9	5.8	3.5
Donetska	58.4	58	55.5	51.9	16.2	17.4	18.4	16.8	9.3	8.2	12	22.8	11.7	9.9	6.2	5.3	4.5	6.5	7.8	3.2
Zaporizhska	63.1	57.5	61.5	64.4	11.5	9.9	10.4	8.7	10.6	14.1	13.2	16.4	7.5	10.8	8.8	5.9	7.2	7.7	6.1	4.5
Luganska	45.2	49.9	49.1	52.9	14.7	15.1	17	15.9	24.7	20.8	19.2	17.8	5.5	5.6	6.8	6.7	10	8.5	7.9	6.8
Odeska	54.9	56.4	51.8	54.9	12.9	14.8	15.7	18.6	18.7	17.7	18	11.6	10.4	7.2	9.5	9.9	3.1	3.8	5	4.9
Kharkivska	53.1	50.8	48.5	48.9	14.6	14.8	13.3	14.2	13.9	16	20.4	20.4	11.5	12.9	11.3	10.6	6.9	5.4	6.4	5.9
Khersonska	44	46.5	55.4	51.0	13.8	12.7	10.4	12.3	21.3	19.6	15.4	21.7	14.9	13.8	14.1	10.9	6	7.3	4.6	4.2
Kyiv	47.6	51.8	51.4	57.3	11.5	9.9	13.3	5.8	15.5	11.9	10.6	15.0	19.3	22.6	18.2	18.3	6.1	3.9	6.4	3.5
Sevastopol	48.1	50.5	53.8	50.5	13.2	11.2	15.4	13.8	17	17.8	19.7	20.2	15.1	12.1	6.8	10.1	6.6	8.4	4.3	5.5

Average in target regions	53.5	53.5	55.1	54.2	13.2	13.2	13.7	13.8	15.7	15.2	15.5	18.1	11.6	11.6	10	9.4	6.1	6.4	5.7	4.5
Ukraine		62.3	62	58.4		12	12.4	12.8		11.3	12.1	15.5		11.3	8.8	7.7		4.8	4.8	3.4

## I. Progress toward target indicators

Per activity 01 of the Detailed Implementation Plan for Year Four (DIP IV), performance monitoring data from the TB Control Partnership Project have been collected to assess progress toward achieving project targets according to the project monitoring and evaluation plan (PMEP). Progress towards achieving project targets established in the PMEP in the fourth quarter of Year Four is reflected in Table 2 and in the report narrative and covers indicators that require quarterly reporting (Detailed Implementation Plan Year IV Activity 01).

**Table 2. Indicators that require quarterly reporting in accordance with the PMEP (progress in the fourth quarter of Year IV)**

<b>PMEP Indicator</b>	<b>Description</b>	<b>#</b>
# 8	Number of people trained in any STOP-TB Strategy elements.	311
# 9	Number of laboratory review meetings held in the project regions.	6*
# 10	Number of project regions providing accurate and timely TB surveillance and NTP performance data.	10
# 14	Number of laboratories performing quality-assured TB culture and first-line drug susceptibility testing according to international standards.	10**
# 22	Number of individuals trained to provide clinical prophylaxis and/or treatment of TB in HIV-infected individuals.	20
# 25	Number of individuals trained in HIV-related institutional capacity building.	42
# 30	Number of individuals trained to provide social support services and HIV- and TB-related stigma and discrimination reduction.	62

\*- conducted as part of general comprehensive oblast TB review meetings

\*\* - oblast TB dispensaries' laboratories (Level 3) take part in external quality control performed by national reference laboratory (NRL)

The numbers in Table 2 reflect the project's shift according to the project strategy in the final year from heavily emphasizing training activities with significant numbers of people trained, to intensified supervision of TB services and detailed analyses of the results at follow-on review meetings in the target regions. It is important to note that starting this year, the temporary M&E forms for MDR TB were approved and treatment result data on MDR-TB, along with data on sensitive TB, have begun to be collected. As such, the most important feature characterizing the latest M&E trainings conducted by Project has been the introduction of MDR TB M&E approaches. To enhance M&E specialists' skills based on practical issues, PATH's training approach included having trainers with M&E skills co-train with trainers with clinical

backgrounds, thus assuring use of practical case studies, emphasis on accurate TB record-keeping in accordance with international standards, and the ability to correlate the statistical, clinical and laboratory data as part of overall results analysis.

## **II. Results and project elements**

### **Result 1**

#### **High-quality DOTS services available to 50 percent of the population.**

*DIP Objective 1. Expand DOTS coverage to 50 percent of the population and improve DOTS quality.*

*Capacity building activities*

In Year 4, by pursuing systematic DOTS expansion, PATH attained the overarching TB Control Partnership project's program-coverage result of expanding DOTS coverage to 50 percent of Ukraine's population. DOTS coverage being defined as the "percentage of the population living in the area of basic management units implementing the DOTS strategy," serves as a platform for consistent implementation of cost-effective international approaches in TB control. PATH worked towards ensuring DOTS coverage by providing training and technical assistance to basic TB control management units, which are units of district TB coordinators (rayon TB specialists) and function as a part of district health services under technical supervision of TB dispensaries.

In Year 4 PATH continued to undertake intensive efforts to finalize rolling out DOTS training for improved provision of TB-related services at TB in-patient and PHC out-patient clinics to ensure district-by-district DOTS coverage in Luganska and Odeska oblasts as well as in AR Crimea, and in some selected districts of other project regions such as Dnipropetrovska, Zaporizhska, Khersonska oblasts, as well as Sevastopol city, which were not previously covered or when refresher training for new TB and PHC staff was needed.

In the period from October 2010 to September 2011, PATH conducted 67 training events on the following topics:

- Three-day trainings for PHC providers, "Organization of high-quality DOTS-based TB services at PHC clinics;"
- Four-day trainings for TB doctors providing inpatient and outpatient services, "Organizing DOTS-based TB services at specialized TB facilities. Principles of MDR-TB case management;"
- Three-day trainings for heads of clinical-diagnostic laboratories and laboratory specialists, "Laboratory diagnosis of TB by smear microscopy. Quality assurance of smear microscopy testing in clinical-diagnostic laboratories;"
- Five-day Training-of-Trainers (TOT), "Laboratory diagnosis of TB by smear microscopy. Quality assurance of smear microscopy testing in clinical-diagnostic laboratories;"
- Three-day trainings on TB/HIV co-infection for TB doctors and infection disease doctors;

- Three-day trainings, “Enhancing capacity of regional councils to combat TB and HIV/AIDs on a basis of intersectional cooperation” for representatives of regional TB/HIV councils from project sites;
- Three-day trainings on TB/HIV interpersonal communication and counseling;
- Five-day Follow-on Training-of-Trainers (TOT), “Theory and Practice of Developing and Conducting Trainings on TB/HIV Counseling for NGO Social Workers;” and
- One-day and four-day workshops, “E-TB Manager: Case Management Module.”

A series of the following international trainings were organized by PATH and conducted within the Year 4 project activities:

- International hands-on training, “International principles of TB management, epidemiology and laboratory diagnosis,” UK Health Protection Agency Mycobacterium Reference Unit, Queen Mary’s School of Medicine, University of London, London, UK;
- International training, "Organization of Treatment of MDR TB Patients," WHO Collaborative Center, Riga, Latvia;
- International training, "Organization of Treatment of TB patients with multi-drug resistant (MDR) TB and extensively drug-resistant (XDR) TB", organized by the WHO Training Center, Novosibirsk Research Institute and Tomsk Oblast TB Service, Tomsk, Russia; and
- International Training Course on MDR TB case management provided by FILHA/NTP of Estonia International Training Center in Tartu, Estonia.

Overall in Year 4, PATH staff and a team of trained master trainers provided training to a total 1273 personnel in both TB and general health services on Stop TB Strategy components, including DOTS principles, MDR-TB case management, TB program management, TB/HIV c-infection, and epidemiology and laboratory diagnosis (DIP IV, activities 1.1, 1.4, 1.6, PMEP indicator 8). This number includes 394 TB specialists, 83 laboratory specialists, 41 monitoring and evaluation specialists (24 statisticians and 17 epidemiologists), 386 primary health care providers, 68 infectious disease specialists, 185 nurses, 24 NGO representatives, 92 health administrators and other health care specialists representing all project target administrative territories. In some cases, the same individuals participated in multiple trainings (17 persons), depending on their responsibilities. Thus, the total number of persons trained in Year 4 summed up to 1256 individuals.

A breakdown of training activities in Stop TB Strategy elements by the number and specialty of health care providers trained, where they work, and the type of training received is presented in Table 3.

**Table 3. Training activities of the TB Control Partnership Project, Year 4 (October 1, 2010 – September 31, 2011)**

Sites	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter
	Number and type of trained specialists:			

<p><b>Dnipropetrovska Oblast</b></p>		<p>1 Lab specialist, 1TB specialist – International training on MDR-TB diagnosis (London). 4 TB specialists – M&amp;E trainings. 1 NGO representative, 1 psychologist – TB/HIV (TOT) training</p>	<p>2 Lab specialists – Lab (TOT) training. 26 TB specialists, 17 infectionists, 3 administrators – TB/HIV trainings. 6 administrators, 1 infectionist, 3 NGO representatives, 1 statistician – TB/HIV trainings for regional CC members.</p>	<p>3 DOTS trainings - 15 TB specialists, 13 PHC providers, 15 interns (12 PHC providers and 3 TB specialists). 1 MDR-TB training – 16 TB specialists, 1 administrator. 1 Lab training – 14 Lab specialists. 3 M&amp;E trainings – 28 TB specialists, 10 statisticians, 7 nurses. 1 TB HIV IPCC training – 3 infectionists, 1 epidemiologist, 1 dermato-venerologist, 1 head of donor department, 1 nurse, 3 heads of medical departments of penitentiary institutions.</p>
<p><b>Donetska Oblast</b></p>		<p>1 Lab specialist – International training on MDR-TB diagnosis (London). 1 epidemiologist – TB/HIV (TOT) training</p>	<p>3 Lab specialists – Lab (TOT) training. 7 administrators, 1 infectionist, 3 NGO representatives, 1 TB specialist – TB/HIV trainings for regional CC members</p>	
<p><b>Kharkovska Oblast</b></p>		<p>1 TB specialist – International MDR-TB training (Riga). 1 Lab specialist – International training on MDR-TB diagnosis (London)</p>	<p>1 TB specialist – MDR-TB training. 1 Lab specialist, 1 TB specialist – Lab (TOT) training. 18 TB specialists, 7 infectionists, 1 epidemiologist, 2 nurses, 1 anesthesiologist, - TB/HIV trainings. 5 administrators, 2 infectionists, 3 NGO representatives, 1 epidemiologist, 1 TB specialist – TB/HIV trainings for regional CC members .</p>	

<b>Khersonska Oblast</b>		1 MDR-TB training - 36 TB specialists	2 TB specialists – MDR-TB training. 4 TB specialists, 4 infectionists - TB/HIV trainings.	
<b>Kyiv</b>		11 TB specialists, 10 statisticians - M&E trainings. 1 manager, 3 lab specialists - International training on MDR-TB diagnosis (London)	4 TB specialists – MDR-TB training. 15 TB specialists – TB/HIV trainings. 6 administrators, 6 NGO representatives, 2 TB specialist – TB/HIV trainings for regional CC members.	1 TB specialist – MDR-TB training in Tartu, Estonia.
<b>Luganska Oblast</b>	1 DOTS training – 21 PHC providers, 1 infection disease specialist. 1 Lab training – 10 Lab specialists.	1 MDR-TB training - 28 TB specialists 4 TB specialists – M&E trainings (Kyiv). 1 Lab specialist – International training on MDR-TB diagnosis (London)	65 PHC providers – DOTS trainings. 1 Lab specialist – Lab training (TOT). 2 TB specialists – MDR-TB training. 24 TB specialists, 16 infectionists, 2 epidemiologist, 2 dermatologists, 2 psychologists, 1 statistician – TB/HIV trainings. 4 administrators, 2 infectionists, 2 NGO representatives, 2 TB specialists – TB/HIV trainings for regional CC members.	1 TB/HIV IPCC training – 8 TB specialists, 4 infectionists, 1 epidemiologist, 1 dermatovenerologist, 2 psychologists, 1 nurse. 1 TB specialist – MDR-TB training in Tartu, Estonia.
<b>Odeska Oblast</b>	2 DOTS trainings – 38 PHC providers, 2 TB specialists, 8 epidemiologists, 1 infectionist, 3 pulmonologists. 2 Lab trainings – 29 Lab specialists.	22 TB specialists, 1 statistician - M&E trainings.  1 TB specialist – International MDR-TB training (Riga).	2 Lab specialists – Lab training (TOT). 26 TB specialists, 1 infectionist, 4 nurses, 2 dermatologist, 1 PHC provider – TB/HIV trainings.	3 DOTS trainings – 65 PHC providers, 6 pediatricians. 1 TB/HIV IPCC training – 1 infectionist, 13 TB specialists, 1 psychologist. 1 TB specialist – MDR-TB training in Tartu, Estonia.

<b>Sevastopol</b>	MDR-TB training – 25 TB specialists	1 psychologist – TB/HIV (TOT) training		
<b>Crimea</b>		2 DOTS trainings– 36 PHC providers, 1 TB specialist, 1 epidemiologist, 4 nurses. 1 MDR-TB training– 25 TB specialists. 4 TB specialists – M&E trainings. 1 TB specialist – International MDR-TB training (Riga). 1 Lab specialist – International training on MDR-TB diagnosis (London)	37 PHC providers, 20 nurses – DOTS trainings. 10 Lab specialists, 11 nurses, 13 PHC providers, 1 statistician – Lab trainings. 1 Lab specialist – Lab training (TOT).	3 DOTS trainings – 23 PHC providers, 1 pulmonologist, 1 Lab specialist, 38 nurses. 1 TB/HIV training– 1 administrator, 10 nurses, 7 PHC providers, 2 social workers.
<b>Zaporizhska Oblast</b>	MSH/Drug management workshop (Zaporizhya)-4 TB specialists, 3 pharmacists, 11 nurses.	2 DOTS trainings – 29 PHC providers, 1 TB specialist, 1 infection disease specialist, 30 nurses. 1 NGO representative - TB HIV (TOT) training	39 PHC providers, 46 nurses, 1 gynecologist, 1 infectionist, 1 neurologist, 3 TB specialists – DOTS trainings. 1 Lab specialist – Lab training (TOT). 1 TB specialist – MDR-TB training. 6 TB specialists, 4 infectionists – TB/HIV trainings. 6 administrators, 1 epidemiologist, 1 infectionist, 3 NGO representatives, 1 TB specialist – TB/HIV trainings for regional CC members.	
<b>Others oblasts</b>		2 NGO representatives, 1 psychologist - TB HIV (TOT) training		
<b>Total trainings</b>	<b>8</b>	<b>13</b>	<b>27</b>	<b>19</b>
<b>DOTS</b>	<b>3</b>	<b>4</b>	<b>9</b>	<b>9</b>
<b>MDR TB</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>2</b>
<b>M&amp;E</b>		<b>3</b>		<b>3</b>
<b>LAB</b>	<b>3</b>	<b>1</b>	<b>4 (1 TOT included)</b>	<b>1</b>
<b>TB/HIV</b>		<b>1</b>	<b>10</b>	<b>4</b>
<b>IPCC trainings for</b>				

<b>NGOs</b>				
<b>MSH/Drug Management Workshop</b>	<b>1</b>			
<b>Training for regional Coordination Councils' members</b>			<b>6</b>	
<b>Conferences</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>1</b>
<b>WG meetings</b>		<b>2</b>		
<b>Review Meetings/Round Tables</b>	<b>7</b>	<b>9</b>	<b>4</b>	
<b>Total number of trained specialists:</b>				
	59 PHC providers	65 PHC providers	154 PHC providers	108 PHC providers
	31 TB specialists	140 TB specialists	140 TB specialists	83 TB specialists
	11 Nurses	34 Nurses	83 Nurses	57 Nurses
	39 Lab specialists	8 Lab specialists	21 Lab specialists	15 Lab specialists
		4 NGO representatives	20 NGO representatives	
	2 Infectionists	1 Infectionists	57 Infectionists	8 Infectionists
	3 pulmonologists	3 psychologists	2 psychologists	3 psychologists
	8 epidemiologists	2 epidemiologists	5 epidemiologists	2 epidemiologists
	3 pharmacists	11 statisticians	3 statisticians	10 statisticians
		1 program manager		1 head of donor department
			38 administrators	2 administrators
			1 anesthesiologist	15 interns (12 PHC providers and 3 TB specialists)
				3 heads of medical departments of penitentiary institutions
			4 dermatologists	2 dermatologists
			1 gynecologist	6 pediatricians
			1 neurologist	1 pulmonologist
				2 social workers
<b>Total number of persons trained</b>	<b>156</b>	<b>269</b>	<b>530</b>	<b>318</b>
<b>Actual number of persons trained</b>	<b>156</b>	<b>267</b>	<b>522</b>	<b>311</b>

*DOTS Training (DIP IV, Activity 1.1; PMEP Indicator 8)*

To ensure high quality of the provision of appropriate TB services by PHC practitioners in Year 4, PATH continued to undertake intensive efforts to finalize the roll-out of DOTS training for improved provision of TB-related services at TB in-patient clinics and PHC out-patient clinics.

Through the intensive DOTS roll-out activities within the USAID TB Control Partnership Project, DOTS coverage was expanded to 50 percent of Ukraine's population.

Overall, in Year 4 a series of 15 roll-out and 10 refresher training activities on TB-related interventions was conducted in Luganska, Odeska, Dnipropetrovska, Zaporizhska, Khersonska oblasts, as well as in AR Crimea and Sevastopol city to entirely cover these administrative regions by high-quality DOTS-based services. PATH successfully trained all targeted district TB specialists and TB specialists in TB dispensaries in Luganska and Odeska oblasts, and AR Crimea. The basic training course content was focused on the key Stop TB Strategy components, including DOTS principles and TB-program management and evaluation. At the same time, MDR-TB case management was also addressed as a part of overall TB-case management. The training participants enhanced their knowledge and skills on early TB detection, proper referral of patients, organization of directly-observed treatment, and effective follow-up of TB patients during the out-patient treatment phase. Following basic training on DOTS-based TB services, technical assistance to TB and PHC specialists were provided through an extensive series of regional monitoring and supervision visits.

There was a need to provide further refresher trainings on basic DOTS strategy elements and technical assistance to PHC providers in Zaporizhska, Khersonska and Dnipropetrovska oblasts because in the last two project years there was a high staff turnover and rotation at both TB and PHC services in these regions and additional training was highly requested for new TB and PHC practitioners there.

PATH finalized the creation of a professional team of local trainers representing regional TB dispensaries in each project region. These trainers were trained by PATH through an intensive training of trainers (TOT) program during previous project years and follow-on series of TOTs conducted in Year 4 to further enhance training skills of the PATH's cohort of trainers. This TOT program has proved its sustainability as the majority of the trainers trained within the USAID TB Control Partnership Project has already started conducting trainings within the Stop TB in Ukraine Program with the financial support of the Global Fund to Fight AIDS, Tuberculosis and Malaria.

It is worth highlighting that the majority of DOTS trainings for PHC providers were conducted at the rayon level, rather than having the training participants from districts come to oblast city. The trainers from the oblast city rather travelled to the training sites at the rayon level. This organizational approach has afforded PATH an excellent opportunity to include additional training participants at the rayon level to discuss in detail, the challenges for organizing DOTS services in particular districts, and to decrease overall training costs.

#### *Collaboration with medical schools*

Per DIP 4 Activities 1.2 and to fulfill PMEP indicator 28, PATH organized the All-Ukrainian workshop "Human Resources Capacity Strengthening in TB Control in Ukraine," that was conducted from September 29 to October 1, 2010 in Gaspra, Crimea. The goal of the national workshop was to present and discuss up-to-date approaches to the development of educational and training programs for the enhancement of pre-diploma, post-diploma, and on-service education of TB specialists and PHC providers in Ukraine. The role of educational programs based on up-to-date international approaches and standards in TB control in pre-diploma, post-diploma,

and on-the-job education of medical professionals was highlighted in numerous speeches and presentations of the workshop participants.

PATH staff facilitated a discussion on urgent issues regarding pre- and post-diploma education in TB control and general health care system and presented the possibilities of incorporating a training approach of adult learning to the basic medical educational programs. Training curricula on TB microscopy and laboratory quality assurance and on interpersonal communication and counseling were presented by PATH and recommended to be adopted by medical schools and academies for postgraduate continuous medical education.

One of the results of this workshop was the conclusion that in order to improve continuing medical education for laboratory specialists, it was highly important to conduct regular short-term (five- or ten-day) training courses on specific issues of TB diagnosis in compliance with international standards and best practices. Those training courses should be included in the training curriculum of the medical academies of postgraduate education. During this workshop, PATH presented the guidelines, “Standards of Bacteriological Diagnosis of Tuberculosis in Clinical Diagnostic Laboratories” and associated training curriculum on laboratory diagnosis of TB by smear microscopy and quality assurance of smear microscopy in clinical diagnostic laboratories that could be used for teaching at medical academies for postgraduate education. Following the above indicated national workshop, PATH conducted a series of meetings with Anna Lunyova, MOH Chief Laboratory Specialist, Head of Laboratory Diagnostic Chair of the National Medical Academy for Postgraduate Education, and discussed the issue of organization of training courses on laboratory diagnosis of TB by smear microscopy and quality assurance of smear microscopy. Two thousand copies of the guidelines, “Standards of Bacteriological Diagnostics of Tuberculosis in Clinical Diagnostic Laboratories” were provided to the staff of the TB Chair of the National Medical Academy of Postgraduate Education.

#### *Improving quality of TB laboratory testing*

In April 2011, PATH jointly with the MOH and the National Academy of Postgraduate Medical Education participated in the Conference entitled “Current Issues of Laboratory Medicine”. Considering the extensive experience accumulated by PATH in the TB control field in the past decade, PATH was entrusted to develop and conduct a one-day TB panel that included presentations on the epidemiology of TB, modern methods of rapid TB diagnosis, and the collaboration of the USAID-and GFATM-funded projects on TB control in Ukraine. The experts trained by PATH presented the results of the external quality control (EQC) in Kyiv which demonstrated the improvements in laboratory performance and quality control thanks to the USAID investment – the proportion of inaccurate smear microscopy results was less than 5% in all 24 Kyiv City Level I laboratories supported by the project.

The Academy of Postgraduate Medical Education reported that based on the materials provided by PATH a five-day training course on acid- fast bacilli (AFB) smear microscopy and EQC for laboratory specialists had been developed and approved for implementation. The aforementioned postgraduate education course will help ensure that virtually all laboratory specialists in the country will be able to acquire this critically important skill for effective detection of new TB cases.

*Regulatory documentation for TB laboratory testing*

PATH's efforts to train laboratory personnel in EQC and equip key Level III laboratories with specialized equipment and required supplies and consumables, as well as the international technical assistance in EQC that was provided through the Project, have ultimately resulted in the introduction of external DST quality control for level III laboratories in Ukraine. A respective NRL guidance document was developed and approved for implementation by the Minister of Health in the past quarter.

Implementation of external DST quality control is the first step towards a much-needed drug resistance survey in Ukraine, which can provide the country with accurate information on MDR- and XDR-TB and on optimal ways to reduce the burden of TB. In addition, with significant TA of the PATH project team, the National Plan for the Optimization of TB Laboratory Network in Ukraine was finalized and approved.

*Regulatory documentation for TB laboratory testing*

During the reporting quarter, PATH staff took part in the development of the National Plan for the Optimization of TB Laboratory Network in Ukraine. Later on, this plan was approved by the Head of the MOH Committee for Socially Dangerous Diseases and became a basis for implementation of the GFATM-funded Stop TB Project in Ukraine.

*Capacity building in the laboratory infection control with involvement of international experts*

In June 2011, PATH team in collaboration with WHO, and National TB Center and international laboratory specialist from the Supra-National Reference Laboratory in Riga, Latvia carried out a series of consultations for laboratory specialists of Ukraine on infection control and organization of safe working environment in TB laboratories. The expert recommendations will be used to optimize infection control practices throughout the country.

*International trainings and conferences*

In March 2011, PATH supported the participation of the National Reference TB Laboratory Head and seven regional laboratory specialists in a training course on International Principles of TB Management, Epidemiology and Laboratory Diagnosis in London. The knowledge acquired at the course helped these specialists deepen their understanding of modern TB diagnostic methods, interpret test results, and advocate for the more efficient use of local and national TB resources. In May 2011, with USAID project support, nine national TB laboratory specialists from the project regions participated in a one-week intensive training course provided by the experts of the National Reference TB Laboratory of Poland and the Institute of TB and Lung Diseases in Warsaw. The focus of this training course was TB culture and drug susceptibility testing (DST) methods using the BACTEC MGIT system. The participants had an opportunity to practice the new skills in the Polish Reference Laboratory. They also learned about new molecular genetic tests for TB and especially MDR-TB diagnosis. As a result of this training, the participants were able to integrate TB culture and DST into their routine work.

Due to the recent international recommendations, the need to identify the culture grown on liquid media in the BACTEC system with immune-chromatographic tests has been identified as a crucial laboratory procedure and will be addressed through advocacy for procurement of the immune-chromatographic tests for all regions that use the BACTEC equipment.

### *Training in laboratory diagnosis*

Currently, National TB Program is lacking National guidelines on TB culture and (DST). This is the cornerstone guiding document in building capacity of the laboratories and in the situation where this document is absent the respective skills of the majority of national specialists remain weak. To address this weakness, 20 national specialists representing all project locations were planned to be trained in TB culture and DST using international recommendations. However, considering that practically all of these specialists have already been trained in these topics earlier this year in London and Warsaw, another training during the same year was not deemed to be a good use of the donor funds. Many of the London and Warsaw trainees will be invited to participate in the work of an Expert Group that PATH has proposed to convene to develop national guidelines for external laboratory quality standards for nationwide use and a national program for implementation of these standards.

In September 2011, a three-day training in acid-fast bacilli (AFB) smear microscopy and external quality control (EQC) for 15 laboratory specialists of Dnipropetrovska oblast was held at the training center based at the Dnipropetrovsk Medical Academy and the oblast level 3 TB laboratory.

### *Training of Trainers*

In April 2011, PATH conducted refresher training in smear microscopy and quality control for ten regional trainers in the pilot sites. We now have a team of qualified trainers capable of raising capacity of primary health care laboratory specialists in the USAID-assisted sites. The training curriculum and training methods were updated in accordance with the latest recommendations. The trainees are also expected to assist the National TB Program in training of other laboratory specialists and enforcing quality standards to increase detection of TB cases and adjustment of treatment protocols accordingly.

### *Laboratory review meetings*

During the reporting year, general review meetings were conducted twice in each Project oblast with technical assistance and support of the Project. The key purpose of the meetings was to analyze in-depth the results of the ongoing monitoring of the National TB Program, identify shortcomings and recommend improvements. The issues related to laboratory diagnosis and analysis of laboratory activities, especially quality control (QC), were widely discussed. Poor quality of sputum specimens and poor adherence to bio-safety protocols have been identified as issues in many regions that need to be urgently addressed.

For example, during such a meeting in Feodosia, the partners identified a 15% increase in the number of advanced and untimely detected TB cases. The analysis showed that this increase had been primarily caused by low motivation of people to seek treatment, and poor adherence of primary health care physicians to the national TB diagnosis standards (e.g., three-fold testing of sputum, X-ray investigations, etc.). It was decided to attract social services' funding to purchase public transport tickets and food packages to impact care-seeking behavior of high-risk population groups of the city, and to consider more effective ways of motivating primary care physicians and nurses. Poor quality of sputum specimens and poor adherence to bio-safety protocols have been identified as other issues that need to be urgently addressed.

### *Other laboratory activities*

Per an agreement with the National Association of Clinical Chemistry and Laboratory Medicine President, PATH participated in the International Conference on Laboratory Medicine that was held in Kyiv during April 19-21, 2011. PATH staff presentations focus on an overview of TB epidemiology in the country, the vision for an integration of the USAID and the Global Fund TB control projects in Ukraine, and a new rapid diagnostic test for early detection of suspected MDR TB cases, particularly in HIV-positive cohorts.

In August 2011, a technical expert group meeting was held in Kyiv to develop a strategy and an agenda for a five-day training course in AFB smear microscopy and EQC for laboratory specialists from Donetsk and Kharkivska oblasts. These regions are expected to serve as laboratory training centers for the National TB program.

### *Regional monitoring visits to monitor TB services and regional review meetings to analyze monitoring visit findings (DIP IV, Activities 1.11 and 1.12)*

During the reporting period, PATH continued to provide on-going support to strengthen the monitoring and evaluation system at the regional level. A wide range of on-site monitoring visits to in-patient TB clinics and out-patient PHC clinics at oblast, rayon, and city levels were conducted by oblast TB dispensaries with PATH technical assistance according to agreed-upon annual oblast monitoring plans submitted to PATH at the beginning of Year IV. Monitoring visits were undertaken within the project regions to identify and immediately address weaknesses with on-the-spot technical assistance and training. In addition, a series of general review meetings was conducted following the monitoring visits so that all stakeholders involved were engaged in follow-up discussion and analysis of findings and in developing recommendations for program improvement in the regions. Listed below are the most common problems that were identified during regional monitoring visits:

- Inadequate financing of TB program at rayon level;
- Absence of TB specialists in some areas;
- Mistakes in filling in recording documentation (TB-01, TB-03) in some areas;
- Poor infection control;
- Implementation of nonstandard treatment schemes;
- Lack of adherence to the protocol of treatment monitoring
- Lack of adherence to the protocol of TB detection;
- Lack of coordination between various agencies.

During each monitoring visit, meetings with rayon administration were conducted to keep the regional health care administration informed about the progress and challenges facing the regional TB program at the rayon and district levels. Those meetings also served as a forum to draw attention to and prioritize funding opportunities for improvement of regional TB program services, such as prevention, early diagnosis of tuberculosis among at risk populations, and strengthening of collaboration between various agencies involved in TB control. On-the-job trainings for primary health care specialists were conducted with special reference to TB detection and diagnosis. Some of the most prominent results of conducted monitoring visits in some rayons of Kherson are as follows:

- Computer equipment and Internet connection were provided to support electronic TB register;
- Screening for TB among HIV-positive people and testing for HIV among TB patients was improved (100% of first detected HIV+ individuals screened for TB symptoms and 81% of TB patients received VCT and HIV test results respectfully);
- TB detection in primary health care facilities was improved ;
- The referral system of patients between the civil sector and penitentiary system was strengthened .

Monitoring visit outcomes in selected rayons of Odesa Oblast included improved infection control through the implementation of patient flow division, proper organization of sputum collection places, more accurate completion of recording documentation (TB-01, TB-03), and intensified TB detection activities among at risk populations.

#### *e-TB Manager implementation*

During reporting period, the Center of Excellence in Dnipropetrovsk conducted three four-day trainings on Monitoring and Evaluation for 45 regional specialists. These trainings were aimed at improving TB case management and ensuring that Dnipropetrovska Oblast provides consistent and reliable data. Definitions related to TB and MDR-TB case management were explicitly detailed to the audience. Participants gained practical experience in TB and MDR-TB form usage, including form completion in accordance with currently accepted case definitions of TB. Below is the list of main topics covered by the training:

- Epidemiology of TB: fundamentals of epidemiology and main factors for TB morbidity.
- Monitoring and evaluation. Main indicators.
- TB and MDR-TB case forms, definitions, form completion.
- Cohort analysis.
- Indicators of TB and MDR-TB case detection and treatment results. Evaluation and interpretation.
- Monitoring as a background for proper management. Evaluation of indicators and decision-making based on the data obtained. Site visits as part of monitoring and as on-the-job training.
- e-TB Manager: the role of a centralized information system in case management, medicines management, data flow, and surveillance in the national TB control program.
- Structure and format of Medicines Management module – its features and capabilities.
- Structure and format of TB Case Management module – its features and capabilities.
- Management module – its features and capabilities, including data transformation into various analysis, reporting forms and indicators.

Almost all trainees had already been trained in the case management module of eTB-Manager by specialists from the Statistics Department of the Oblast TB dispensary (who were trained within

the framework of the Project in January 2011). Practical sessions dealing with e-TB Manager allowed for question and answers raised by trainees based on experience to date with eTB-Manager. Participants saw and felt the strong relation between data entered into the system in the case management module and the results obtained in various analyses, including reporting forms. The analysis of data already entered into the system emphasized the importance of quality trainings for users and showed advantages of brief refresher training sessions after a short period of time of use. PATH continues building technical capacity of oblast TB dispensaries. Specifically, during this reporting period, PATH arranged broadband internet connection for the AR Crimea oblast TB dispensary, which allows Crimea-based specialists to begin proper implementation of the eTB Manager, including data entry.

PATH will seek opportunities, in collaboration with MSH and other local partners, to provide TA and to support oblasts in the process of embedding the new system into their work, with a particular focus on the design of data flow, given the limited access of practitioners to the system, data verification issues, trainings for local specialists etc. This will enable broader data utilization by rayon specialists. Roll-out trainings for the end-users of eTB Manager remain essential for successful system implementation.

***Introducing and disseminating the National Guidelines on Infection Control in TB settings (DIP IV, Activity 1.13, 1.14)***

The National Conference “Tuberculosis Infection Control in Healthcare Facilities” was held on June 14–15, in Kyiv (*DIP IV, Activity 1.13*). The conference was organized within the USAID TB Control Partnership Project in Ukraine in collaboration with the Ministry of Health (MOH) of Ukraine Committee on HIV and other Socially Dangerous Diseases, WHO, and the National Institute of Phthiology and Pulmonology named after F. Yanovskyi. The conference served as a national forum to discuss the international recommendations for TB infection control, to present the newest national infection control guiding document “Infection Control Standard” developed with the technical assistance of the Project and aimed at improving infection control practices for TB control in Ukraine, and to share experiences from the USAID project sites in organizing the administrative, engineering, and personal protection interventions. Overall, about 230 participants took part in this national event.

The key stakeholders in TB control participated in the conference: Academician Yuriy Feschenko, Chief TB Specialist of Ukraine, Director of the National Institute of Phthiology and Pulmonology; Dr. Oleksandr Fed’ko, Head of the State Service of Ukraine to combat HIV/AIDS, TB and other Socially Dangerous Diseases; Prof. Svitlana Cheren’ko, Head of the MOH’s Committee on HIV, and other Socially Dangerous Diseases; Prof. Serhiy Ryzhenko, Head of the State Sanitary-Epidemiological Service of Ukraine; Dr. Olga Stelmakh, Director of the Ukraine TB Control Center; Dr. Ihor Pokanevych, Head of WHO Country Office in Ukraine; faculty members of the National TB Institute; chief doctors and other health care providers representing regional TB dispensaries and polyclinics both public and penitentiary sector; and representatives of the national and regional Sanitary-Epidemiological Stations (responsible for infection control in the oblasts). WHO supported participation of the international experts at the conference. International standards of infection control implementation were presented by Igor Raikhert, Advisor on MDR-TB and TB/HIV Co-infection of the WHO Bureau in Ukraine. Girts Skenders, Director of the Supra-National Reference TB Laboratory, Latvia made a presentation on international approaches towards infection control activities application at the TB laboratory network. Svitlana Doltu, Chief Specialist of the Ministry of Justice of Moldova, TB Coordinator of the Medical Office of the

Department of Penitentiary Institutions, Chisinau, Moldova, shared the experience of implementation of infection control measures in the penitentiary service of the Republic of Moldova. Dr. Tamara Tonkel, PATH program officer, facilitated a group session and made a presentation during a plenary session titled “Individual protection equipment within the infection control system.”

Per DIP IV, Activity 1.14, to introduce and disseminate a guiding document on “Recommendations on infection control for TB settings” and as a follow-on activity of the National Conference “Tuberculosis Infection Control in Healthcare Facilities” that was held on June 14–15, in Kyiv (DIP IV, Activity 1.13), the Regional Conference on Infection Control took place in Zaporizhyya on July 14, 2011. The conference was organized within the USAID TB Control Partnership Project in Ukraine in collaboration with the Zaporizhska Oblast Health Care Administration, the Zaporizhska Oblast TB Dispensary, and the Zaporizhska Medical Academy of Postgraduate Education. The conference served as a regional forum to discuss the international recommendations for TB infection control, to present the newest national infection control guiding documents (“IC Standards”) aimed at improving infection control practices for TB control in Ukraine, and to discuss the local experiences in organizing the administrative, engineering, and personal protection interventions in TB and other health care facilities of Zaporizhka oblast. Overall, about 95 participants took part in this regional event. The actual need to develop oblast- and facility-specific infection control plans was the main topic of discussion.

Trained TB personnel of Zaporizhska oblast have already started to implement infection control measures, including administrative IC measures, in their TB facilities. The conference participants discussed efficient ways of separating smear-positive patients from smear-negative patients and dividing MDR-TB patients from sensitive-TB patients. During the conference, the participants emphasized the importance of other IC measures, including implementation of personal protection and proper usage of respirators, which were provided under the project.

*Continue support for URCS activities on treatment adherence in current project oblasts by supporting URCS nurses, volunteers, and CBOs (DIP IV, Activity 1.16)*

PATH has continued supporting TB treatment adherence activities in the project oblasts implemented by URCS nurses, volunteers, and CBOs. A new subcontract effective from December, 1, 2010 was established with the URCS to ensure continuum-of-care and treatment adherence among released prisoners in Khersonska, Dnipropetrovska, and Zaporizhska Oblasts (DIP Year 4, activities 1.16 and 1.17). The key goal of the project is to sustain a system of support for TB patients, who have various social problems, during the out-patient treatment stage using the existing network of Red Cross visiting nurses. During the reporting period, the National Committee of the Ukrainian Red Cross Society developed a project implementation plan, provided instructions to regional organizations involved in project implementation, appointed project coordinators in the regions, approved work plans for regional organizations, and created an expert group to monitor the work.

The program is being implemented by AR Crimea, Dnipropetrovsk, Donetsk, Zaporizhyya, Lugansk, Odesa, Kharkiv, and Kherson regional organizations as well as by Kyiv and Sevastopol city organizations. The cooperation programs with the Prison Departments of Dnepropetrovsk, Kherson, and Zaporizhyya regions are being continued as well.

Based on the results of the monitoring the following priorities have been determined for this program:

1. Improve treatment adherence of TB patients who have limited access to health services due to various reasons by ensuring direct observation of out-patient TB treatment through the support provided by the URCS visiting nurses in Zaporizhya, Donetsk, Dnepropetrovsk, Lugansk, Odesa, Kharkiv, and Kherson regions, and Kyiv, Sevastopol Cities and AR Crimea.
2. Improve referrals and treatment adherence of recently released prisoners who need to continue TB treatment in Dnepropetrovsk, Kherson and Zaporizhya regions.
3. Strengthen advocacy for the rights and needs of TB patients by participating in the work of Coordination Councils, disseminating informational materials aimed at decreasing stigma and discrimination and improving cooperation with local NGOs and the government Social Services.

Fundraising activities have been conducted in all project regions for social support to TB patients and their families. Food packages were provided to TB patients, especially ex-prisoners facing difficult financial situations, to encourage them to receive treatment.

In addition in order to encourage TB patients to undergo observed treatment the Red Cross provided assistance in the form of used items, food parcels, hygiene products, medications, and financial support. This social support has been provided in addition to support funded by the project.

#### *Ad-Hoc Partners' Meeting*

Ten Chief Doctors of the regional TB dispensaries from the project oblasts, together with five representatives of URCS, took part in an ad-hoc Partners' Meeting. It took place in Kyiv on January 26. The main project partners gathered to discuss both the upcoming work plan priorities for the USAID TB assistance project, and for the GFATM R9 draft implementation plan to reduce the potential for duplication and overlap in activities. In addition, the project partners shared their experiences in conducting monitoring and supervisory visits in the targeted oblasts, districts, and cities. The URCS Executive Director presented results and lessons learned from the implementation of URCS and PATH's joint program "Support for Detection and Treatment of TB in Socially Vulnerable Population Groups," which is being implemented under the USAID project. Following the presentation, the collaboration between TB services and the URCS program was discussed intensively and the previous year's lessons were further considered in the planning for future implementation.

#### *Drug management*

In the reporting year, building on an assessment of pharmaceutical management practices in TB facilities, Project was working with counterparts to examine potential tools and approaches for strengthening skills and practices in four areas in need of attention: recordkeeping and recording, inventory management, quantification, and monitoring and evaluation. During an options analysis workshop, members of working groups included participants from national level, Kyiv, Kharkiv, Dnipropetrovsk, and Zaporizhya Oblasts, the city of Sevastopol, and the primary national distributor of TB medicines. The focus was on pharmaceutical management tools that would improve efficiency and operations, and improve availability of TB medicines. In coordination with the

National TB Center and the Committee for HIV/AIDS, TB, and other Socially Dangerous Diseases, Zaporizhya Oblast and Sevastopol were selected as pilot areas for testing the adapted tools. One of the needs identified by working groups was basic training in good pharmaceutical management practices, including inventory management, and implementation of these practices. MSH developed a training program and adapted materials to focus on the specific needs at oblast and rayon facilities. During the reporting period MSH provided training for quantification or other aspects of pharmaceutical management, conducted site visits to reinforce systems strengthening activities, and prepared a best practices workshop with target oblast/municipal staff, and other key stakeholders, that planned to be conducted during the extension period.

In October 2010, MSH conducted a monitoring visit to Zaporizhya. Visits to facilities found that several of the tools were regularly being used, and counterparts took concrete steps to improve inventory management and storage practices. Another site visit to Sevastopol showed continued use of the drug expiry chart and improvements in inventory management, including better organization and labeling of inventory and tracking of temperature variations in facilities.

MSH also conducted training on pharmaceutical management in Zaporizhya for TB facility staff from the oblast and all rayon facilities to introduce the tools developed in the previous year, and to address topics identified as priorities:

- recordkeeping and recording
- inventory management
- quantification
- monitoring and evaluation.

Facilitators in the training included a participant in adaptation of materials from Kharkiv, who presented information on quantification. She was particularly effective in addressing the questions of participants; MSH plans to engage additional local participants in conducting peer-to-peer training and/or monitoring visits.

Although participants in the Zaporizhya training initially felt that they had good systems in place, they reported gaining new information, which they could start using in their facilities. Participants received copies of all of the presentations, and electronic versions of the tools, including the drug expiry chart, quantification spreadsheets, and site monitoring checklist. The oblast and site level personnel particularly liked the site monitoring checklist, which provides clear guidance on expectations and a way of recording both status and performance improvement. The drug expiry chart was refined, and later a printed and laminated version was distributed to facilities for their use in the oblast TB facilities.

Overall, the following tools were refined during this period:

- recordkeeping and reporting forms, including “Pharmaceutical management stock records,” and daily administration forms
- electronic and manual tools for quantification of first and second line TB medicines
- Inventory management forms for reporting stock balance, receipt, and issues, supply order and receipts, and drug expiry
- the TB site monitoring checklist for monitoring and supervision, and pharmaceutical

### *Participation at international conferences*

According to DIP IV Activity 1.3, the project supported the participation of eight national and PATH technical experts at the 41st World Conference of the International Union against Tuberculosis and Lung Disease that took place from November 11 to 15, 2010 in Berlin, Germany. The conference offered a wide, five-day scientific program focused on innovations in TB diagnosis and treatment approaches. Also, the conference provided a platform for sharing and learning field experiences in establishing efficient TB control systems in various countries. Members of the Ukrainian delegation also completed one-day post-graduate courses on TB control components offered as part of the conference. A range of these courses included, for example, a course titled “Tuberculosis program monitoring and evaluation,” “Tuberculosis infection control: managerial, administrative, engineering, and practical aspects,” and others.

### *Collaboration with GFATM activities.*

During the reporting period, PATH Project staff used a number of opportunities to meet with the GFATM Stop TB Program management team to coordinate activities, avoid duplication of efforts at the regional level, and use donor resources efficiently. The GFATM Workplan was revised in order to remove potential duplications with the Project activities. Currently, the geographic focus of the GFATM project is on the other oblasts than the USAID project, making coordination at this stage relatively straightforward.

## **Result 2**

### **High-quality DOTS-plus (including MDR-TB, XDR-TB, and TB/HIV co-infection) services available to 30 percent of the population**

#### **DIP Objective 2. Build adequate capacity for rapid implementation of DOTS-plus for MDR/XDR-TB in the project regions**

##### *National Conference on MDR TB Case Management*

During the reporting period the project has continued to provide technical assistance to the State Service on HIV/AIDS and Other Socially Dangerous Diseases, National TB Center, TB and other experts on MDR-TB, an issue that is driven by a growing severity of the TB epidemic with almost 16 percent of newly detected TB cases and 44 percent of previously-treated TB case having multi-drug resistant TB.

The all-Ukrainian conference on Multi-Drug Resistant Tuberculosis (MDR-TB) Diagnosis and Treatment was held on May 12, 2011 in Kyiv. The conference was organized within the USAID TB Control Partnership Project in Ukraine in collaboration with the MOH of Ukraine, State Service on HIV/AIDS and Other Socially Dangerous Diseases (former Committee), WHO, and the National Institute of Phthiology and Pulmonology named after F. Yanovskyi. The conference served as a national forum to discuss the international recommendations to MDR-TB diagnosis and treatment, to raise concerns in relation to non-compliance with standard TB treatment regimens, and to suggest approaches on effective MDR-TB case management. The key stakeholders in TB control participated in the conference: Academician Yuriy Feschenko, Rector of the National Institute of Phthiology and Pulmonology; Oleksadr Fed’ko, Head of the State

Service of Ukraine to combat HIV/AIDS, TB and other Socially Dangerous Diseases; Svitlana Cheren'ko, Head of the MOH's Committee on **HIV/AIDS**, Tuberculosis and **other Socially Dangerous Diseases**; Ihor Pokanevych, Head of WHO Country Office in Ukraine; faculty members of the National TB Institute; chief doctors and other health care providers representing regional TB dispensaries and polyclinics; and other stakeholders. Representatives of the Estonia National MDR-TB Control Program, WHO Country Office in Ukraine, and PATH (Tamara Tonkel' and Tamara Ivanenko) made presentations on international approaches in effective MDR-TB case management. Around 200 participants took part in this national conference.

On May 13, 2011, the day after the National Conference on MDR TB an ad-hoc meeting of project partners was conducted in which 37 representatives of TB services from project sites took part. The meeting was devoted to the sharing of experience of the oblast Consultation Commissions on MDR TB in providing adequate TB treatment to MDR and XDR TB patients according to the international anti-TB practices. Each project region presented their achievements, innovations, challenges, and suggested solutions. Participants reported that this meeting was very useful because of the possibility of the peer experience exchange.

The project provided technical support to the National Workshop, "Providing High-Quality Health Care to MDR-TB Patients in Ukraine," which took place in Kyiv on January 25. The workshop gathered together 110 Chief Doctors of the oblast, rayon and city TB dispensaries and chief doctors of TB hospitals of the penitentiary system. The conference raised attention to the compliance with the international treatment regimens and suggested approaches on effective MDR-TB case management. PATH staff Tamara Tonkel presented the analysis of the quality of case management of MDR-TB based on the results of supervisory visits conducted within the project.

To address the growing burdens of multidrug resistant TB (MDR-TB) and following the special request from the Sevastopol City TB Dispensary, one four-day training, "Organizing DOTS-based TB services at specialized TB facilities. Principles of MDR-TB case management," was conducted in October 2010 in Sevastopol. Twenty-five TB doctors providing inpatient and outpatient services in Sevastopol took part in this training event. The training was conducted by a team of trainers from the Phtisiology Chair of the National Medical Academy of Postgraduate Education named after P. Shupyk (Olga Nikolayeva), Sevastopol City TB Dispensary (Galina Dubrovina), and PATH (Tamara Tonkel). During the training, MDR-TB case management was addressed as a part of overall TB-case management. The participants were able to review the international recommendations for effective MDR-TB case management and to discuss organization of services, diagnosis, treatment, management of adverse effects of second-line TB drugs, infection control, and other MDR-TB-related issues.

A large amount of training time was devoted to the organization of treatment of patients with MDR-TB. PATH applied an advanced training approach—after each trainer's presentation, the participants were suggested to consider real cases from the everyday practice of TB doctors from Sevastopol and to review the inpatient and outpatient record books, X-ray images, TB-related recording forms, in particular, TB 01 and TB 03 statistical forms, and the laboratory data for the entire period of patient's treatment. The participants discussed the MDR-TB treatment regimens that could be suggested considering that all necessary anti-TB drugs were available. Much attention during the training was paid to the case management of TB-HIV co-infected patients. The TB doctors participating in the PATH training in Sevastopol developed an algorithm of

registration and rapid relief of various side effects that patients could develop while receiving anti-TB drugs and applied the developed algorithm when analyzing various case studies.

*Ongoing Support for further development of Dnipropetrovsk Center of Excellence (DIP IV, Activity 2.1)*

Per DIP IV, Activity 2.1, PATH continued to provide ongoing support to the Ukrainian Center of Excellence for MDR-TB Case Management in Dnipropetrovsk, which has been established under the project. In Year Four, PATH continued to work on strengthening the capacity of Ukrainian specialists to address the growing burden of drug-resistant TB (DR-TB).

In order to launch a series of trainings for Ukrainian specialists conducted by the Ukrainian Center of Excellence in Dnipropetrovsk, PATH provided further support for the development and operations of the Center. In the first quarter of Year Four, Dr. Tamara Ivanenko from PATH visited the Center of Excellence and the TB laboratory of the Dnipropetrovska Oblast TB Dispensary and assessed the readiness of the Center of Excellence to conduct a series of trainings for clinicians and laboratory specialists from the project targeted oblasts. The first three-day training was conducted for heads of clinical diagnostic laboratories, laboratory physicians and microbiologists titled “Laboratory diagnosis of TB by smear microscopy: quality assurance of smear microscopy in clinical diagnostic laboratories.”

In the second quarter of Year Four, one of the key trainers of the Dnipropetrovsk Center of Excellence, Dr. Avdonina, enhanced her skills through participatory co-training work with PATH Program Officer, Dr. Tamara Tonkel. In addition, the Head of the Center of Excellence and the chief of the Level III laboratory increased their skills and gained state-of-the art knowledge in diagnostic approaches at the training on “International Principles of TB Management, Epidemiology and Laboratory Diagnosis” in London, UK.

In the third quarter of Year Four, PATH coordinated with the Dnipropetrovsk Oblast Health Care Administration, the Dnipropetrovsk Oblast TB Dispensary, and the Dnipropetrovsk State Medical Academy to develop a schedule of trainings for TB doctors, laboratory specialists, M&E specialists and other health care providers working in Dnipropetrovska oblast and a group of interns who studied at the Dnipropetrovsk State Medical Academy.

Finally, during the fourth quarter, the Dnipropetrovsk Center of Excellence conducted nine (9) trainings on STOP-TB Strategy components, including DOTS principles, MDR-TB case management, TB/HIV, laboratory diagnosis, and TB program monitoring and evaluation. These trainings have been conducted by the trained trainers from the Center with the supervision of the PATH specialists. It proofed the readiness of the Cnter to conduct high level trainings independently. Overall, 129 specialists from Dnipropetrovska Oblast took part in this series of trainings.

More detailed information on the cascade of trainings conducted at the Dnipropetrovsk Center of Excellence is summarized in Table 4 below.

**Table 4. Training activities conducted by the Ukrainian Center of Excellence for MDR-TB Case Management in Dnipropetrovsk in the fourth quarter of Year Four (July 1, 2011 to October 30, 2011) of the TB Control Partnership Project in Ukraine.**

Administrative Territory	Title of Training	# of Participants and Type of Service	Venue of Training	Date of Training	Trainers
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<b>Administrative Territory</b>	<b>Title of Training</b>	<b># of Participants and Type of Service</b>	<b>Venue of Training</b>	<b>Date of Training</b>	<b>Trainers</b>
Dnipropetrovska Oblast	Organizing DOTS-based TB services at specialized TB facilities.	15 participants: 13 TB doctors from the civil sector and 2 TB doctors from the penitentiary sector	Dnipropetrovsk Center of Excellence	July 20 - 22	Lead Trainer – Olga Pavlova, co-trainers – Olena Vorontsova, Yevgeniya Koryachko
	Organization of high-quality DOTS-based TB services at PHC clinics	13 general practitioners and family doctors from Dnipropetrovska Oblast	Dnipropetrovsk Center of Excellence	July 25 - 27	Lead Trainer – Olga Pavlova, co-trainers – Yevgeniya Koryachko, Alla Kotelnikova
	Organizing DOTS-based TB services at specialized TB facilities. Principles of MDR-TB case management	17 TB doctors from Dnipropetrovska Oblast TB hospitals	Dnipropetrovsk, Center of Excellence	Sept. 6 - 9	Lead Trainer – Tamara Tonkel, co-trainers – Olena Vorontsova, Oksana Avdonina
	Organizing DOTS-based TB services at specialized TB facilities and PHC clinics. Principles of TB case management	15 interns of Dnipropetrovska State Medical Academy: 3 TB specialists and 12 PHC providers	Dnipropetrovsk Center of Excellence	Sept. 12 - 14	Lead Trainer – Dmytro Kryzhanovskiy, co-trainers – Oksana Avdonina, Mariya Fonariova, Natalia Marchenko, O. Drozd, N. Vidischeva, V. Freivald
	Laboratory diagnosis of TB by smear microscopy. Quality assurance of smear microscopy in laboratories	14 laboratory specialists of Dnipropetrovska Oblast	Dnipropetrovsk Center of Excellence	Sep. 14 - 16	Trainers: Mariya Fonariova, Yuliya Chernyavska. Supervisor: Nina Zhrebko
	Training on the	15 participants: 12 TB doctors, 2 statisticians, 1 nurse from Dnipropetrovska Oblast	Dnipropetrovsk Center of Excellence	Sept. 13 - 16	Lead Trainer – Alla Kotelnikova, co-trainers – Yana Levchenko, Oksana Chabanenko. Supervisor: Oleksiy Bogdanov

Administrative Territory	Title of Training	# of Participants and Type of Service	Venue of Training	Date of Training	Trainers
	Developing the Monitoring and Evaluation (M&E) System and Procedures	15 participants: 10 TB doctors, 3 statisticians, 2 nurses from Dnipropetrovska Oblast	Dnipropetrovsk Center of Excellence	Sept. 20 - 23	Lead Trainer –,Alla Kotelnikova, co-trainers – Yana Levchenko, Oksana Chabanenko. Supervisor: Oleksiy Bogdanov
		15 participants: 6 TB doctors, 5 statisticians, 4 nurses from Dnipropetrovska oblast	Dnipropetrovsk Center of Excellence	Sept. 27 - 30	Lead Trainer –,Alla Kotelnikova, co-trainers – Yana Levchenko, Oksana Chabanenko. Supervisor: Tamara tonkel
	TB/HV Interpersonal Communication and Counseling	10 participants: 4 infectionists, 1 epidemiologist, 3 general practitioners, 2 nurses from the civic and penitentiary sector of Dnipropetrovska oblast	Dnipropetrovsk Center of Excellence	July 27 - 29	Trainers: Nataliya Zaika, Olga Pavlova

*Supporting participation of selected TB providers from project sites in the international MDR- TB training courses (DIP IV, Activity 2.2)*

According to DIP IV, Activity 2.2, it is planned to support the participation of TB providers from each project oblast and from the national level in a series of international MDR-TB and XDR-TB training courses in order to enhance their knowledge and practical skills in MDR-TB diagnosis, treatment, infection control, monitoring and other MDR-TB related services through participation in the basic training course on essential components of MDR-TB case management, including hands-on practice. In the reporting period, PATH supported participation of the Ukrainian TB specialists according to the following schedule:

- Training course “Organization of Treatment of MDR-TB Patients”, April 4–8, Riga, Latvia, 3 participants.
- Training course “Organization of Treatment of MDR-TB Patients”, April 18–22, Tallinn, Estonia, 3 participants.
- Training course “Organization of Treatment of MDR-TB Patients”, April 25–29, Tomsk, Russia, 5 participants.

### **DIP Objective 3. Provide access to TB/HIV co-infection services to 30% of the population**

In the reporting period, PATH conducted National workshop on TB/HIV case management from November 17 to November 19, 2010. Dr. Alberto Matteelli, PATH's consultant and international expert in TB/HIV case management provided technical lead to this workshop. Dr. Alberto Matteelli and PATH staff, in the frame of this workshop, conducted a plenary presentation on TB/HIV case management and two teaching events—a mini-training and a case study session on TB/HIV clinical case management. The mini-training session titled "Components of effective case management of the HIV/TB co-infection," showed the main challenges in case management of TB/HIV co-infected patients in Ukraine compared with international recommendations, and analyzed TB/HIV co-infection clinical cases and clarified options to improve detection and case finding, diagnosis, prevention, and treatment standards.

A plenary session presentation titled "Modern approaches to TB/HIV co-infection prevention and treatment based on the evidence medicine principles," recalled the international recommendations on TB/HIV activities, showed the progresses in implementation and constraints which will need to be faced in the near future. The recommendations of the TB/HIV working group of the STOP-TB Partnership for the European Region were presented, focusing on the need to integrate the HIV and TB programs and to establish mechanisms for ensuring access to quality prevention and care interventions for vulnerable populations, namely drug addicts, prisoners, and migrant populations. A clinical hearings session was aimed at exchanging information on the practical aspects of clinical management of patients with HIV/TB co-infection focusing on treatment standards, through presentation and discussion of clinical cases.

#### *Improving TB/HIV prevention, screening, diagnosis, treatment, and care*

Per DIP IV, activity 3.2, PATH provided technical assistance in the development of Collaborative Action Plans for 2011 and 2012 in all project target regions in order to ensure that these plans are being developed based on monitoring results of TB/HIV services. For example, in Zaporizhya, coordination of efforts in screening, detection, diagnosis, and treatment of TB/HIV co-infection and Zaporizhska oblast's Order on the creation of a TB/HIV Joint Medical Commission for improvement of treatment for TB/HIV patients and related activities in the Action Plan for the next year were approved. The main goal of the plan is the improvement of access to TB/HIV care and treatment at the rayon level.

#### *Human resources capacity building in TB/HIV management*

During this reporting period, PATH continued working to improve the knowledge and skills of health care providers to implement TB/HIV collaborative practices. Per DIP IV, activity 3.5, relevant activities included organization and technical leadership at the Review Conference "TB/HIV co-infection" in Zaporizhya for 120 TB and infectious disease doctors of rayon level on October 21, 2010.

The project's focus in Year 4 on monitoring and evaluation of results and on support to TB/HIV collaborative activities was also reflected at the workshop "Deficient Practices in TB/HIV case management revealed by regular monitoring," convened for 80 infectious disease doctors of Zaporizhska Oblast in Zaporizhya on October 20, 2010.

### *TB/HIV surveillance, monitoring and evaluation*

TB/HIV surveillance and monitoring of TB/HIV collaborative services continues to be a critical challenge in TB/HIV management in Ukraine. In fact, it has not yet been possible to get accurate data, because of inconsistency in data on TB/HIV received from TB and HIV services as there is no agreement on basic definitions, indicators and absence of cross-checking procedures of the reported TB/HIV cases and therefore to perform meaningful analysis, to guide management decisions and next steps for adequate response to the growing TB/HIV burden.

Findings of previous monitoring visits are summarized as follows:

- There is insufficient knowledge on TB/HIV clinical case management among TB and HIV specialists. Many of them express a need for additional trainings in clinical aspects of TB/HIV case management.
- Lack of rapid laboratory diagnosis of MDR-TB/HIV cases and reliance on too long for TB/HIV patients conventional TB culture testing jeopardize adequate diagnosis and treatment that is able to stop quick generalization of TB disease in HIV infected patients.
- The governmental system of monitoring and evaluation of TB/HIV activities is virtually absent.

In order to support of strengthening of surveillance of TB/HIV cases and monitoring and supervision of TB/HIV case management (DIP IV, Activity 3.9) PATH provided technical assistance to the State Service for HIV and Socially Dangerous Diseases in developing of table of indicators for TB/HIV monitoring that was based on the WHO TB/HIV indicators Guide and, with active stakeholder participation, adjusted during the project implementation. The table was included in the draft Order on TB/HIV case management. PATH expects improvement of monitoring and evaluation in the regions after the Order is approved. The inclusion of indicators for evaluation of TB/HIV activities is a key factor contributing to the sustainability of project activities in the technical area of TB/HIV monitoring.

During the reporting period, PATH provided on-going support to strengthen the monitoring and evaluation system at the regional level. Per DIP IV, activity 3.6, project target regions' TB/HIV coordinators are in the process of developing plans of monitoring visits. PATH and consultants conducted monitoring visits to project oblasts for evaluation of clinical management of TB/HIV cases and TB/HIV collaborative activities. Recommendations were provided as follows:

1. Oblast Health authorities should establish a system of monitoring and evaluation of TB/HIV activities which includes at least:
  - Rate of HIV testing and positivity rate among TB cases.
  - Treatment outcome of TB among TB/HIV co-infected persons as compared to uninfected ones.
  - Number of HIV persons who are screened for TB.
  - Incidence of TB cases among HIV registered cases.
  - Number of HIV infected persons who receive an isoniazid preventive therapy course.
  - Antiretroviral (ARV) pharmaceuticals use among TB cases and timing of ARV start.

2. The Oblast TB Dispensary and other central TB clinics should achieve a high quality of laboratory diagnosis of TB and MDR-TB by consistent availability of media for liquid culture and drug susceptibility testing.
3. The Oblast TB Dispensary and other central TB clinics should shorten the diagnostic delay of MDR-TB by the use of rapid tests.

Following the recommendations, project oblasts made significant efforts to enhance management of the TB/HIV collaborative activities. For example, in May 2011, data on voluntary counseling and testing (VCT) performance from monitoring and supervisory visits to TB institutions were reviewed at an oblast-level meeting in Zaporizhya. The meeting participants – 78 providers representing TB institutions of the entire Zaporizhska oblast - discussed the current VCT legislation, objectives and procedures for HIV testing and counseling, supervision, monitoring and evaluation of counseling quality, and ways to strengthen coordination of HIV-and TB- diagnostic services. Similarly, data from monitoring and supervisory visits to TB and HIV institutions of the oblast were discussed at a review meeting in Berdyansk at the end of May 2011. This discussion focused on TB/HIV case management. More than 100 providers of TB and HIV services in the oblast discussed ways to improve detection, diagnostics and treatment of TB/HIV co-infection, in particular: monthly meetings of TB and HIV service providers to discuss and resolve everyday issues, quarterly reviews of clinical TB/HIV case management, additional on-the-job training in TB/HIV diagnosis for the staff of the oblast TB dispensary and the AIDS center, social mobilization at the rayon level to improve provision of social and psychological support to TB and HIV patients, and possibilities to establish new HIV-service NGOs at the rayon level. Further, data from monitoring and supervisory visits to TB and HIV institutions of the oblast were discussed at a review meeting in Zaporizhya at the end of the September 2011. This discussion focused on TB/HIV case management, cohort analysis, especially on the results of an analysis of TB/HIV deaths. Main causes of death included ineffective treatment, poor treatment adherence due to drug addiction or alcoholism and limited or no access to substitution therapy or psychosocial support, late diagnosis of TB among HIV-infected persons due to patient delays in seeking care as well as to poor provider skills and poor access to equipment needed to diagnose extra pulmonary TB. Proposed solutions included:

- Access to substitution therapy for TB patients;
- Timely administration of HAART for HIV-infected TB patients.
- Involvement of narcologists and psychologists in TB and TB/HIV case management; and
- Involvement of HIV-service NGOs in intensive TB case finding among drug users and PLHIV.

During the reporting period, PATH analyzed the implementation of TB/HIV activities with the representatives of the National Medical University, the National Center of Prevention and Control of AIDS, and the State Department on HIV-infection and other Socially Dangerous Diseases and made a decision to conduct a National Conference on TB/HIV to discuss the issues and methods to improve TB/HIV prevention, detection, diagnosis and treatment.

*Conducting National conference “Current issues in TB/HIV co-infection r”*

On March 29-30, 2011, PATH, in collaboration with the National Medical University, the National Center for Prevention and Control of AIDS and the State Department of Ukraine on

HIV-infection and other Socially Dangerous Diseases, conducted a conference entitled, “Current issues in TB/HIV co-infection control.”

**Table 6. Composition of the conference participants**

#	Types of participants	Number
1.	TB specialists	55
2.	HIV specialists	28
3.	TB specialists from the Prison Department	13
4.	Academic staff of medical schools	40
5.	Autopsy specialists	12
6.	Public health officials	8
7.	NGO representatives	6
	<b>TOTAL</b>	<b>162</b>

The conference agenda included current issues on HIV/TB co-infection in Ukraine, TB relapse in HIV-infected patients; AIDS Services during an epidemic of TB and HIV; ways to improve provision of health care co-infected patients in Ukraine; TB Diagnosis in HIV-infected patients; WHO policy for collaboration in the field of TB/HIV; monitoring and assessment of TB/HIV co-infection control activities; implementation of the Global Fund Programs on TB/HIV co-infection; research findings regarding stigma and discrimination of TB patients; international recommendations on TB/HIV co-infection control programs implementation, effectiveness of antiretroviral therapy in HIV/TB co-infected patients; and morphologic aspects of TB and HIV/AIDS pathology.

**Key outcomes of the conference:**

- Deepened understanding of effective approaches to TB/HIV case management and National approach to the collaborative TB/HIV program management;
- Improved communication and collaboration of various health services involved in provision of care for TB/HIV patients;
- An opportunity to discuss a range of issues related to TB/HIV prevention, detection, diagnosis and treatment to improve the situation in Ukraine,
- Developed new ideas regarding improvement of collaboration among various services
- Proposed effective ways for addressing medical and social problems at the regional level

*Continue enhancing mechanisms to ensure transparency and accountability at oblast/provincial, local and site levels of TB-related decision-making and implementation of policy, legal, regulatory and fiscal standards related to TB/HIV prevention, diagnosis, treatment and care. (DIP IV, Activity 3.2)*

During the reporting period, PATH provided technical support to Oblast Coordination Councils in monitoring and evaluation of TB/HIV activities, in conducting review meetings, and in developing new activities to address weaknesses in implementation. As a result, shortcomings in TB, HIV and TB/HIV co-infection detection were identified in many regions. For example, in the Razdolne rayon of AR Crimea, poor detection of TB/HIV cases caused primarily by a lack of knowledge among medical providers of primary health care. The Coordination Council of AR Crimea requested, in particular, that PATH conduct a training to improve TB/HIV case management. This

training took place on September 7-9, 2011, in Razdolne, Crimea, for 21 participants. The key objectives were to improve participants' knowledge of TB, HIV, and TB/HIV case management, discuss approaches to diagnosis and treatment of TB, HIV, and TB/HIV co-infection, and develop skills in implementing the diagnostic algorithm using a questionnaire. According to the results of the post-training evaluation, most participants found the training to be "excellent": About 98% noted excellent professionalism of the trainers and 96% gave the highest mark to the relevance of the information. Participant knowledge on selected topics improved by 42% compared to the pre-training evaluation. Information on screening of patients, diagnosis and treatment of TB/HIV co-infection, and infection control was in greatest demand.

During the reporting period, PATH conducted three TB/HIV case management trainings for TB and infectious disease physicians from Kharkivska, Khersonska, Zaporizhska, and Dnipropetrovska oblasts, and Kiev City. The goal of the trainings was to strengthen cooperation between various public health institutions, social services and NGOs to improve TB/HIV case management. The key objectives were to improve participants' knowledge of TB/HIV case management, discuss a multi-disciplinary approach to TB/HIV case management, and develop skills in creating collaboration plans, and implementing program monitoring and evaluation. According to the result of the post-training evaluation, most participants found the training to be "excellent". 96 percent of participants admired excellent professionalism of the trainers; 80 percent gave the highest mark to the relevancy of the information. Participants' knowledge of selected topics improved by 12-46 percent. Information on screening of patients, diagnosis and treatment of TB/HIV co-infection, and infection control was in greatest demand.

*Reprint and disseminate informational materials for vulnerable populations for TB/HIV prevention and care (DIP IV, Activity 3.1)*

Based on PATH's assessment, it was clear that HIV-service NGOs needed printed educational materials on TB. PATH selected two TB brochures and one booklet developed previously for reprinting. PATH had 25,000 copies of each brochure printed, as well as 20,000 copies of the booklet printed during the previous quarter. All copies of printed materials have been distributed to 10 HIV-service NGOs involved in TB screening and referral. According to the distribution plan, all materials were subsequently distributed to the clients, their family members and friends, and to AIDS Centers for use as supporting materials in post-test counseling of PLWHA.

*Provide technical assistance and facilitate development of the National Order on the TB/HIV Collaborative Case Management (DIP IV, Activity 3.3)*

In June 2010, PATH Consultant and the Director of the WHO Collaborative Training Center in Tradat, Italy (Sondalo), Dr. GB Migliori, and Project team conducted a monitoring visit to project oblasts and National Institutions and provided recommendations for improvement of TB/HIV case management in Ukraine. The need for a national guiding document on Collaborative TB/HIV Program management was the key recommendation. In September 2010, after intensive PATH advocacy efforts and discussions with all partners and stakeholders, a National Working Group was established with TA from Project to develop an order on TB/HIV collaborative program and case management to ensure the sustainability of implementing client-centered international approaches to TB/HIV case management introduced under the Project. In accordance with the workplan, the Working Group met five times between October, 2010, and February 2011 to draft the Order, which was subsequently uploaded to the State Service's web-site for public discussions. During the reported year, the draft order was updated based on the feedback received during public

discussion, and it is now being sent for approval to MOH for approval. PATH is intensively tracking the process of the order's approval.

*Continue implementing TB symptom screening, referral process, and treatment support using HIV service organizations and PLHIV NGOs as key service points (DIP IV, Activity 3.7)*

During the reporting period PATH continued providing technical assistance to the Coalition of HIV-service Organizations (NGOs) under the subcontract established earlier, including assistance with the development of plans, monitoring tools, capacity building, joint assessment visits and joint analysis of findings. In their turn, the NGOs receive technical support from the Coalition through e-mail and telephone consultations and supervisory and monitoring visits.

The All-Ukrainian charitable foundation, "The Coalition of HIV-Service Organizations" (Coalition) in the framework of implementation of the PATH project "Partnership in TB control in Ukraine" funded by USAID, from 1 September 2010 to 1 September 2011 performed subcontract, and according to sub-contract, Coalition with TA from PATH conducted the following tasks:

- Capacity building of local NGOs in TB/HIV work aimed on early TB detection among clients;
- Support of organizing of demonstrative sites and study visits of representatives of NGOs and state institutions for sharing the positive experience of the TB/HIV work;
- Determination of the needs in trainings of NGOs and their further education.

According to work plan that was developed at the beginning of the program implementation, the Coalition has conducted the following activities:

- developed a task order and announced a competition in two areas:  
Area 1: «Creating of demonstrative sites for sharing experience on best practices in TB/HIV co-infection work» and Area 2: «Activity aiming early TB detection, redirecting and providing social service for TB patients».

On November, 8, 2010 according to decision of the commission of experts were supported applications of such organizations:

Area 1:

1. Charitable foundation «Spodivannya» - Zaporizhya city.
2. International charitable foundation «Vertikal» - Kyiv city.

Area 2:

1. Apostolivska rayonna NGO "Zirka nadii" – Nikopol, Dnipropetrovska oblast.
2. Charitable organization «Svit bez zalezhnosti» - Kyiv city.
3. Charitable organization «Charitable foundation«Vse mozhlyvo» - Melitopol, Zaporizhska oblast
4. NGO «Doroga zhyttia» - Dnipropetrovsk city.
5. NGO «Energiya zhyttia» - Nikopol, Dnipropetrovska oblast.
6. Dnipropetrovska oblasna NGO «Perekhrestya» - Dnipropetrovsk city.
7. Republic NGO «Youth NGO «Tvoya Peremoga» - Bakhchisaray, Crimea.
8. Kharkivska oblast branch All-Ukrainian charitable foundation «All-Ukrainian Network of PLWA» – Kharkiv city.

Organizations that won in the first area have already had an experience with TB/HIV and rather good indicators of dispensary among their clients. They worked with PLWA as well as with the representatives of the risk groups (drug users) and can share their experience in

organization of infection control issues, early TB detection and support of client during TB diagnostic and treatment.

Organizations that were selected for project implementation in the second area mostly provided services for PLWA; half of them worked with the representatives of the risk groups (drug users, PSB, homeless people). Only one of them conducted the TB/HIV project, others have no such experience. This organizations was selected because of needs of three Is implementation and hypothetical high level of TB among their clients because of absence of TB detection during more than 2 years.

Two trainings for the leading staff and for social workers/psychologists of the selected organizations were conducted. During the trainings participants got basic knowledge about TB, studied the role of NGOs in fighting epidemic, and learned the requirements of the infectious control. Both trainings attended TB-specialists. The total number of the participants in both trainings is 49. In general participants highly evaluated the importance of the new knowledge for them from the training, especially:

- Specifics of TB treatment for PLWA;
- Role of dispensary;
- Infectious control;
- Necessity of NGO work in the HIV/TB area;
- Necessity of fulfillment the course of TB treatment;
- Differences in development of TB treatment adherence.

During time of project implementation 4 monitoring visits were conducted to each of the organizations. The first visit was pre-monitoring. The pre-monitoring showed the most organizations need improvement of infectious control and set-up of the process of dispensary: in most organizations there were no schedule of wet cleaning, airing and quartz cleaning, participants of the “self-help” groups were not regularly inspected on TB, in some of the organizations the staff was not inspected on TB. According to pre-monitoring results organizations received corresponding recommendations and during the project the mentioned weaknesses were removed.

According to Area 1 organizations got internships:

- International charitable foundation «Vertykal»: 51 NGO representatives.
- Charitable foundation «Spodivannya»: 12 medical providers from the regions of Zaporizhska oblast, 1 representative of rayon center of social service for family, children and youth, 1 representative of the Crimean center for children and youth living with HIV and 42 representatives of NGOs.

During the internship the following topic were observed: motivation work with clients in TB/HIV projects, activities of infectious control in the work of HIV-service organizations, specifics of TB treatment for HIV patients, mutual influence of the projects on harm reduction and projects on care and support of PLWA in the context of TB prevention and treatment, were provided the communication between staff of AIDS center and TB-hospital.

For intensive TB case findings among NGOs clients were conducted TB screening and counseling for 2,058 clients. Of these, 1,675 clients (81%) were directed to medical facilities for TB diagnostic testing. Of those referred, 1,189 clients (71%) were tested for TB, and 308 TB cases (26% of those tested, or 15% of total counseled) were detected and directed for treatment to TB facilities. Nearly all (305) started treatment.

During the work organizations received hand-outs from PATH: «Letter of self-control of TB disease» and “TB is treatable: questions and answers”. All materials were successfully distributed

among NGOs' clients, doctors of AIDS centers for using during counseling and distribution among HIV-infected persons.

The project showed that HIV-service NGOs in their work very often meet clients with TB that is why it is very important to train representatives of such organizations and practical implementation of their work on activities of infectious control. That's why careful analysis of project implementation results conducted and information materials with recommendations for HIV-services organizations in the development process.

*Conduct trainings for providers (doctors and nurses) on interpersonal communication and Diagnostic Counseling and HIV Testing (DCT) (DIP IV, Activity 3.8)*

According to the training schedule, three trainings entitled, "Effective Communication and Counseling on TB/HIV," were conducted for 42 TB and infectious disease physicians and epidemiologists of Dnipropetrovska, Luganska and Odeska oblasts. The focus of the training was on principles and methods of working effectively with TB and HIV patients. The training objectives were to present TB and HIV epidemiology, discuss problems of TB/HIV co-infection, present counseling principles and effective communication methods, and develop the communication and counseling skills of the participants. Practical sessions provided an opportunity to practice the skills, discuss the issues of stigma and discrimination and the burn-out phenomenon and how to prevent it. The training also covered the issues of interpersonal communication, effective counseling methods, and counseling on TB and HIV infection and on voluntary counseling and testing of TB patients for HIV. A post-training evaluation showed that participant knowledge had improved by 26% and the objectives had been successfully accomplished. More information about the events is presented in the Summary Table of Trainings and Conferences.

*Conduct trainings for providers (doctors and nurses) on interpersonal communication and Diagnostic Counseling and HIV Testing (DCT).*

According to the training schedule, seven trainings "Effective Communication and Counselling on TB/HIV" were conducted for TB specialists, infectious disease physicians and epidemiologists of Kharkivska, Dnipropetrovska, Luganska and Odeska oblasts. The focus of the training was on principles and methods of effective work with TB and HIV patients.

The objectives of the training were to present TB and HIV epidemiology, discuss specific problems of TB/HIV co-infection, present counseling principles, effective communication methods and developing respective skills of the participants. Practical sessions provided an opportunity to practice the skills, discuss the issues of stigma and discrimination, and the burnout phenomenon and how to prevent it. The training also covered the issues of interpersonal communication, effective counseling methods, counseling on TB, HIV infection, voluntary counseling and testing of TB patients for HIV. A post-training evaluation showed that the participants' knowledge of the above topics had improved by 16 -46 percent, and the objectives had been successfully accomplished.

### **Result 3**

#### **Reduced policy, legal, regulatory, fiscal, and attitudinal barriers inhibiting access to TB and TB/HIV co-infection prevention, diagnosis, treatment, and care according to international DOTS-based standards.**

##### **DIP Objective 4. Create an enabling environment for DOTS implementation by removing or reducing existing policy and attitudinal barriers**

In order to further provide technical assistance on TB and TB/HIV strategy for oblast coordination councils (CC) (DIP IV, Activity 4.3) and provide ongoing technical support to Regional TB Program Units (DIP IV, Activity 4.4), during the reporting period, PATH's consultants visited Khersonska and Kharkivska oblasts, AR Crimea, and Kyiv City to monitor and provide technical assistance to the Coordination Councils' (CC) coordination efforts for TB and TB/HIV programs. The objectives of these visits were to further provide technical assistance on TB and TB/HIV strategy development for oblast coordination councils (CC) (DIP IV, Activity 4.3), provide ongoing technical support to Regional TB Program Units (DIP IV, Activity 4.4), and to update the National Coordination Council as well as the NTP regarding on-the-ground progress. They reviewed how the oblast and rayon councils were functioning and how much supportive they were to their respective HIV and TB control programs. Specifically, the role of District TB Coordinators in ensuring high success rates of DOTS interventions through strong patient-centered inpatient and outpatient (ambulatory) care and support activities was assessed. The main focus was how both the inpatient and ambulatory phases were being implemented and how patients would be followed as they returned home and what support services were being provided to complement the basic DOTS intervention.

The overall finding of the monitoring was a significant improvement in the CCs' understanding and "political will" to provide leadership for support of their respective TB programs. It is obvious to view CCs' support of the STOP TB Program implementation as an indicator of local government readiness not only to be a partner, but also a proactive stakeholder.

The particular issue emphasized by the operational capacity of the CCs and the team's overall observation was the growing capability of CCs' monitoring functions, though it varies from site to site. The councils were meeting regularly and monitoring closely the progress made in the implementation of previous decisions through working groups, information dissemination to districts and eventually to heads of village councils. The consultants found out that there was engagement of the oblast and rayon governments in social support service provision to patients at various administrative levels. At the same time there are growing concerns regarding the lack of uninterrupted and consistent drug supply system on the ground and actual lack of both first- and second-line drugs in local TB facilities. Also, although the consultants found out that there was engagement of the oblast and rayon governments in social support service provision to patients at various administrative levels, there remains a significant number of people who were categorized as "asocial" (homeless, abusers of drugs and alcohol, former prisoners, unemployed people, etc) and a massive scaling-up of social service support aimed at not only these patients but also their families to assure treatment adherence and completion is still needed.

*Build capacity of oblast level TB and HIV Coordination Councils (CC) members on TB/HIV collaborative program management through trainings.*

A collaborative approach to trainings for oblast level Coordination Councils was developed in cooperation with the USAID-funded Project on HIV/AIDS service capacity building in Ukraine implemented by Futures. A coordinated schedule of training events and a coordinated training module entitled "Development of regional Coordination Councils activities to combat TB and HIV based on inter-sector collaboration," has been developed. An effective collaborative approach to TB, HIV, and TB/HIV co-infection case management was presented at six trainings for Coordination Councils (CC) members in Mykolaivska, Khersonska, Dnipropetrovska, Luganska, Zaporizhska, Kyivska, Kahrkivska, Odeska oblasts as well as AR Crimea, Sevastopol City, and Kyiv City (participants from Mykolayivska and Kyivska oblasts were supported by Futures). The objectives of the training were to improve CCM members' skills in organization of inter-agency collaboration to combat TB/HIV co-infection, discuss new tendencies and recommendations on organization and coordination of efforts for improvement of TB/HIV collaborative program and case management. The participants evaluated the training positively; their knowledge of the above topics improved by 21 percent. The described cooperation of the USAID-funded projects proved to be very effective because it provided an opportunity to use the US Government funds more efficiently, approach the same target group in comprehensive way, and to leverage the intellectual and information resources of the two projects.

PATH continued to support the MOH HIV and TB Committee to raise awareness among key policymakers on global TB strategic approaches and best practices. PATH continued to participate actively in the MOH TB and HIV Committee's activities to maintain a mechanism for regularly sharing information on TB activities planned by MOH, GFATM R9 implementing partners, international and national NGOs to improve coordination of their TB-related efforts

*Supporting the publication of the All-Ukrainian journal, "Tuberculosis, Lung Diseases, HIV Infection."*

In order to further create an enabling environment for DOTS implementation and to participate in the development of TB regulations and national advocacy (DIP IV, Activity 4.1), PATH supported the publication of the All-Ukrainian scientific journal *Tuberculosis, Lung Diseases, HIV Infection*, that was initiated by the TB chair of the National Medical University named after O.O. Bohomolets. Professor Vasyl Petrenko, TB Chair Head, is chief editor of this newly published journal. This publication is currently the only specialized journal on phthiology in Ukraine. It reviews the latest theoretical and practical achievements in TB control in Ukraine and worldwide; presents modern scientific and research information on TB, lung diseases, and HIV/AIDS; and disseminates the best practices of domestic and foreign scientific schools and medical centers. In a separate section called *Legal and Regulatory Environment*, the journal publishes versatile guidance documents as well as the latest orders and regulations of the MOH and the international standards for TB diagnostics, treatment, and care. It also reports on the congresses and conferences devoted to TB, lung diseases, and HIV/AIDS. For example, the third issue of this journal published the judgment of the All-Ukrainian Conference "Human Resources Capacity Strengthening in TB Control in Ukraine," that was conducted within the TB Control Partnerships Project in September 2010 in Crimea (per DIP III activity 1.2). Thus, a nationwide audience was informed through this publication about the results of the discussion that took place during that

conference on the up-to-date approaches to the development of educational and training programs for the enhancement of pre-diploma, post-diploma, and on-the-job education of TB specialists and PHC providers in Ukraine. The fourth issue of the journal published the Resolutions of the roundtable, “Availability of antimycobacterial therapy: provision and control of quality of antimycobacterial medicines, procurement and supply management, WHO prequalification of the drugs.” Thus, a nationwide audience was informed through this publication about the results of the discussion that took place during the roundtable about the challenges and barriers to the proper drug supply and use aspects in TB control. Also highlighted was the Conference supported by the Project, “Current issues on TB/HIV coinfection control”.

The journal is published on a quarterly basis (four issues per year), and the quarterly circulation is 3,000 copies. The journal is distributed to MOH officials; TB clinics and dispensaries; AIDS centers; officials from the Ministry of Internal Affairs, Ministry of Defense, and Penitentiary Department of Ukraine; teaching staff of higher medical institutions and universities of pre- and post-diploma education; scientific medical libraries; and TB doctors, infection disease doctors, and general practitioners. The journal is also presented and distributed at national and regional medical forums.

### **III. Performance problems during the reporting period and variance from the annual implementation plan and PMEP**

Project progress has been made difficult by the following factors:

- Recent rotation in the MOH leadership
- Continuous restructuring of the NTP and creation of the State Services of HIV/AIDS and Socially Dangerous Diseases (with changing leadership)
- Understaffing of the National TB Center
- Changes in the governmental health administrations at the oblast levels
- Delays in the development and revision of much-needed regulatory documents
- Systemic changes towards more efficient TB and TB/HIV services

These factors also have negatively affected the results of previous advocacy efforts undertaken by PATH and its partners, creating the need to repeat educational and advocacy efforts aimed at new key stakeholders to ensure an enabling environment for continued implementation of the Stop-TB strategy. Decreasing national and local budgets and gaps in drug procurement and supply also may potentially impede implementation of TB control interventions that have been initiated by the project, resulting in significantly worsening treatment results in the coming months.

### **IV. Key activities planned in the 1<sup>st</sup> Quarter of the Extension Period and estimated expenditures for each result**

**Result 1.** During the remaining project period, PATH will complete all remaining project activities, review results, and provide technical assistance to ensure that gains in achieving high-quality DOTS implementation in the project regions are sustained. Supervisory visits and review meetings will be conducted in project oblasts, and TA will be provided to the Heads of the Level III Labs and microbiologists in oblasts where leadership has been recently rotated. Based on the

anticipated MOH order, e-TB Manager trainings for specialists from every project site will be conducted. Best practices for supportive supervision for TB and TB/HIV case management will be reviewed and further disseminated, as needed. In addition, the project will provide TA to the joint Infection Control Assessment Mission in collaboration with the WHO- and GFATM- supported program.

**Result 2.** Due to the MOH's delay in approving the TB/HIV Collaborative Order, PATH will need to provide TA to ensure project sites will adopt the recommended collaborative activities and gain approval through oblast-level ministerial orders.

**Result 3.** PATH will convene a final meeting of the Project for all stakeholders to disseminate lessons learned and final strategic recommendations in support of sustaining continued quality improvement of TB services

PATH also will analyze the result of collaboration with local NGOs to improve case detection, reduce diagnostic delay, and improve treatment adherence. Additionally, PATH will finalize analysis of the operational research on gender-specific behavioral patterns in relation to TB incidence in Ukraine and disseminate to the findings to stakeholders, as well as disseminate lessons learned and recommendations on supporting the continuum of care and TB treatment completion for released prisoners.

## **v. Budget and expenditures**

In the Year 4, PATH has spent \$195,164 for Result 1, \$8,882 for MDR TB-related activities, \$111,315 for TB/HIV activities to fulfill Result 2; and \$18,133 for Result 3 plus \$19,586 for Crimea activities. Totally, as of September 30, 2011 - \$353,080. In summary, as of September 30, 2011, PATH has spent \$9,098,797 in Year 1, 2, 3 and 4.

# Annex 1. TB Control in Ukraine (IQC TASC 2): Contract Number GHS-I-00-00034-00

## Year IV Annual Report (October 1, 2010–September 30, 2011) Project Performance Monitoring and Evaluation Plan

#*	Indicator	Data Source(s)	Baseline Value(s)	Target Value	Actual Value	Comments	Timing/ status
1	TB incidence rate at the national level and in each project area (oblast level)	NTP data  Oblast TB program data	Reported nationally (85 TB cases per 100,000 population in 2005) and is calculated for each region.	No target for this impact indicator—it will serve a monitoring function and for further calculation of TB surveillance and NTP performance indicators.  <b>Year I</b> (2007-2008) - TB incidence (TB case notification) rate at the national level in 2007  <b>Year II</b> (2008-2009)– TB notification rate at the national level in 2008  <b>Year III</b> (2009-2010) - TB notification rate at the national level in 2009  <b>Year IV</b> (2010-2011) - TB notification rate of the new TB cases at the national level in 2010	<b>Year I</b> 79.8 TB cases per 100,000 population  <b>Year II</b> 77.8 TB cases per 100,000 population  <b>Year III</b> 72.7 TB cases per 100,000 population  <b>Year IV</b> 68.4 TB cases per 100,000 population	An increase in reported TB incidence may indicate improved TB diagnosis and case registration rather than worsening of the TB situation.  <b>Year I</b> TB incidence rate in each project area is provided below in table 1  <b>Year II</b> TB incidence rate in each project area is provided below in table 1  <b>Year III</b> TB incidence rate in each project area is provided below in table 1  <b>Year IV</b> TB incidence rate in each project area is provided below in table 1  TB incidence (case notification ) rate for 2011 will become available in March 2012.	Annually

2 AI	DOTS-based TB case detection rate at the national level and in project regions	WHO estimates  NTP data  Oblast TB program data	DOTS-based TB detection rate for cases registered in 2006 is a baseline indicator for the project Not available for sub national regions.	At or approaching 70% case detection by 2011 in project regions (project goal).  <b>Year I</b> (2007-2008) – DOTS-based TB detection rate for cases registered in 2006  <b>Year II</b> (2008-2009)– DOTS-based TB detection rate for cases registered in 2007  <b>Year III</b> (2009-2010)– DOTS-based TB detection rate for cases registered in 2008 <b>Year IV</b> (2010-2011)– DOTS-based TB detection rate for cases registered in 2009	  <b>Year I</b> - 65% Estimated TB detection rate of new SS+ TB cases  <b>Year II</b> – 55% Estimated TB detection rate of new SS+ TB cases  <b>Year III</b> – 100% Estimated TB detection rate of new SS+ TB cases  <b>Year IV</b> – 73% estimated TB case detection rate, all forms of TB	WHO estimates of detection rates are available for TB cases notified in countries two years earlier.  WHO used a modified method to estimation this indicator.  WHO moved from estimates of the case detection rate for SS+ TB to all forms of TB (Global TB Control report 2010, p 13)	annually
3 AI	TB treatment outcomes by a cohort analysis: - Treatment success Treatment failure Default Died Transferred	NTP data Oblast TB program data	Available for project regions.  Data on treatment success rates in patients who started treatment in 2006 (based on results of cohort analysis) are reliable only in the oblasts that have been covered previously by project activities. Oblast that started analysis of TB treatment effectiveness based on a cohort analysis as part of the new M&E system - introduced in 2007 – need training and TA. A reliable overall rate in Ukraine are yet to be	At or approaching 85% treatment success by 2011 in project regions (project goal).  <b>Year I</b> (2007-2008) – treatment results for patients who started treatment in 2006  <b>Year II</b> (2008-2009)–TB treatment results for patients who started treatment in 2007  <b>Year III</b> (2009-2010)–TB treatment results for patients who started treatment in 2008  <b>Year IV</b> (2010-2011)–TB treatment results for patients who started treatment in 2009	<b>Year I</b> – (average for project regions) Treatment success – 53.5% Treatment failure – 15.7% Default – 11.6% Died – 13.2% Transferred – 6.1%  <b>Year II</b> – (average for project regions) Treatment success – 53.5% Treatment failure – 15.2% Default – 11.6% Died – 13.2% Transferred – 6.4%  <b>Year III</b> – (average for project regions) Treatment success – 55.1% Treatment failure – 15.5% Default – 10% Died – 13.7%	Note that per the cohort analysis final annual results are available in 12-15 months after the fourth cohort in a year is closed which will allow, for example, reporting treatment success in 2009 for 2007 cohorts (patients who started treatment in 2007)	annually

			calculated.		Transferred – 5.7%  <b>Year IV – (average for project regions)</b> Treatment success – 54.2% Treatment failure – 18.1% Default – 9.4% Died – 13.8% Transferred – 4.5%	2010 cohort data are in progress and will be available in March 2012.	
<b>4. AI</b>	DOTS coverage	NTP data  Project data	29%	50%  <b>Year I</b> (2007-2008) – 35%  <b>Year II</b> (2008-2009) – 40%  <b>Year III</b> (2009-2010) – 46%  <b>Year IV</b> (2010-2011) – 50%	<b>Year I</b> – 35%  <b>Year II</b> – 41%  <b>Year III</b> – 46%  <b>Year IV</b> – 50%	29% represents a proportion of the country population living in areas within the initial 8 administrative areas where WHO and PATH introduced DOTS-based TB control services.	annually
<b>5 AI</b>	Case notification rate in new sputum smear positive pulmonary TB cases	NTP data  Oblast TB program data	Not available nationally, but can be calculated for the current project regions using the available data.	No target for this indicator—it will serve a monitoring function and for further calculation of TB surveillance and NTP performance indicators.  <b>Year I</b> (2007-2008) – TB notification rate in new sputum smear positive pulmonary TB cases reported in 2007  <b>Year II</b> (2008-2009) – TB notification rate in new sputum smear positive pulmonary TB cases reported in 2008  <b>Year III</b> (2009-2010) – TB notification rate in new sputum smear positive pulmonary TB cases reported in 2009  <b>Year IV</b> (2010-2011) – TB notification rate in new sputum smear positive pulmonary TB	<b>Year I</b> - 35.3 (35.2 including Lugansk)  <b>Year II</b> – 34.5 SS+ TB cases per 100,000 population (average for project regions)  <b>Year III</b> – 32.6 SS+ TB cases per 100,000 population (average for project regions)  <b>Year IV</b> – 32.4 SS+ TB cases per 100,000 population (average for project regions)	Following a decrease of the overall TB notification rate the reported rate of new SS+ TB cases has also decreased in the reporting year (2009-2010). However, the proportion of SS+ TB cases among the overall number of pulmonary TB cases has increased that shows improved laboratory confirmation of TB cases.	annually

				cases reported in 2010	National average in 2007 - 31.5 2008 – 31.6 2009 – 29.7 2010 – 28.9 SS+ TB cases per 100 000 population.		
<b>6 AI</b>	TB microscopy laboratory coverage: Average population per TB microscopy unit	NTP data  Oblast TB program data	In the current project regions, there is one Level I lab per 68,000 population, in addition to many Level II labs performing smear microscopy.	Adequate coverage - one quality Level I laboratory per approximately 70 - 100,000 population, taking into account the need to ensure coverage of remote areas.	<b>Year I and Year II</b> – There is one Level I Lab per 55,000 population  <b>Year III</b> – 67333 average population per TB microscopy unit (Level I lab)  <b>Year IV</b> – 67174 average population per TB microscopy unit (Level I lab)	The objective is to decrease the number of labs so that the workload is sufficient to maintain quality while ensuring coverage (especially for remote areas).  Three of project targeted oblasts meet indicated target by population.	annually
<b>7 AI</b>	Proportion of TB laboratories with less than 5% error on sputum smear microscopy	Laboratory External Quality Assurance (EQA) records	Two laboratories in the current project regions functioning at this level of proficiency.	More than 70% of laboratories in the project regions with <5% error on smear results.  <b>Year II</b> – 20% of laboratories in the project regions with <5% error on smear results.  <b>Year III</b> – 50% of laboratories in the project regions with <5% error on smear results.  <b>Year IV</b> – 70% of laboratories in the project regions with <5% error on smear results.	<b>Year I</b> – n/a  <b>Year II</b> – 43%  <b>Year III</b> – 67%  <b>Year IV</b> – 72%		annually
<b>Project Data</b>							
<b>8. AI</b>	Number of people trained in any Stop TB Strategy elements	Project records	7,000 from all DOTS efforts (PATH and WHO).	10,000  <b>Year I</b> (2007-2008) – 600  <b>Year II</b> (2008-2009) – 1000  <b>Year III</b> (2009-2010) – 800  <b>Year IV</b> (2009-2010) – 860	<b>Year I</b> - 1124  <b>Year II</b> – 2408  <b>Year III</b> – 1526 participants (1499 individuals) <b>Year IV</b> – 1253 participants (1197)	Cumulative total as a result of additional training through this project only.  In Year 3 and 4, as a result of rotation of medical staff providing TB services at both TB specialized and primary	quarterly

					individuals)	health care levels the need to provide trainings remained an actual task.	
9.	Number of laboratory review meetings held in project regions	Project records	Not done currently	<p><b>Year I</b> (2007-2008) - At least 24 lab review meetings held in the initial eight project regions</p> <p><b>Year II</b> (2008-2009) – at least 18 lab review meetings held in 9 project areas (semi-annually)</p> <p><b>Year III</b> (2009-2010) – at least 20 lab review meetings held in 10 project areas (semi-annually)</p> <p><b>Year IV</b> (2009-2010) – 20 lab review meetings held in 10 project areas (semi-annually)</p>	<p><b>Year I</b> - 10</p> <p><b>Year II</b> – 16</p> <p><b>Year III</b> – 21</p> <p><b>Year IV</b> – 20</p>	PATH monitored 16 review meetings (in 8 project areas each 6 months) and provided technical support to conveying extended 7 laboratory review meetings.	Quarterly
10.	Number of project regions providing accurate and timely TB surveillance and NTP performance data	Project records	Analysis of accuracy and timeliness is not conducted currently	<p><b>Year I</b> (2007-2008) - Eight current project regions provide accurate and timely TB data for annual data collection and analysis</p> <p><b>Year II</b> (2008-2009) – nine project areas provide accurate and timely TB data for annual data collection and analysis</p> <p><b>Year III</b> (2009-2010) – ten project areas provide accurate and timely TB data for annual data collection and analysis</p> <p><b>Year IV</b>(2010-2011) – ten project areas provide accurate and timely TB data for annual data collection and analysis</p>	<p><b>Year I</b> – 8</p> <p><b>Year II</b> - 9</p> <p><b>Year III</b> – 10</p> <p><b>Year IV</b> - 10</p>	Following the implementation of the revised TB and MDR TB recording and reporting (R&R) forms the need to continue addressing accuracy of the collection of TB R&R requires to provide trainings and technical assistance.	quarterly
11	Proportion of new TB cases	NTP data Oblast TB	No accurate data available.	No target for this indicator—it will	<b>Year I</b> – n/a	There is no reliable data on	annually

	diagnosed with MDR-TB	program data		serve a monitoring function only. No measurable effect on MDR-TB prevalence can be achieved during the project period.  <b>Year II</b> (2008-2009) – data reported in 2008  <b>Year III</b> (2009-2010) – data reported in 2009  <b>Year IV</b> (2010-2011) – data reported in 2010	<b>Year II</b> - n/a  <b>Year III</b> – n/a  <b>Year IV</b> - n/a	MDR-TB. The implementation of temporal MDR-TB recording and reporting forms has been launched in 2009. Temporal MDR TB R & R forms are implemented. First data will be available in 2012. The reliability of this data will depend on whether EQC is implemented.	
12	Proportion of MDR-TB cases diagnosed as XDR-TB	Laboratory data Oblast TB program data	No data available.	High-quality data available for at least 2 project regions. No measurable effect on XDR-TB prevalence can be achieved during the project period  <b>Year II</b> – preparation in progress  <b>Year III</b> – preparation in progress  <b>Year IV</b> – preparation in progress	<b>Year I</b> - There is no reliable data on XDR-TB.  <b>Year II</b> - There is no reliable data on XDR-TB.  <b>Year III</b> - There is no reliable data on XDR-TB.  <b>Year IV</b> - There is no reliable data on XDR-TB.	Temporal MDR TB R & R forms are implemented. First data will be available in 2012. The reliability of this data will depend on whether EQC is implemented.	annually
13	Number of DOTS-Plus projects operating in project areas	Project records Oblast TB program data	Donetska Oblast is operating one DOTS Plus pilot project from 2007 with support from WHO.	2 additional pilot sites supported by the project.  <b>Year II</b> (2008-2009) – preparation in progress  <b>Year III</b> (2009-2010) – Crimea, Zaporizhya and Dnipropetrovsk  <b>Year IV</b> (2010-2011) – provide support to at least 2 additional pilot sites	<b>Year I</b> – 1 MDR TB case management program operates in Donetsk oblast with WHO support  <b>Year II</b> – 1 MDR TB case management program operates in Donetsk oblast with WHO support  <b>Year III</b> – 1 MDR TB case management program operates in Donetsk oblast with WHO support. Technical assistance and training was		annually

					provided to approximate the proper MDR-TB case management in particular in Crimea, Zaporizhya and Dnepropetrovsk		
					<b>Year IV – 1</b> Technical assistance and training was provided to approximate the proper MDR-TB case management in addition to Kherson and Luhansk oblasts.		
<b>14</b>	Number of laboratories performing quality assured TB culture and first-line drug susceptibility testing (DST) according to international standards	Laboratory EQA records Laboratory TA reports Laboratory supervision records	1 (Donetska only)	5  <b>Year II</b> (2008-2009) – preparation in progress to assure appropriate TB culture and DST  <b>Year III</b> (2009-2010) – 3 additional laboratories  <b>Year IV</b> (2010-2011) – 5 laboratories	<b>Year I – 1</b> Laboratory of the Donetsk Oblast TB Hospital only  <b>Year II – 4</b> laboratories  <b>Year III – 6</b>  <b>Year IV – 10</b>	Require ongoing education in culture testing and DST with introduction of the EQC for DST. Not yet functioning NRL remains a bottle neck for implementation of the EQC. Recently NRL received panels from SNRL and successfully passed EQC.	Quarterly
<b>15</b>	TB/HIV co-infection service coverage	AIDS Center records Oblast TB program data Project data	No data available	30% of the population countrywide have access to both TB and HIV services through improved referral, diagnosis and treatment  <b>Year II</b> (2008-2009) – 10%  <b>Year III</b> (2009-2010) – 20% of population  <b>Year IV</b> (2010-2011) – 30% of population	<b>Year I – 0</b>   <b>Year II – 15%</b>  <b>Year III – 23%</b>  <b>Year IV – 30%</b>		annually
<b>16 AI</b>	Number of HIV-infected clients attending HIV care/treatment services that are receiving treatment for TB disease	AIDS Center records Oblast TB program data Project data	No regular data available.	Recording of and provision of services to at least 300 TB/HIV cases on TB treatment will be cross-checked in AIDS and TB centers annually  <b>Year I</b> (2007-2008) - to cross-	          <b>Year I - 300</b> TB/HIV cases	Reflecting the number of recorded TB/HIV patients, the indicator will serve primarily a monitoring function.	annually

				<p>check 300 TB/HIV cases at TB and HIV AIDS centers</p> <p><b>Year II</b> (2008–2009) recording of 300 TB/HIV cases will be cross-checked in TB and AIDS centers</p> <p><b>Year III</b> (2009–2010) recording of 300 TB/HIV cases will be cross-checked in TB and AIDS centers</p> <p><b>Year IV</b> (2010–2011) recording of 300 TB/HIV cases will be cross-checked in TB and AIDS centers</p>	<p>were cross-checked in TB and AIDS centers</p> <p><b>Year II</b> – 346</p> <p><b>Year III</b> - 350</p> <p><b>Year IV</b> - 363</p>		
<b>17 PI</b>	Cumulative number of individuals provided with HIV-related palliative care including TB/HIV	AIDS Center records TB/HIV pilot project data TB program data HIV/AIDS Capacity Project data	No data available.	<p>30,000 through this project (this indicator may require revision in discussion with USAID/Kyiv Mission).</p> <p><b>Year II</b> (2008-2009) –350 TB/HIV cases receiving palliative care in health facilities in project areas which employ health professionals who were trained under the project (5,000 HIV cases in project area)</p> <p><b>Year III</b> (2009-2010) – 400 TB/HIV cases (15,000 HIV cases in project area)</p> <p><b>Year IV</b> (2010-2011) – 2800 TB/HIV cases (13,000 HIV cases in project area)</p>	<p><b>Year I</b> – 1370 TB/HIV cases</p> <p><b>Year II</b> – 1,626 TB/HIV cases (12,747 HIV cases)</p> <p><b>Year III</b> – 2,462 TB/HIV cases (13900 HIV cases)</p> <p><b>Year IV</b> – 3040 TB/HIV cases (14021 HIV cases)</p>	This project will focus on TB/HIV-related palliative care only. Other palliative care will be provided through the HIV/AIDS Capacity Project. Data collection will require coordination with that project to avoid double counting.	annually
<b>18 PI</b>	Number and proportion of registered TB patients who received HIV counseling and testing and received their	Oblast TB program data TB facility records	To be collected for project regions through review of existing TB data.	85 % of all registered TB patients by 2011.	<p><b>Year I</b> – 9,000 (60%)</p> <p>A preliminary data suggest that 1522 patients in Dnepropetrovsk Oblast which corresponds to</p>		annually

	test results			<p><b>Year II</b> (2008-2009) – at least 60% of registered TB patients in 9 oblasts receive quality counseling</p> <p><b>Year III</b> (2009-2010) – at least 75% of registered TB patients in 9 oblasts receive quality counseling</p> <p><b>Year IV</b> (2010-2011) –85% of registered TB patients in 9 oblasts receive quality counseling</p>	<p>64% and 2210 patients in Kherson oblast (65%) received HIV counseling, testing and received test results.</p> <p><b>Year II</b> – 11,349 (70%)</p> <p><b>Year III</b> – 12,200 (75%)</p> <p><b>Year IV</b> – 14,185 (85%)</p>		
<b>19</b>	Proportion of registered HIV-positive individuals who receive screening for TB	AIDS Center records	Data not available.	<p>100% of registered HIV positive individuals in project regions will receive an initial screening for TB by 2011.</p> <p><b>Year II</b> (2008-2009) – at least 50% of HIV-positive individuals in Donetsk, Zaporizhska, Khersonska, Kharkivska, Dnipropetrovska oblasts, Kyiv and Sevastopol cities</p> <p><b>Year III</b> (2009-2010) – at least 65% of HIV-positive individuals in Donetsk, Zaporizhska, Khersonska, Kharkivska, Dnipropetrovska oblasts, Kyiv and Sevastopol cities</p> <p><b>Year IV</b> (2010-2011) – 100% of new registered HIV positive individuals in project sites</p>	<p><b>Year I</b> – n/a</p> <p><b>Year II</b> – 46% of new HIV cases – in the indicated project target areas</p> <p><b>Year III</b> – 65% of HIV-positive individuals in Donetsk, Zaporizhska, Khersonska, Kharkivska, Dnipropetrovska oblasts, Kyiv and Sevastopol cities</p> <p><b>Year IV</b> (2010-2011) – 100% of new registered HIV positive individuals in project sites</p>	The National AIDS Center started implementation of a patients tracking e-system in April 2008 and will be able to provide relevant precise data in 2009.	annually
<b>20.</b>	Number of HIV	Project	No data	At least 16			annually

	service organizations participating in TB symptom screening of clients	records		<p>organizations in pilot regions  <b>Year I</b>- at least 3 organizations</p> <p><b>Year II</b> (2008-2009) – additional 5 organizations</p> <p><b>Year III</b> (2009-2010) – additional 6 organizations</p> <p><b>Year IV</b> (2010-2011) – 8 additional organizations</p>	<p><b>Year I</b> – 6</p> <p><b>Year II</b> – 18</p> <p><b>Year III</b> – 24 6 additional organizations</p> <p><b>Year IV</b> – 34 (cumulative) 10 additional organizations</p>		
<b>21 PI</b>	Number of service outlets providing voluntary HIV counseling and testing	AIDS Center data TB program data Health facility records	Data not available.	<p><b>Year II</b> (2008-2009) – 24 (cumulative)</p> <p><b>Year III</b> (2008-2009) – 36 (cumulative)</p> <p><b>Year IV</b> (2010-2011) - no additional outlets. Sustain the services in the indicated outlets.</p>	<p><b>Year I</b> - 16</p> <p><b>Year II</b> – 39</p> <p><b>Year III</b> – 53</p> <p><b>Year IV</b> - 53</p>	Because of the current HIV screening requirements in Ukraine, this indicator will also include facilities that provide provider-initiated counseling and testing and diagnostic counseling and testing.	annually
<b>22</b>	Number of individuals trained to provide clinical prophylaxis and/or treatment for TB to HIV-infected individuals	Project records	None (through project activities).	<p>By the end of the project – 265</p> <p><b>Year I</b> (2007-2008) – 30</p> <p><b>Year II</b> (2008-2009) – 100</p> <p><b>Year III</b> (2009-2010) - 50</p> <p><b>Year IV</b> (2010-2011) – no additional trainings; Sustain the services via supervisory visits</p>	<p><b>Year I</b> – 47</p> <p><b>Year II</b> – 119</p> <p><b>Year III</b> – 116</p> <p><b>Year IV</b> - 85</p>		Quarterly
<b>23</b>	Cumulative number of service outlets providing clinical prophylaxis or treatment services for Tuberculosis for HIV-infected individuals	Project records	Data not available.	<p>28</p> <p><b>Year I</b> (2007-2008) – 16</p> <p><b>Year II</b> (2008-2009) – 24 (cumulative)</p> <p><b>Year III</b> (2009-2010) – 38 (cumulative)</p> <p><b>Year IV</b> (2010-2011) – no additional outlets. Sustain the services in the indicated outlets.</p>	<p><b>Year I</b> - 16</p> <p><b>Year II</b> – 39</p> <p><b>Year III</b> – 54</p> <p><b>Year IV</b> - 54</p>		annually
<b>24 PI</b>	Number of local organizations	Project records	Data not available.	20 organizations			annually

	provided with TA for HIV-related institutional capacity building			<p><b>Year II</b> (2008-2009) – 12 (cumulative)</p> <p><b>Year III</b> (2009-2010) – 17 (cumulative)</p> <p><b>Year IV</b> (2010-2011) – 20 (cumulative)</p>	<p><b>Year I</b> – 7</p> <p><b>Year II</b> – 15</p> <p><b>Year III</b> – 19</p> <p><b>Year IV</b> – 20</p>		
<b>25 PI</b>	Number of individuals trained in HIV-related institutional capacity building	Project records	Data not available	<p>80 individuals</p> <p><b>Year II</b> (2008-2009) – at least 30 persons</p> <p><b>Year III</b> (2009-2010) – additional 40 persons</p> <p><b>Year IV</b> (2010-2011) – 160</p>	<p><b>Year I</b> – 28</p> <p><b>Year II</b> -137</p> <p><b>Year III</b> – 72</p> <p><b>Year IV</b> - 162</p>	As above.	Quarterly
<b>26 PI</b>	Number of civil society organizations provided with TA for participating in TB control, TB/HIV and HIV advocacy and /or policy development activities	Project records	<5	<p>16</p> <p>At least 2 organizations per project region will be active in TB control, TB/HIV and HIV advocacy and policy development on a consistent basis</p> <p><b>Year II</b> (2008-2009) – 5 organizations</p> <p><b>Year III</b> (2009-2010) – additional 8</p> <p><b>Year IV</b> (2010-2011) – no additional organizations</p>	<p><b>Year I</b> - 6</p> <p><b>Year II</b> – 15 (cumulative)</p> <p><b>Year III</b> – 20 (cumulative)</p> <p><b>Year IV</b> – 20 (cumulative)</p>	This combines two suggested indicators, since organizations will receive both TB and HIV-related support.	Annually
<b>27 PI</b>	Number of individuals trained in HIV-related policy development	Project records	Data not available	<p>32</p> <p><b>Year II</b> (2008-2009) – 24</p> <p><b>Year III</b> (2009-2010) - 16</p>	<p><b>Year I</b> – 8</p> <p><b>Year II</b> – 36</p> <p><b>Year III</b> – 22</p> <p>Training in TB/HIV case management and development of TB/HIV coordination plan (Crimea and Sevastopol)</p>	This effort will be done in coordination with stakeholder organizations involved in HIV-related TA: AIDS, Alliance, Constella Futures and others	annually

				<b>Year IV</b> (2010-2011) – no additional trainings	<b>Year IV - 71</b>		
<b>28.</b>	Number of medical and nursing school incorporating DOTS training into their curriculum	Project record	One medical and one nursing school in Dnepropetrovsk region	At least 8 medical educational institutions  <b>Year II</b> (2008-2009) – an additional medical school  <b>Year III</b> (2009-2010) – 3 additional medical schools  <b>Year IV</b> (2010-2011) - 8	<b>Year I</b> – One medical school in Dnepropetrovsk region  <b>Year II</b> – 3  <b>Year III</b> – 6  <b>Year IV</b> - 8		annually
<b>29</b>	Number of identified obsolete policies, laws, or regulations that have been canceled, replaced, or revised to comply with international standards	Constella Futures documents Policy review	~18	The identified priority documents are in compliance with international standards.  <b>Year II</b> (2008-2009) – 3 priority documents  <b>Year III</b> (2009-2010) – 5 documents  <b>Year IV</b> (2010-2011) – no target	<b>Year I</b> – 2  <b>Year II</b> – 6 (cumulative)  <b>Year III</b> – 8 (cumulative)  <b>Year IV</b> - 11 (cumulative)	This is a revision of a suggested indicator. The total number of documents in need of revision to be determined by the Constella Futures review, which is soon to be completed.	annually
<b>30 PI</b>	Number of individuals trained to provide social support services and in HIV- and TB related stigma and discrimination reduction	Project records	700	1,900  <b>Year I</b> (2007-2008) – TOT  <b>Year II</b> (2008-2009) – follow on trainings to 400 participants  <b>Year III</b> (2009-2010) – additional 600  <b>Year IV</b> (2010-2011) – 1243	<b>Year I</b> – 31  <b>Year II</b> – 373  <b>Year III</b> - 245  <b>Year IV</b> - 194	Stigma reduction training will be incorporated into other broader trainings.	quarterly
<b>31</b>	Number of Individuals trained in TB and HIV-related policy development	Project records	None (through project activities).	80  <b>Year II</b> (2008-2009) –24 persons  <b>Year III</b> (2009-2010) – additional 40 persons  <b>Year IV</b> (2010-2011) – 10	<b>Year I</b> – 12  <b>Year II</b> – 36  <b>Year III</b> – 22  <b>Year IV</b> - 71	This combines two suggested indicators, since individuals will receive both TB and HIV-related support.	annually
<b>32</b>	Number of	Oblast data	None.	10	<b>Year I</b> – 3	This replaces a	annually

	project regions with local advocacy plans	Project records		<b>Year II</b> – 3 regions <b>Year III</b> – 4 additional regions <b>Year IV</b> – 3 additional	<b>Year II</b> – 6 (cumulative) <b>Year III</b> – 7 (cumulative) <b>Year IV</b> – 10 (cumulative)	suggested indicator.	
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