



**Challenge TB - Ukraine**

**Year 1**

**Annual Report**

**October 1, 2014 – September 30, 2015**

**October 30, 2015**

**Cover photo:** Anastasia is determined to complete her MDR-TB treatment. (Credit: Lyudmila Pichtereva.)

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## Abbreviations and Acronyms

ART	Anti-Retroviral Therapy
COP	Country Operation Plan
CSW	Commercial Sex Worker
CTB	Challenge TB
DOT	Directly Observed Therapy
DR-TB	Drug-Resistant TB
Global Fund	Global Fund to Fight AIDS, Tuberculosis and Malaria
GLI	Global Laboratory Initiative
HCW	Health Care Worker
HR	Human Resources
IC	Infection Control
IDU	Injecting Drug User
KNCV	KNCV Tuberculosis Foundation
LOP	Laboratory Operational Plan
M&E	Monitoring And Evaluation
MARPs	Most-At-Risk Populations
MDR-TB	Multidrug-Resistant TB
MOH	Ministry of Health
MOU	Memorandum of Understanding
MSM	Men Who Have Sex With Men
NGO	Nongovernmental Organization
NRL	National Reference Laboratory
NTP	National Tuberculosis Program
PHC	Primary Health Care
PLHIV	Persons(s) Living with HIV
PLHIV Network	All-Ukrainian Network of People Living with HIV/AIDS
PMDT	Programmatic Management Of Drug-Resistant TB
SPMMSC	Center Of Primary Medical And Sanitary Care
TB	Tuberculosis
UCDC	Ukrainian Center for Socially Dangerous Disease Control (Ukraine MOH)
URCS	Ukrainian Red Cross Society
USAID	United States Agency for International Development
WHO	World Health Organization
XDR-TB	Extensively Drug-Resistant TB

## 1. Executive Summary

This report covers the Challenge TB (CTB) project's progress and achievements during the project Year 1 (October 1, 2014–September 30, 2015). During the reporting period, PATH collaborated with many different partners: KNCV Tuberculosis Foundation (KNCV), the United States Agency for International Development (USAID), the Ukrainian Center for Socially Dangerous Disease Control (UCDC) of the Ministry of Health of Ukraine at the national level, and with the health departments of Poltavaska and Mykolayivska oblasts. to provide support to the national TB program (NTP) and oblast TB programs in further strengthening interventions to control multidrug-resistant TB (MDR-TB) and provide support and technical assistance to partner oblasts in the integration of a patient-centered approach based on the ambulatory health care system into oblasts' routine MDR-TB case management system.

In this period, the project developed a model for a patient-centered approach to MDR-TB care, based on ambulatory treatment and quality improvement of MDR-TB control services, with the aim of achieving the project's objective of improved MDR-TB treatment success rates in project oblasts. The goal of creating a system of ambulatory care for MDR-TB is to maximize the benefits to the patient while minimizing the costs to both the patient and the health care system. Ambulatory care should be used as one tool within a larger constellation of activities to increase treatment success and reduce the burden of MDR-TB in Ukraine. PATH engaged all possible service providers at the ground level, including primary health care providers and Ukrainian Red Cross Society (URCS) and other nongovernmental organizations (NGOs), in developing the ambulatory care algorithm. The developed model is designed to be used as a handout for physicians and patients to discuss treatment opportunities and develop a plan. The model includes the general treatment approach and an ambulatory care algorithm based on existing primary health care possibilities. The model was approved by Order #854 in Poltavaska oblast on September 21, 2015. It is currently being finalized in Mykolaivska oblast and expected to be approved during the first quarter of the second year of the project. PATH will introduce this algorithm to the UCDC and other national stakeholders and partners to be used as the base for the national primary health care model.

Piloting the algorithm, PATH partnered with the National Committee of the URCS to implement collaborative activities with TB medical facilities focused on provision of care and support to MDR-TB patients who receive TB treatment during the outpatient stage. A subaward was signed and a joint plan of action was developed with the National Committee of the URCS to bolster advocacy and community involvement, provide support to MDR-TB patients during the ambulatory stage of treatment, and ensure directly observed therapy (DOT). The goal is to improve MDR-TB treatment outcomes. Under the subaward, the URCS carries out collaborative activities with TB medical facilities to provide DOT services to patients who choose to receive follow-up MDR-TB as an out-patient, and work with TB patients who have interrupted their treatment to identify and address the reasons for interruption in order to convince them to complete treatment, and inform local authorities of project results and attract local budget funds to sustain program implementation. One hundred patients are currently receiving DOT services from URCS in Poltavaska and Mykolayivska oblasts.

The project has intensified training and technical assistance efforts to build the NTP capacity to adequately address the growing burden of MDR-TB and extensively resistant TB (XDR-TB). To create a well-informed TB work force, the project team worked on developing a training curriculum to be used as the guide for trainers in different settings and to harmonize, update, and consolidate technical materials according to the Ukrainian national TB protocol and international recommendations. The curriculum reflects the newest World Health Organization (WHO) guidelines and recommendations as well as the latest Ukrainian TB protocol, approved in 2014 (Order #620). Training materials include a training agenda, a set of training modules, curriculum methodology, presentations, case studies, role-plays, tasks

for individuals, and group exercises. The curriculum addresses all areas of TB, MDR/XDR-TB, TB/HIV diagnosis and case management, side-effects management, infection control, and monitoring and evaluation, with special attention to the ambulatory stage of care. The curriculum was handed over to the UCDC and other partners, to be used for trainings including trainings funded by the grant from the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund).

The curriculum was used by the project to conduct training events in project sites. The project trained **43 TB providers** (13 men and 30 women) from Mykolayivska and Poltavaska oblasts in two trainings. Based on a mapping of existing services for MDR-TB outpatient treatment, the project developed training plans for **primary health care (PHC) providers** to enhance their TB management skills, help promote patient-centered care, and equip providers with skills and strategies to improve treatment adherence. Overall **44 PHC providers** (9 men and 35 women) were trained.

In order to address the problem of frequent side-effects and their management the project developed clinical guidelines/protocol on comprehensive organizational and programmatic management of TB (DR TB) side effects and submitted it to UCDC for further approval. According to existing procedure, the guidelines will be reviewed by a formal national working group to ensure compliance with other protocols (e.g., neurological) and approved for use as national protocol. The project will disseminate the protocol to partners in projects sites and countrywide during the second year of the project.

To ensure compliance with proper infection control (IC) measures in TB facilities in all health care settings and in communities, CTB assisted project oblasts to develop oblast IC plans and to revise TB hospital IC plans. During the reporting period, IC working groups were created in both project oblasts. **TB hospital IC Plans** were reviewed and revised. In both oblasts, **hospital IC plans** were approved by the hospital administration orders.

The draft **oblast IC Plans** were developed and discussed during the joint workshop with representatives from both oblasts, including the heads of the oblasts' health departments. The drafts have now been finalized for approval and implementation. The main revision focused on strengthening administrative control measures, particularly in high-risk settings.

The CTB project will consider providing technical assistance in monitoring of the implementation of the developed IC protocols in both oblasts during the second year of the project.

In the framework of the USAID CORE project "Childhood TB Care Baseline" on June 17, 2015, the KNCV Benchmarking Tool for Childhood TB Policies and Practice was discussed and filled in during a meeting with a working group of leading pediatric TB experts of Ukraine. Thanks to this effort it was revealed that an important limitation in achieving proper pediatric TB care is a lack of awareness in Ukraine about the global pediatric TB strategy. The working group stressed that there is no national childhood TB working group, that the approach to childhood TB care implemented throughout the country is often outdated and not properly funded, and that primary pediatric providers are not involved in TB services and not knowledgeable about TB care. Case finding is not well-defined and is very poorly implemented. These data will be used as a baseline on the situation on childhood TB in the country and will guide the planning of potential childhood TB-related activities in coming CTB project years.

## 2. Introduction

With year 1 funding through Challenge TB, PATH worked in collaboration with KNCV, USAID's Mission in Ukraine, the Ministry of Health (MOH) of Ukraine, UCDC at the national level, and the health departments of Poltavaska and Mykolayivska oblasts to provide support to the NTP and oblast TB programs in further strengthening interventions to control MDR/XDR-TB.

The goal of the first year of the project is to improve outcomes for MDR-TB patients by reducing mortality, lowering default rates, improving MDR-TB case detection and diagnosis, and enhancing treatment success. The achievement of this goal requires targeted efforts to address MDR-TB through integration of a patient-centered approach based on the ambulatory health care system into oblasts' routine MDR-TB case management system, as well as crosscutting activities aimed at strengthening NTP capacity and systems and using innovative approaches to improve TB services in Ukraine.

The project is implemented at the national level and at the oblast level in two oblasts (Poltavaska and Mykolayivska), impacting a total population of 2,618,024.

**Figure 1. Map of Ukraine.**



During 2015, PATH and KNCV provided technical assistance and support to the Ukraine MOH and its partners toward the following objectives:

### **Improved access to quality patient centered care for TB, TB/HIV and MDR-TB services**

- **Improve enabling environment** through developing and piloting a model of ambulatory care for MDR-TB patients based on a patient-centered approach considering different local conditions (rural vs. urban, special populations, etc.) and different patients' preferences. The model will allow individual patients to choose the location of their treatment based on available and feasible

options (e.g., ongoing hospitalization, treatment at a general polyclinic, treatment from a primary care provider, home-based treatment from social service organizations). The purpose of ambulatory care for MDR-TB is to maximize the benefits to the patient while minimizing the costs to both the patient and the health care system.

- **Ensure patient-centered care and treatment.** Advocate to health care authorities in project sites for expanding TB services to primary health care, emphasizing the advantages of ambulatory care, which include a decrease in the costs related to hospitalization, reduction in the risk of ongoing TB transmission to and from other patients, and an increase in patient autonomy and satisfaction (leading to greater completion of treatment and decreases in loss to follow-up). The project helps to design a desired model of collaboration and mobilize available resources for building a patient-centered health care system at the ambulatory level. Clear responsibilities for all facilities, organizations, and individuals involved in MDR-TB patient care within the oblast were developed to avoid programmatic gaps and patients lost to follow-up and ensure a continuum of MDR-TB case management.
- The project ensured assessment of each patient's needs and linkage to other support services as needed, especially for MDR-TB patients with HIV comorbidity, alcohol or drug users, released prisoners, and homeless people; it aims to identify and implement mechanisms for ongoing patient support to address conditions that threaten their ability to complete treatment through the involvement of Red Cross visiting nurses, HIV service organizations, and other social resources.
- To ensure delivery of an adequate regimen of medications and monitoring and proper treatment of side effects or adverse reactions to drugs, the project assisted in establishing an on-the-job supervision system for proper detection, diagnosis and treatment of MDR-TB at all level of health care system. The project also helped oblasts to improve the quality of laboratory diagnosis of MDR-TB cases through mentoring and to strengthen their capacity in monitoring and evaluation of MDR-TB program implementation through participatory involvement into the monitoring visits to the rayon level facilities followed by the monitoring meeting with project team and NTP participation.

### **Prevention of transmission and disease progression**

- **Strengthening infection control** to ensure compliance with proper IC measures in all health care settings and in the community, providing assistance to project oblasts in development of the oblast IC plans, and revising the oblast TB hospitals' IC plans.

### **Strengthened TB platforms**

- **Enhancing political commitment and leadership** to ensure sustainability of effective TB-related interventions at the national and oblast levels, the project seeks to enable the government of Ukraine to make critical, technically sound policy and program decisions to improve MDR-TB control in accordance with international best practices. The project is providing technical assistance to the WHO NTP review and development of the next national TB strategic plan (program) for 2017–2021 and assisting with the development of the national MDR/XDR-TB Scale-Up Plan and national guidelines on side-effects management.
- **Addressing human resource development** and strengthening the capacity of providers at the oblast level in MDR-TB case management, including in people with HIV comorbidity, through trainings, on-the job supervision, and a study tour to the WHO MDR-TB Collaborative Center in Riga, Latvia.

### **3. Country Achievements by Objective/Sub-Objective**

#### **Objective 1. Improved Access**

##### **Sub-objective 1. Enabling environment**

Briefly describe the Y1 SOW for Sub-Obj 1...

***Intervention area 1.4. Provider side: Patient centered approach integrated into routine TB services for all care providers for a supportive environment.***

##### **1.4.1. Assessment and mapping of existing practices/services of MDR-TB case management in project sites:**

Following the agreement to support Mykolayivska and Poltavaska oblasts, PATH, in close collaboration with UCDC, USAID Mission, and local authorities, conducted introductory assessment visits to both oblasts. The project team shared results of the baseline assessment with local health authorities to develop the strategy and specific action plans for each oblast and the specific support needed for project implementation in both oblasts.

The main findings of the assessment include the following:

- In both oblasts, MDR-TB patients receive treatment in TB hospitals for an average of 6 to 10 months;
- Collaboration among TB services and the primary health care network in both oblasts is limited and not well defined. Even during the outpatient stage of treatment, patients often receive drugs in the TB dispensaries for a few weeks at a time without DOT;
- Monitoring of treatment at the outpatient stage is missed. Laboratory monitoring of treatment at the outpatient stage to diagnose and prevent side effects is almost never conducted or is limited to a few simple tests mostly because of lack of lab supplies;
- Side effects during MDR-TB treatment are one of the main reasons for treatment interruption;
- Stock outs of a few TB drugs last year caused approximately eight months of treatment delay in a number of patients;
- Algorithms are described in the local TB protocols but often are not followed or monitored;
- The provision of psychosocial support to TB and especially MDR-TB patients is currently limited to funding from the GFATM grant and defined as a standardized food package distribution and delivering of pills. However, specific patient's needs that may threaten their ability to complete treatment are not identified and addressed. Lack of a permanent source of funding to support patient treatment adherence, creates inconsistencies in the rate of treatment success: for instance, interruption in GFATM grant funding leads to interruption of patient support, and therefore increases treatment interruption or cessation among TB and MDR-TB patients.

The project team prepared a report on the project sites assessments reflecting: the needs of patients, nongovernmental organizations (NGOs), communities, and health facilities in strengthening TB collaborative activities in the project sites and finalized oblasts mapping.

### 1.4.2. Development of algorithm of out-patient case management for project sites

**Figure 2. Discussion of the model of ambulatory TB care in the working group, Poltava.**



In the reporting period, the project developed an algorithm for a patient-

centered approach to MDR-TB care, based on ambulatory treatment and quality improvement of MDR-TB control services. The goal is a well-crafted and tailored model that fits the needs of patients and providers, addresses potential disadvantages of ambulatory care, and enhances the advantages of such care. Advantages may include a decrease in the costs related to hospitalization, a reduction in the risk of ongoing TB transmission to other patients and health

care staff within facilities, and an increase in patient autonomy and satisfaction (leading to greater completion of treatment and decreases in loss to follow-up). The disadvantages of ambulatory care may include loss of specialists' control over treatment, the need to train and supervise additional service providers, the potential for deterioration of quality as services are devolved, a greatly intensified need to ensure adequate communications between all levels of the health system and the patient, and the potential for costs of care to be shifted onto the patient (e.g., for travel to access treatment). The goal of creating a system of ambulatory care for MDR-TB is to maximize the benefits to the patient while minimizing the costs to both the patient and the health care system. Ambulatory care should be used as one tool within a larger constellation of activities to increase treatment success and reduce the burden of MDR-TB in Ukraine. PATH engaged all possible service providers at the ground level, including primary health care providers and Red Cross and other nongovernmental organizations (NGOs), in developing an ambulatory care algorithm.

**Table 1. Outcome indicators for CTB Year 1: enabling environment (patient-centered approach)**

#	Outcome Indicators	Indicator Definition	Baseline (Year/ Timeframe)	Target	Result
				Y1	Y1
1.4.1	One or more components of the patient-centered approach are adopted into routine practice/policy	Description: One or more components of the patient-centered approach (i.e., universal access, consider patient needs, respect rights, provide quality care, establish trust, participate in process, and empower involvement) are adopted into routine practice/policy Indicator Value: Yes/No Level: National	No	Yes	Yes, in both project sites, namely: consider patient needs, empower involvement, participate in process
1.4.8	Algorithm of MDR-TB outpatient case management developed		No	Final algorithm in Poltavaska oblast; draft algorithm in Mykolaivska oblast	Yes. Draft algorithm and model of collaboration approved in Poltavaska oblast by Health Department

					Order; In Mykolayivska oblast the package developed and is in the process of finalization
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### Sub-objective 3. Patient-centered care and treatment

#### ***Intervention area 3.2. Access to quality treatment and care ensured for TB, DR-TB, and TB/HIV for all risk groups from all care providers***

##### **3.2.1. Advocate to Health care authorities in project sites for expanding TB services to PHC. Design a desired model of collaboration and partner involvement into MDR TB outpatient case management.**

The CTB project advocated with oblast TB providers for a shortened period of hospitalization of MDR-TB patients, recognizing that ambulatory care models are dependent on the configuration of the health system, the location and accessibility of health services, the skill level of providers, characteristics of patient populations, and patients' preferences. This change was adopted and included provisions to begin ambulatory care immediately after sputum conversion and continue this throughout the entire course of treatment. Care can range from treatment provided out of a centralized specialty hospital to home-based treatment. The model approach is designed for physicians and patients to discuss treatment opportunities and develop a treatment plan. The model includes a general treatment approach and an ambulatory care algorithm based on existing primary health care possibilities. The model was approved by Order #854 in Poltavaska oblast on September 21, 2015. It is currently being finalized in Mykolaivska oblast and expected to be approved during the first quarter of the second year of the project. PATH will introduce this model to the UCDC and other national stakeholders and partners to be used as the base for the national primary health care model (more results of this work are described in the success story in this report).

##### **3.2.2. Design a desired model of collaboration and partner involvement into MDR TB outpatient case management. Implement community based models of care with support of Ukrainian Red Cross Society (URC) to ensure treatment adherence and completion.**

In order to identify and implement mechanisms for ongoing MDR-TB patient support a subaward was signed with the National Committee of the Ukrainian Red Cross Society (URC), and a joint plan of action was developed. The project activities have started to bolster advocacy and community involvement and provide support to MDR-TB patients at the ambulatory stage of treatment and ensure DOT in the project sites. Under the subaward, the URC carries out collaborative activities with TB medical facilities to provide DOT services to patients who choose to receive follow-up MDR TB treatment as an outpatient; works with TB patients who have interrupted their treatment to identify and address the reasons for interruption in order to support and convince them to complete treatment. Currently, 100 patients with MDR-TB receive support from URC in project oblasts. This work is monitored during project supported supervision visits.

##### **3.2.3. and 3.2.4. Development of a list of drugs for side-effects management and check its availability at oblast level. Development of clinical guidelines on TB side-effects management.**

Side-effects during MDR-TB treatment are one of the main reasons for treatment interruption. To address this, the project developed clinical guidelines/protocol on comprehensive organizational and programmatic management of TB (DR TB) side effects and submitted it to UCDC for further approval. The guidelines were developed by the project staff and consultants with the technical support from a KNCV consultant (Maria Idrissova). The guidelines will be reviewed by a formal national working group to ensure compliance with other protocols (e.g., neurological) and eventually approved for use as a national protocol. The project will disseminate the protocol to partners in projects sites and countrywide during the second year of the project.

**Table 2. Outcome indicators for CTB Year 1: patient-centered care and treatment**

#	Outcome Indicators	Indicator Definition	Baseline (Year/ Timeframe)	Target	Result
				Y1	Y1
3.2.25	% of MDR patients that are no longer infectious receiving outpatient care	Description: Proportion of MDR-TB patients that are no longer infectious* receiving outpatient care Indicator Value: Percent Level: National and Challenge TB geographic areas Numerator: Number of MDR-TB patients that are no longer infectious that are receiving outpatient care during the period of assessment Denominator: Total number of MDR-TB patients that are no longer infectious during the period of assessment  <i>* after receiving negative results of two consecutive sputum and culture tests taken with at least 30 days interval.</i>	n/a	25%	Poltavska oblast: 69% (93/134) Mykolaivska oblast: 84% (215/256) from October 1, 2014 until September 30, 2015  The data needs to be confirmed as the quality of the data collection is unclear.
3.2.5	Number of health facilities with programmatic management of drug-resistant TB (PMDT) services	Description: This indicator measures PMDT service (i.e., diagnosis, treatment, and/or care for MDR-TB patients) coverage by looking at the number of health facilities providing these services. Indicator Value: Number Level: National and Challenge TB geographic areas Numerator: Number of health facilities providing PMDT services	4	10	12: Poltavska obl. – 7; Mykolayivska obl. – 5
3.2.4	Number of MDR-TB cases initiating second-line treatment	Description: The number of bacteriologically confirmed, clinically diagnosed or unconfirmed MDR-TB cases started on second-line treatment during the reporting period. Unconfirmed MDR-TB cases are those awaiting C/DST results. RR-TB may fall under confirmed or unconfirmed depending on the country's MDR-TB diagnosis algorithm. Indicator Value: Number Level: National and Challenge TB geographic areas Numerator: The number of confirmed or unconfirmed MDR-TB patients started on second-line treatment in the reporting period	Poltavska oblast: 275 Mykolayivska oblast: 313, in 2014	Poltavska oblast: 280 Mykolayivska oblast: 320	Poltavska oblast: 239 Mykolayivska oblast: 461, in Oct 2014 – Sept 2015.  Data for the period April–Sept 2015 was withdrawn from the ERR system (eTB-Manager) and is not final yet. The official data for the period April–June 2015 is just under collection and will be available after October.

3.2.7	Treatment success rate for MDR-TB patients on treatment	Description: The proportion of laboratory-confirmed MDR-TB patients successfully treated (cured plus completed treatment) among those enrolled on second-line anti-TB treatment during the year of assessment (where applicable disaggregation by HIV status, XDR status) Indicator Value: Percent Level: National and Challenge TB geographic areas Numerator: Number of laboratory-confirmed MDR-TB patients successfully treated (cured plus completed treatment) Denominator: Total number of laboratory-confirmed MDR-TB patients enrolled on second-line anti-TB treatment during the year of assessment	Poltavska oblast: 53% (102/193) Mykolayivska oblast: 37% (41/112) Cohort 2012	Poltavska oblast: 54% Mykolayivska oblast: 37%	Poltavska oblast: 40% (34/84) Mykolayivska oblast: 59% (67/113) Cohort Oct 2012 – March 2013.  Treatment results for quarters 2 and 3 2013 cohorts will be available in Feb 2016.
3.2.12	Percentage of HIV-positive registered TB patients given or continued on antiretroviral therapy (ART) during TB treatment	Description: The purpose is to measure commitment and capacity of TB service to ensure that HIV-positive TB patients are able to access ART. This indicator measures people registered as HIV-positive who started TB treatment and who also started or continued on ART (i.e., recorded in ART register). Indicator Value: Percent Level: National and Challenge TB geographic areas Numerator: All HIV-positive TB patients, registered over a given time period, who receive ART (are started on ART) Denominator: All HIV-positive TB patients registered over the same given time period	48% in 2013	55%	Poltavska oblast: 63% (88/140) Mykolaiivska oblast: 56% (255/456) in 2014

## Objective 2. Prevention

### Sub-objective 5. Infection control

#### **Intervention area 5.1. Compliance with quality TB-IC measures in health care, community and congregate settings ensured**

##### **5.1.1. Review, and revise if needed, oblast's infection control (IC) plan**

To ensure compliance with proper infection control (IC) measures in all health care settings, particularly those in which people are at high risk for exposure to TB, and in oblasts, the project assisted oblasts to develop oblast IC plans. The workshop on the IC Plan development was conducted on September 8-9 in Poltava for key authorities from both oblasts, including the heads of oblast health administrations (totally, for 23 participants). The main principles of infection control were introduced and discussed. Significant time was spent advocating that people who work or receive care in health care settings are at higher risk for becoming infected with TB; therefore, it is necessary to develop an IC plan in all health care settings, particularly those in which people are at high risk for exposure to TB, consisting of policies and procedures for TB control. The IC plan should be reviewed periodically, and evaluated for effectiveness to determine the actions necessary to minimize the risk for transmission of TB. Draft plans were developed in both oblasts and sent to PATH for further review and technical assistance. The drafts were revised and currently have been finalized for approval and implementation. The main revision is focused

on strengthening administrative control measures, particularly in high-risk settings. The CTB project will consider providing technical assistance in monitoring the implementation of the developed IC protocols in both oblasts during the second year of the project.

### 5.1.2. Review, and revise if needed, oblast TB Hospital IC plans in project sites

**Figure 3. IC measure.**



To ensure compliance with proper infection control (IC) measures in all departments of TB facilities and prevent the transmission of TB among patients and from the patients to health care workers, the CTB project assisted project oblasts to revise oblast TB hospitals' IC plans. During the reporting period, IC working groups were created in both project oblasts (in Mykolayivska oblast under the supervision of the Oblast Health Department, and in Poltavaska under the Oblast Coordinating Committee on HIV and Other Socially Dangerous Diseases). The Poltavaska oblast IC TB Hospital Plan was reviewed and minimally revised. The Mykolaivska oblast IC TB Hospital Plan was reviewed and significantly revised during a two-day workshop. In both oblasts, hospital IC plans were approved by the hospital administration orders. CTB project will consider providing technical assistance in monitoring of the implementation of the developed IC

protocols in both oblasts during the second year of the project.

**Table 3. Outcome indicators for CTB Year 1: infection control**

#	Outcome Indicators	Indicator Definition	Baseline (Year/Timeframe)	Target	Result
				Y1	Y1
5.1.1	Status of TB infection control (IC) implementation in health facilities	Description: This indicator measures the status of TB IC implementation in health facilities. Indicator value: Score based on: 0=no TB IC policy/plan, no organized TB IC activities 1=national TB IC guidelines have been approved and disseminated in accordance with WHO policy 2=TB IC being implemented in pilot or limited health facilities 3=TB IC implemented nationally and/or national certification program implemented Level: National	1	2	2

## Objective 3. Strengthened TB Platforms

### Sub-objective 7. Political commitment and leadership

#### **Intervention area 7.1. Endorsed, responsive, prioritized and costed strategic plan available**

##### **7.1.1. WHO country NTP review**

To ensure sustainability of effective TB-related interventions at the national and oblast levels, and to enable the government of Ukraine to make critical, technically sound policy and program decisions to improve TB control in accordance with international best practices, the CTB project provided technical assistance to the WHO NTP review that was conducted on April 14–24, 2015. The project team participated in the round tables on the review planning process. Four representatives from the CTB

project were included in the review teams (PATH staff Aleksey Bogdanov, Nina Zhrebko, Tamara Ivanenko, and KNCV consultant Gunta Dravniece). The Review Report is now ready and available to partners. This report will serve as the base for development of the next National TB Program (Strategic Plan) for 2017 – 2021, that will be developed during the first quarter of the second project year with CTB support.

#### **7.1.2. MDR TB national scale-up plan.**

PATH had a few meetings with UCDC to discuss proper planning for development of the MDR TB national plan. UCDC (NTP) as the key stakeholder in this work requested that this activity be postponed until October 2015 when the work on the new five-year NTP Strategic Plan would begin. PATH received an official letter from the UCDC requesting that PATH facilitates and leads the development of the MDR-TB plan, which will be included as a part of the National TB Program.

### ***Intervention area 7.2. In-country political commitment strengthened***

#### **7.2.1., 7.2.2. Project launch at National level and stakeholders meetings in project sites.**

To launch the Project at the national level, the key stakeholders meeting was conducted on July 8 in Kyiv. Overall, about 50 participants attended the meeting, including UCDC Director, USAID Health Office Director, Head of the MDR-TB Department of the National Research Institute on TB and Pulmonology, Heads of project oblasts Health Administrations, URC Executive Director, and oblast health care and social service providers. Dr. Svetlana Pak presented KNCV. The meeting was aimed at presenting the project goals and objectives, implementation strategy, USAID TB strategy and PEPFAR Plan. Oblast partners shared their expectations, vision and commitment to implement the project activities.

CTB launched the project in Poltavaska oblast on April 8, and in Mykolayivska oblast on April 28,

2015. During the launch, the goal and objectives of the Project were introduced to the oblast partners to ensure their understanding, commitment and involvement at all stages of the project implementation process, from planning and interventions to monitoring and evaluation. Heads of oblast Health Administrations and other key officials from the national and oblast level participated in the oblast launch meetings and acknowledged the high importance of the CTB project strategy and activities for supporting TB control priorities in Ukraine.

**Figure 4. Signing of the Protocol on CTB Project collaboration in Mykolayivska oblast.**



#### **7.2.3. National conference on MDR TB case management at inpatient and outpatient stages**

A national conference titled, “Urgent Issues of MDR-TB Case Management at the Inpatient and Outpatient Stages, International Approaches and National Experience” was conducted by the National Research Institute for Tuberculosis and Pulmonology of the National Academy of Medical Sciences in Kyiv on March 26, 2015. The aim of the conference was to present and discuss current approaches to outpatient MDR/XDR-TB care in Ukraine within the framework of the health care system reform that the

country has recently undertaken. The CTB project presented the project's goal and plan for the first year and discussed the main problems and barriers to conduct effective MDR-TB case management at inpatient and ambulatory phases of treatment. In addition, CTB supported part of the logistical arrangements for this conference. The conference was conducted as the platform to initiate countrywide discussion on the integration of the TB services into the primary health care system in order to ensure patient-centered approach in TB control.

Overall, 186 persons participated in the event; chief and deputy chief doctors, TB and MDR-TB specialists, and MDR-TB departments heads of oblast TB dispensaries from 23 oblasts of Ukraine and Kyiv City (except for Luhanska oblast and the Crimea) were among the conference participants. In addition, TB chairs of the National Medical University and National Medical Academy of Continuous Medical Education, the deputy director and main TB specialists of UCDC, TB specialists of the State Penitentiary Service of Ukraine, and TB/MDR-TB advisors from USAID and WHO actively participated in the conference and presented the latest international and national approaches on MDR-TB case management.

**Table 4. Outcome indicators for CTB Year 1: Political commitment and leadership**

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y1	Y1
7.1.2	Status of NSP development: 0=The NSP is expired or not being implemented; 1=An updated/new NSP is being drafted; 2=NSP has been developed and costed; 3=NSP has been finalized, endorsed by the government and implemented	Description: This indicator measures the status of NSP development. Indicator value: Score based on below: 0=The NSP is expired or not being implemented; 1=An updated/new NSP is being drafted; 2=NSP has been developed and costed; 3=NSP has been finalized, endorsed by the government and implemented Level: National	0	1	Planned for Q1 year 2
7.2.7	Number of key partners at the national and oblast level supporting the project		n/a	6	10

#### Sub-objective 11. Human resource development

#### **Intervention area 11.1. Qualified staff available and supportive supervisory systems in place**

#### **11.1.1. Curricula development for MDR-TB case management training**

**Figure 5. MDR-TB curriculum.**



The project has also intensified training and technical assistance efforts to build the NTP capacity to adequately address the growing burden of MDR-TB and extensively resistant TB (XDR-TB). During the previous years, multiple sets of training presentations were developed by various projects addressing different aspects of TB management. Nevertheless, these presentations were outdated and not well integrated, and needed significant review and update. In order to create a well-informed TB work force, the project team worked on developing a training curriculum to be used as the guide for trainers in different settings

and to harmonize, update, and consolidate presentations according to the Ukrainian national TB protocol and international recommendations. The curriculum reflects the newest WHO guidelines and recommendations as well as the latest Ukrainian TB protocol, approved in September 2014 (MoH's Order #620). Training materials include a training agenda, a set of training modules, curriculum methodology, training presentations, case studies, role-plays, tasks for individuals, and group exercises. The curriculum addresses all areas of TB, MDR/XDR-TB, TB/HIV diagnosis and case management, side-effects management, infection control, and monitoring and evaluation, with special attention to the ambulatory stage of care. It can be tailored to the needs of particular audiences within the project components, including TB providers, infection specialists working in HIV/AIDS centers, primary health care providers, nurses in TB hospitals, DOT offices, family ambulances, URC nurses, and others. The curriculum has been prepared and handed over to the UCDC and other partners, to be used for trainings including trainings under the grant from the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund).

#### **11.1.2. Workshop for MDR TB Central Doctor Consultative Commission (CDCC) members**

According to Ukraine's National TB Protocol, all oblasts should establish a Central Doctors' Consultative Commission (CVKK) that is responsible for MDR/XDR-TB diagnosis and case management throughout all stages of treatment. The workshop was conducted on June 11-12 for 18 members of Mykolaivska oblast CVKK. The workshop outlined and analyzed common mismanagement issues and mistakes in MDR-TB diagnostic and treatment prescriptions, and provided detailed recommendations to the CVKK members. One of the main recommendations was to enhance supervision to health facilities with patients in the ambulatory stage of treatment with special attention to the risk factors of interrupting or stopping treatment.

#### **11.1.3., 11.1.4. Trainings on MDR-TB case management. Training for PHC, URC and NGOs in MDR-TB case management at ambulatory stage.**

The curriculum was used by the project to conduct two training events in project sites. Overall, the project trained **43 TB providers** (13 men and 30 women) from Mykolayivska and Poltavaska oblasts. Based on a mapping of existing services for MDR-TB outpatient treatment, the project developed training plans for **primary health care (PHC) providers** to enhance their TB management skills, help promote patient-centered care, and equip providers with skills and strategies to improve treatment adherence. Overall **44 PHC providers** (9 men and 35 women) were trained.

#### **11.1.5. Study tour**

**Figure 6. Classmates: WHO CC Riga, Latvia 2015.**



The project conducted a study tour to the WHO Collaborating Centre for Research and Training in Management of Multidrug-Resistant Tuberculosis in Riga, Latvia. **16** Ukrainian health care providers participated. The tour was conducted from July 13 to 24, 2015 and included partners from the project oblasts, including oblast health department leadership and representatives from TB hospitals and primary health care clinics. In preparation of the study tour, the CTB team drafted and finalized a training agenda with a input of participants, obtained visas, and organized travel and other logistics.

**Table 5. Outcome indicators for CTB Year 1: Human resource development**

#	Outcome Indicators	Indicator Definition	Baseline (Year/Timeframe)	Target	Result
				Y1	Y1
11.1.3	Number of health care workers trained, by gender and technical area	Description: This indicator measures the number of health care workers trained, by gender and technical area. Indicator Value: Number Level: National and Challenge TB geographic areas Numerator: Number of health care workers trained during the reporting period	n/a	80	Poltavska obl. – 16 M: 1 F: 15 Mykolaivska obl. - 71 M: 21 F: 50  Total - 87 M: 22 F: 65

## 4. Challenge TB Support to Global Fund Implementation

### Current Global Fund TB Grants

Name of grant, year signed, principal recipient(s) (e.g., Tuberculosis NFM – 2014 - MoH)	Average Rating*	Current Rating	Total Approved Amount	Total Disbursed to Date	Total expensed (if available)
Joint TB/HIV Grant (3 PRs)	n/a	n/a	US\$133,508,128	US\$29.4 M	
PR: INTERNATIONAL HIV/AIDS ALLIANCE, UKRAINE	n/a	n/a	US\$68,799,281	US\$12,966,974	
• PR: ALL-UKRAINIAN NETWORK OF PEOPLE LIVING WITH HIV/AIDS	n/a	n/a	US\$60,406,308	US\$16,393,763	
• PR: UKRAINIAN CENTER FOR SOCIALLY DANGEROUS DISEASE CONTROL OF THE MINISTRY OF HEALTH (UCDC)	n/a	n/a	US\$4,302,539	US\$50,000	

\* Since January 2010

### In-country Global Fund status - key updates, current conditions, challenges and bottlenecks

Ukraine is currently implementing a joint TB and HIV grant for 2015–2017, which combines the activities included in an HIV Round 10 proposal and a TB Round 9 proposal. The grant is being managed by three principal recipients: the Ukrainian Center for Socially Dangerous Disease Control (UCDC) of the Ukraine MOH, the All-Ukrainian Network of People Living with HIV/AIDS (PLWHA Network), and the International HIV/AIDS Alliance in Ukraine.

The single TB and HIV concept note 2015–2017 focuses on the further alignment of HIV and TB in relation to leadership and governance, financing, information systems, the health workforce, service delivery, and community systems. It includes interventions for the provision of defined service packages for injecting drug users (IDUs), commercial sex workers (CSW), men who have sex with men (MSM), and prisoners; HIV testing and counseling; condom programs; HIV treatment, care, and support; and MDR-TB treatment.

The proposed concept note is expected to partially fill the weaknesses and gaps of the state-funded National AIDS Program 2014–2018 and the NTP 2012–2016. The goal of the three-year grant is to contain the TB and HIV epidemics and reduce TB- and HIV-related morbidity and mortality in Ukraine. Given the concentrated nature of the TB-HIV epidemic, the focus is on IDUs, CSWs, MSM, and the transgender population; TB-infected people and their contacts; PLWHA and the sexual partners of most-at-risk populations (MARPs); PLHIV; and the prison population.

Thus, the concept note states the following three objectives for the proposed program:

1. To scale up and ensure equitable access to high-quality TB and HIV prevention, treatment, care, and support with a focus on key affected populations (MARPs, PLWHA, and other people most affected by the HIV and TB epidemic).
2. To strengthen the health system toward sustainable and integrated solutions for key populations most affected by the HIV and TB epidemic.
3. To strengthen community systems that enable needs-based, cost-effective, and integrated interventions for key populations most affected by the HIV and TB epidemic.

Initially, technical assistance to improve the TB response was nearly omitted in the grant. The grant focused activities on the procurement of second-line drugs and diagnostic supplies. It included minimum support for capacity-building and technical assistance in other areas. The work plan was later revised to strengthen technical assistance to TB providers, including capacity-building and patient support during treatment. A plan to create six centers to conduct trainings for TB providers was introduced to, and approved by, the Global Fund.

Integration of TB services into the primary health care system is not included in the grant, and the comprehensive ambulatory case management approach will not be directly strengthened under this grant.

To ensure support to patients for TB treatment adherence, two grant subrecipients have been identified and approved: the PLHIV Network, to support patients with drug-sensitive TB, and the Ukrainian Red Cross, to support patients with MDR-TB. MDR-TB patients receiving treatment under the Global Fund grant (approximately 50 percent of all MDR-TB patients) will be supported by the Ukrainian Red Cross. Patients with drug-sensitive TB will be supported by the PLHIV Network. The State Penitentiary Service of Ukraine was approved as the subrecipient for TB case management activities in prisons, as it was defined in the grant concept note.

Currently the rating of the grant was changed in the official Global Fund website, as compared to the April 2015 rating B1 and marked as n/a.

### **Challenge TB involvement in Global Fund support/implementation; actions taken during Year 1**

The CTB project team participated in a number of meetings and consultant communications with the UCDC (Global Fund principal recipient) during the reporting period. The purpose was to ensure coordination of project activities with NTP priorities, and with national- and regional-level interventions, under the Global Fund grant to avoid duplication of efforts and overlapping of activities.

PATH representatives participated in the US Government/Global Fund joint partner meeting conducted on June 19, 2015. At this meeting, participants presented and discussed proposed Country Operation Plan (COP) indicators from the national indicator list and targets for 2016. They also discussed the main shift from COP14 to COP15. The focus was put on sustainability.

CTB also coordinated a project training plan to support the Global Fund grant vision of capacity-building and training for TB providers. In addition, UCDC formally requested that the CTB project provide the

developed MDR/XDR TB training curriculum for Global Fund trainings. The curriculum was provided to the Global Fund PRs and implementing partners and has been used for training events.

At the regional level, the CTB project monitored the support provided to drug-sensitive TB patients by regional PLHIV Network organizations. The Global Fund grant funds these organizations with the goal of improving and ensuring treatment completion. PATH noted gaps in the quality and reach of support and shared this concern with the UCDC. In particular, very few patients are actually being supported and, although TB drugs are distributed, DOT is not always ensured.

Finally, the CTB project team conducted meetings with Ukrainian Red Cross regional units and TB Services to discuss the selection of patients participating in MDR-TB activities to avoid overlapping with the Global Fund grant. As was reflected in the plan, the CTB project supports MDR-TB patients who receive treatment with NTP-procured drugs through the Red Cross. Thorough selection of patients is conducted and monitored to avoid duplication with the GF-supported patients.

## 5. Challenge TB Success Story

### **Anastasia\* is determined to complete her MDR-TB treatment at the family medicine ambulance in Peresadovka Village, Mykolaivska Oblast, Ukraine**

The Challenge TB project is designed to improve MDR-TB services and outcomes for MDR-TB patients in the project regions of Ukraine through the integration of a patient-centered approach based on the ambulatory health care system into oblasts' routine MDR-TB case management system. During the first year of the project, PATH has developed and is currently piloting in two project regions a model of ambulatory care for MDR-TB patients. Project worked with the Center of primary medical and sanitary care (SPMMSK) of Zhovtnevyi raion in Mykolaivska oblast and visited one of the SPMMSK's family medicine ambulances in Peresadovka Village. The project staff also visited the DOT site located in this rural family medicine ambulance, where an appointed nurse should directly monitor TB patients taking their anti-TB drugs. In the beginning of 2015, the Peresadovka Village DOT site was located in the same building of the family medicine ambulance where patients with various diseases, including TB, came through the ambulance's corridors. No infection control measures were observed there. The DOT site room urgently needed to be repaired and equipped. In addition, the PHC providers felt prejudiced against people with TB and especially MDR-TB and expressed reluctance and lack of confidence to take on ambulatory treatment of MDR-TB patients at their site. As a result, the PHC staff referred any MDR-TB patient from their family medicine ambulance in the village to the rayon or oblast level. Thus, in January 2015, no MDR-TB patients received DOT services there.

**Figure 7. SPMMSK: MDR-TB treatment.**



Today, three patients are being provided MDR-TB treatment based on ambulatory care at this DOT site. Anastasia, one of these MDR-TB patients, testifies: *“I am determined to complete my treatment now. It is so comfortable that I can receive my anti-TB medicines just in the village where I live. Previously, I had to go by bicycle to the rayon center and receive my treatment there.”*

The project helps to provide primary medical aid, geographically close to rural residents, ensuring better quality and reachability of MDR-TB

\* Full name withheld to protect identity.

ambulatory care and improving patient autonomy and satisfaction, which will lead to a higher treatment success rate for MDR-TB treatment. Through an intensive series of round table meetings, monitoring visits, trainings and workshops, PATH worked with the health authorities and PHC providers to build their ability to provide competent, compassionate, and patient-centered care to MDR-TB patients on an ambulatory basis. As a result of these advocating and educating activities, the SPMMSC administration of Zhovtnevyi raion in Mykolaivska oblast made a decision to close the existing DOT site in Peresadovka Village and provided the premises for creating a new DOT site that would meet the TB-related infection control requirements. In August 2015, a new DOT site was opened at the family medicine ambulance in Peresadovka Village. The room was repaired and equipped with furniture, and a UV lamp was installed. The infection control measures are observed, as TB patients enter the new DOT site through a separate entrance.

The project will continue to work with primary health care providers to build their ability to provide competent, compassionate, and patient-centered care to MDR-TB patients on an ambulatory basis. This will allow patients greater access to care and a higher quality of care that meets their particular needs in alignment with health reforms that promote ambulatory services.

## **6. Operations Research**

**N/A - no operations research conducted in year one.**

## **7. Key Challenges during Implementation and Actions to Overcome Them**

### **Administrative challenges**

The award agreement between KNCV and PATH was signed during the first week of April 2015. According to PATH policy, no subagreements can be issued before a donor agreement is executed by both parties. This caused delays in the involvement of the Ukrainian Red Cross Society and several consultants ready to support project activities. To mitigate this challenge, the team conducted all preparatory work for the subagreements in advance.

PATH is actively working to sign protocols/memorandums of understanding (MOUs) with project partners. MOUs with the project sites are required both to formalize relationships between PATH and recipients and to adhere to legal requirements for project registration in Ukraine. This process involves USAID, KNCV, PATH headquarters staff, Ukraine health authorities, and project recipients. The involvement of multiple parties slows the process; it also adds the challenge of working within various organizations' requirements, rules, and business practices.

PATH worked with the USAID Mission, which is representing the international partners to the Ministry of Economy of Ukraine in the registration process, to harmonize the text of the MOUs. Currently MOUs are signed by all parties.

### **Technical challenges**

Currently, Ukraine lacks second-line drugs procured by the government. Initially, about 35 percent of patients on treatment for MDR-TB in Ukraine received medicines under the Global Fund grant. The remaining 65 percent were treated using medicines procured by the NTP. In 2015 the government delayed tenders for drug procurement due to the political turbulence since the last year and, as a result, there is a lack of government-procured second-line drugs in the country. To resolve the problem temporarily, the UCDC allowed drugs procured under the Global Fund grant to be used for all patients on treatment, including newly diagnosed patients. In other words, the UCDC allocated drugs procured under the Global Fund to a higher number of patients, which means that Ukraine runs the risk of stock outs if replacement supplies are not received in time. Also, because the supply of drugs from the NTP is erratic, this reallocation may stretch the Global Fund supply thin, creating a risk of treatment interruption for all patients when the Global Fund stock is exhausted.

To address this challenge, the CTB project team had a number of meetings with WHO, the USAID Mission, other stakeholders, and NTP to clarify when the drug procurement might happen. There were a number of suggestions to address the immediate needs in the country, including a request to USAID and WHO to conduct emergency procurement, but after intensive negotiations it was declined. Currently the government of Ukraine is continuing the negotiation with the UN agencies regarding the international procurement of TB drugs and other drugs and commodities for health care needs. Given that the procurement problems happened above the NTP level, the CTB project continues to closely monitor the situation to ensure that drugs are available for the full treatment course for the newly enrolled patients.

Other challenges remain the same as noted during previous reporting quarters:

- There are no incentives to reduce excessive hospitalization and orient resources to priority areas of modern TB control, including patient-centered ambulatory care models. Significant savings could be made by reducing hospitalization time of TB patients. However, there are no viable mechanisms to use potential savings for primary health care and TB ambulatory services, including side-effects prevention and management as well as providing incentives and enablers to TB patients. The Challenge TB project is working with the health administrations in the project oblasts to ensure their commitment to identify ways to use savings for increased targeted funding to the primary health care facilities to ensure proper TB case management and organization of infection control at the primary health care level.
- Treatment monitoring using laboratory tests for side-effects management is not followed fully at the inpatient treatment stage and is very limited at the ambulatory stage of treatment. Government biochemical and clinical laboratories in general health facilities at the different levels of care have limited technical capacity and inadequate equipment and supplies to conduct the biochemical, hormonal, and other tests for MDR-TB patients to prevent/diagnose side effects. Private laboratories are able to conduct some of these tests, but neither the NTP nor patients can cover the cost. CTB will provide assistance to the project oblasts in quantification of needed supplies and procure essential laboratory tests and equipment for side effects diagnostic for project sites.
- There is poor organization of infection control at the primary health care level, and poor understanding among providers of the main principles of IC. At the same time, a lack of understanding of IC, and fear of contracting MDR-TB, contribute to stigma against patients on ambulatory treatment in non-TB facilities. The CTB project increased assistance on the capacity building on IC measures at all level of TB care at project oblasts through support in development of IC plans and on-the-job capacity building in the IC measures implementations. In addition, printed materials will be provided to describe the options of the IC equipment available.

Finally, ongoing political conflict in Ukraine undermines TB care and prevention by damaging the national economy and limiting the attention and priority given to public health. At present, all available resources have been diverted to the conflict and defense activities. A devaluated currency, resulting in fewer financial resources overall, together with the flight of profitable businesses from Ukraine, leaves few opportunities to advocate for increased spending on TB. The CTB project continuously discusses with the partners in the project sites how to mitigate the situation and prioritize needs to spend available resources effectively.

## 8. Lessons Learned/Next Steps

The CTB project work started during a time of major political and military instability in the country, with a number of key government stakeholders replaced during the course of project implementation. In addition to these challenges, we encountered other issues as outlined below and developed recommendations that could help to further improve Ukraine's MDR-TB case management.

There are several specific barriers to implementing ambulatory care for MDR-TB in Ukraine:

- **Stigma:** MDR-TB is highly stigmatized in Ukraine, particularly among health care providers who are not TB specialists. These include family care doctors, primary health care nurses, and staff from social service organization who should be the main points of contact for MDR-TB patients on ambulatory care. While a portion of the stigma and discrimination can be traced to fear of infection, a larger portion is attributable to the perception that MDR-TB patients are “difficult to

work with”—they have comorbid conditions such as drug or alcohol use, have psychological issues, or are homeless—and health providers are poorly equipped to address those issues. Stigma within the health system must be addressed for an ambulatory model to succeed.

- **Disincentives for discharge from the hospital:** Traditionally, MDR-TB patients were hospitalized in TB-specialized facilities for long periods of time, sometime until completion of treatment. Although the recently issued protocol stipulates that MDR-TB patients should be discharged from inpatient services as soon as sputum smears are negative (at approximately three to four months), doctors routinely keep patients hospitalized for an average of eight months. There are two main reasons why long hospitalizations continue to be the norm. First, doctors are concerned that patients will be lost to follow-up soon after discharge and therefore prefer to treat them as inpatients for longer periods. Second, hospital staffing and compensation continues to be calculated based on the number of inpatient bed-days. To preserve staff and funding, they may keep patients longer than necessary. Third, patients often need support to continue treatment at outpatient settings, including for food, transportation costs, and/or a place to stay overnight. Full implementation of the Protocol requires considerable effort and a rethinking of alternative incentives for hospitals to discharge patients.
- **Lack of standardization:** Health reform is being implemented in different ways at the oblast level, and staff are unclear on how to organize a system of ambulatory treatment for people with MDR-TB. Mechanisms for key pieces of an ambulatory care system are unclear—for instance, how second-line anti-TB drugs will be provided to family doctors for treatment of patients, and who is responsible for reporting results.
- **Lack of training:** Primary care providers are not yet well equipped to provide the complex services required for adequate care, especially side-effects management and monitoring of people with MDR-TB. Social service providers are also unprepared to support the needs of MDR-TB patients throughout their long treatment.

Taking all of this information into account, the following steps are recommended to move the primary health care MDR-TB case management agenda forward:

1. Conduct intensive engagement with government and all care providers, including the private and public sectors, business and civil society, and professional and community-based groups, to strengthen response to TB.
2. Pay attention to issues that remain major barriers to progress.
3. Convene technical partners and government staff working on ambulatory care to ensure coordination across efforts.
4. Educate partners and stakeholders when needed to obtain their support.
5. Provide technical assistance to set up systems ensuring the quality and continuity of care provided in both inpatient and outpatient settings through supervision visits with onsite coaching, an analysis of findings, and solution development.
6. Support technical assistance to develop a user-friendly guidance document on setting up ambulatory care for MDR-TB.
7. Continue to support institutionalization, implementation, and evaluation of developed ambulatory care models that have been started to the endpoint of results, focusing on treatment). Support collection and analysis of data on key affected populations as part of this process to refine approaches.
8. Improve infection control at all stages of MDR-TB case management at the oblast level.

9. Convene quarterly meetings of stakeholders at the oblast level to discuss progress and problem-solve challenges.
10. Convene an annual conference of oblasts implementing ambulatory care for MDR-TB patients to foster cross-program learning and identify best practices.

## Annex I: Year 1 Results on Mandatory Indicators

<b>MANDATORY Indicators</b>				
<i>Please provide data for the following mandatory indicators:</i>				
<b>2.1.2 A current national TB laboratory operational plan exists and is used to prioritize, plan and implement interventions.</b>	<b>National APA 1</b>	<b>CTB APA 1</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>
<b>Score</b> as of September 30, 2015	0	N/A	<b>None</b>	There is no consistent Laboratory Operational Plan (LOP) in the Ukrainian national TB program (NTP). NTP 2012-2016 contains essential elements of the LOP (lab optimization plan, new diagnostic tools introduction and implementation, procurement of lab consumables, TB microscopy/culture EQC, human resources capacity-building) but doesn't include strategy and management principles.
<b>2.2.6 Number and percent of TB reference laboratories (national and intermediate) within the country implementing a TB-specific quality improvement program i.e. Laboratory Quality Management System</b>	<b>National APA 1</b>	<b>CTB APA 1</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>

<b>Number and percent</b> as of September 30, 2015	0% (0/33)	N/A	<b>None</b>	Currently, there is one national reference laboratory (NRL) functioning in Ukraine; there are 24 Level-3 labs (one in each region) in the civil sector and 8 Level-3 labs in the penitentiary system. Neither the NRL or intermediate-level laboratories (32 Level-3 labs that perform culture and DST) are accredited using the international regulations under ISO15189. Neither the "Global Laboratory Initiative (GLI) Stepwise Process towards TB Laboratory Accreditation" (scoring = phase 1-4) nor SLIPTA/SLMTA for TB (scoring=stars 1-5) were implemented in Ukraine.
<b>2.2.7 Number of GLI-approved TB microscopy network standards met</b>	<b>National APA 1</b>	<b>CTB APA 1</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>
<b>Number of standards met</b> as of September 30, 2015	7	N/A	<b>None</b>	The standard numbers that are met: 2, 3, 6, 7, 9, 10, 11
<b>2.3.1 Percent of bacteriologically confirmed TB cases who are tested for drug resistance with a recorded result.</b>	<b>National 2014</b>	<b>CTB 2014</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>
<b>Percent (new cases)</b> , include numerator/denominator	97.4% (13,063/13,408)	98.4% (855/869)	<b>None</b>	Previously treated cases include both relapses and others.
<b>Percent (previously treated cases)</b> , include numerator/denominator	96.0% (8,569/8,922)	96.6% (730/756)		

<b>Percent (total cases)</b> , include numerator/denominator	96.9% (21,632/22,330)	97.5% (1,585/1,625)		
<b>3.1.1. Number and percent of cases notified by setting (i.e. private sector, pharmacies, prisons, etc.) and/or population (i.e. gender, children, miners, urban slums, etc.) and/or case finding approach</b>	<b>National 2014</b>	<b>CTB 2014</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>
<b>Number and percent</b>	30,236	N/A	<b>None</b>	
<b>3.1.4. Number of MDR-TB cases detected</b>	<b>National APA 1</b>	<b>CTB APA 1</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>
Total 2014	7,855	774	<b>Limited</b>	Data for the periods April–June and Jul–Sept 2015 was withdrawn from the ERR system (eTB-Manager) and is not final yet. The official data for the period April–June 2015 is just under collection and will be available after October.
<i>Jan-Mar 2015</i>	2,148	168		
<i>Apr-June 2015</i>	2,559	231		
<i>Jul-Sept 2015</i>	2,189	179		
To date in 2015	6,896	578		

3.2.1. Number and percent of TB cases successfully treated (all forms) by setting (i.e. private sector, pharmacies, prisons, etc.) and/or by population (i.e. gender, children, miners, urban slums, etc.).	National 2013 cohort	CTB 2013 cohort	CTB APA 1 investment	Additional Information/Comments
<b>Number and percent</b> of TB cases successfully treated in a calendar year cohort	Getting from WHO	511 (73%) - Mykolayivska oblast  645 (77%) - Poltavaska oblast	<b>Moderate</b>	
3.2.4. Number of MDR-TB cases initiating second-line treatment	National APA 1	CTB APA 1	CTB APA 1 investment	Additional Information/Comments
Total 2014	7,540	588	<b>Moderate</b>	Data for the periods April–June and Jul–Sept 2015 was withdrawn from the ERR system (eTB-Manager) and is not final yet.
Jan-Mar 2015	2,011	146		
Apr-June 2015	2,528	231		
Jul-Sept 2015	2,133	177		
To date in 2015	6,672	554		
3.2.7. Number and percent of MDR-TB cases successfully treated	National 2012 cohort	CTB 2012 cohort	CTB APA 1 investment	Additional Information/Comments
<b>Number and percent</b> of MDR-TB cases successfully treated in a calendar year cohort	Getting from WHO	41 (37%) - Mykolayivska oblast  102 (53%) Poltavaska oblast	<b>Substantial</b>	

<b>5.2.3. Number and % of health care workers diagnosed with TB during reporting period</b>	<b>National 2014</b>	<b>CTB 2014</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>
<b>Number and percent</b> reported annually	0.05% (355/690,777)	0.04% (8/18,508) - Mykolayivska oblast  0.04% (11/26,085) - Poltavska oblast	<b>None</b>	
<b>6.1.11. Number of children under the age of 5 years who initiate IPT</b>	<b>National 2014</b>	<b>CTB 2014</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>
<b>Number</b> reported annually	114,400	376 - Mykolayivska oblast 333 - Poltavaska oblast	<b>None</b>	NTP data is for children 0–14 only.
<b>7.2.3. % of activity budget covered by private sector cost share, by specific activity</b>	<b>National APA 1</b>	<b>CTB APA 1</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>
<b>Percent</b> as of September 30, 2015 (include numerator/denominator)	N/A	N/A	<b>None</b>	CTB did not collaborate with the private sector. The current landscape in Ukraine does not lend itself to private-sector participation.
<b>8.1.3. Status of National Stop TB Partnerships</b>	<b>National APA 1</b>	<b>CTB APA 1</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>
<b>Score</b> as of September 30, 2015	0	N/A	<b>None</b>	There is no STOP TB Partnership in Ukraine.
<b>8.1.4. % of local partners' operating budget covered by diverse non-USG funding sources</b>	<b>National APA 1</b>	<b>CTB APA 1</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>

<b>Percent</b> as of September 30, 2015 (include numerator/denominator)	N/A	98% (US\$3,200,700/ US\$3,252,200)	<b>Moderate</b>	The Ukrainian Red Cross Society (URCS) implements various projects with diverse funders (national and international). Most projects are funded by the International Red Cross and International Committee of Red Cross as well as other donors, including Global Fund. Most projects are focused on the support of internal migrants and military conflict related activities.
<b>8.2.1. Global Fund grant rating</b>	<b>National APA 1</b>	<b>CTB APA 1</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>
<b>Score</b> as of September 30, 2015	Current grant TB/HIV: N/A Latest TB: B1 Latest HIV: A1	N/A	<b>None</b>	In January 2015, Ukraine started to implement a joint TB/HIV grant for 2015–2017, which combined the activities included in an HIV Round 10 proposal and a TB Round 9 proposal for which the latest rates were A1 and B1, respectively.
<b>9.1.1. Number of stock outs of anti-TB drugs, by type (first and second line) and level (ex, national, provincial, district)</b>	<b>National APA 1</b>	<b>CTB APA 1</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>
<b>Number</b> as of September 30, 2015	0	0	<b>None</b>	Currently, there are no drug stock outs due to an emergency donation of second-line drugs from the Global Fund to cover treatment of all patients. MOH procurement has been delayed during the year. Patients' waiting lists for MDR-TB treatment exist in every oblast.
<b>10.1.4. Status of electronic recording and reporting system</b>	<b>National APA 1</b>	<b>CTB APA 1</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>

<b>Score</b> as of September 30, 2015	3	N/A	<b>Limited</b>	ERR is a patient/case-based, real-time system that functions at national and subnational levels for both TB and MDR-TB.
<b>10.2.1. Standards and benchmarks to certify surveillance systems and vital registration for direct measurement of TB burden have been implemented</b>	<b>National APA 1</b>	<b>CTB APA 1</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>
<b>Yes or No</b> as of September 30, 2015	Yes	N/A	<b>Limited</b>	Ukrainian surveillance and vital registration systems were assessed in 2015 within the WHO NTP review with application of standards and benchmarks instrument. Results and recommendations are ready and will be provided to NTP along with assessment report.  Out of 12 standards for TB surveillance applicable for Ukraine, 4 were met, 6 were partially met, and 2 were not met (2015, NTP Review).
<b>10.2.6. % of operations research project funding provided to local partner (provide % for each OR project)</b>	<b>National APA 1</b>	<b>CTB APA 1</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>
<b>Percent</b> as of September 30, 2015 (include numerator/denominator)	N/A	N/A	<b>None</b>	The CTB project did not conduct or support operational research during Year 1.

10.2.7. Operational research findings are used to change policy or practices (ex, change guidelines or implementation approach)	National APA 1	CTB APA 1	CTB APA 1 investment	Additional Information/Comments
Yes or No as of September 30, 2015	N/A	No	None	The CTB project did not conduct or support operational research during Year 1.
11.1.3. Number of health care workers trained, by gender and technical area	CTB APA 1		CTB APA 1 investment	Additional Information/Comments
	# trained males APA 1	# trained females APA 1	Total # trained in APA 1	Total # planned trainees in APA 1
1. Enabling environment			0	
2. Comprehensive, high quality diagnostics			0	
3. Patient-centered care and treatment	22	65	87	80
4. Targeted screening for active TB			0	
5. Infection control			0	
6. Management of latent TB infection			0	
7. Political commitment and leadership			0	
8. Comprehensive partnerships and informed community involvement			0	

9. Drug and commodity management systems			0	
10. Quality data, surveillance and M&E			0	
11. Human resource development			0	
Study tour on organization and monitoring of patients-centered approach ambulatory care for MDR-TB patients, WHO CC Riga, Latvia	4	12	16	15
Other (explain)			0	
<b>Grand Total</b>	<b>26</b>	<b>77</b>	<b>103</b>	<b>95</b>
<b>11.1.5. % of USAID TB funding directed to local partners</b>	<b>National APA 1</b>	<b>CTB APA 1</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>
<b>Percent</b> as of September 30, 2015 (include numerator/denominator)	N/A	4% (US\$53,198/ US\$1,312,173)	<b>Limited</b>	Subaward to the Ukrainian Red Cross to work in the project sites to support MDR-TB patients in order to ensure treatment completion and prevent defaults.

**Annex II: Status of EMMP activities**

<b>Year 1 mitigation measures</b>	<b>Status of mitigation measures</b>	<b>Outstanding issues to address in Year 2</b>	<b>Additional remarks</b>
Education, technical assistance, and training about activities that inherently affect the environment include discussion prevention and mitigation of potential negative environmental effects.	Discussion of environmental impact included in education, technical assistance, training, and other materials completed.	No outstanding issues.	