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**TB CARE I**

# **TB CARE I - VIETNAM**

**Year 2**

**Annual Report**

**January 1 – September 30, 2012**

**October 30, 2012**

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## List of Abbreviations

ACSM	Advocacy, Communication and Social Mobilization
APA	Annual Plan of Activity
CA	Cooperative Agreement
DTU	District TB Unit
HCMC	Ho Chi Minh City
MDR	Multi-drug resistance
M&E	Monitoring and Evaluation
MOH	Ministry of Health
MOPS	Ministry of Public Security
NTP	National Tuberculosis Control Program
OR	Operational Research
SA	Sub-Agreement
TB	Tuberculosis
TBIC	TB Infection Control
VAAC	Vietnam Administration AIDS Control
WHO	World Health Organization

## Executive Summary

With the total buy-in of 2,702,827 USD, TB CARE I Vietnam APA2 has been implemented by lead partner of KNCV and two coalition partners of Management Sciences for Health and World Health Organization. Due to the work-plan approval in March 2012, the majority of project activities have been implemented in Quarter 3 and 4. Under TB CARE I APA2, 8 technical areas are included which are: universal access; laboratories; TBIC; Programmatic Management of Drug resistant TB; TB/HIV; Health System Strengthening; M&E, Surveillance and OR, and Drug supply and management.

Under APA2, a variety of different achievements have been obtained and here below are the most important outcomes of the Project under APA2.

Firstly, a three – year work-plan for comprehensively controlling TB/HIV/MDR TB in prisons have been available for Vietnam under joint support from TB CARE I and GF9. The medium work-plan include all key components for comprehensively controlling TB/HIV/MDR TB in prisons and is a foundation for all donors and aid organization to pool their supports for TB/HIV/MDR TB controls in prisons in Vietnam.

Secondly, the guidelines and training materials on the new strategy of management of TB in children for diagnosis and preventive treatment in line with latest WHO recommendations has been developed and approved by NTP in May 2012. Nine trainings for NTP staff, doctors and pediatricians in general hospitals and 30 trainings for CHWs in 3 pilot provinces was conducted in July and August 2012. The pilot phase for new strategy of management of TB in children has been started in September 2012 in 3 selected provinces with 30 districts and 415 communes involved. Two operation researches has been developed and finalized to evaluate this new strategy in the pilot phase and to form evidence for scaling up.

Thirdly, under the supports of TB CARE I, Xpert MTB/RIF has been introduced in 17 sites in Vietnam (8 MDR treatment centers (8 provinces, 3 districts), 4 provinces with high prevalence of HIV and 2 Pediatrics Hospitals) with focus on 3 targeted groups of MDR-TB suspect, HIV and children suspected of TB. The introduction of Xpert MTB/RIF system has been really warmly welcomed by all sites and the diagnosis of TB has been lifted to a higher level. So far, under TB CARE I, 588 NTP staff have received training on GeneXpert across the nation of Vietnam. And 1203 MDR and TB suspects has been screened by this rapid test, of which 209 rifampicin resistant cases and 661 TB cases have been identified by the Xpert MTB/RIF.

Fourthly, with TB CARE I support, the bio-safety level in the laboratories and TBIC status in 9 MDR-TB treatment centers have been improved with the renovation works completed for the laboratories and MDR-TB treatment wards. With this support, PMDT has been scaled up in 9 MDR-TB treatment centers and 12 satellite provinces in the country.

Fifthly under APA2, the TB CARE I Project in Vietnam has been successfully in ACSM works, especially to the highest level of communication and advocacy, i.e. central parliamentary members. The awareness on TB as a returning disease to the globe as well as to Vietnam has been improved; the necessity of NTP being maintained in national targeted programs has been targeted. And the official approval by the Government on keeping TB control Program in the lists of national targeted programs has been attributed to several causes, including the advocacy works by the Project with national central and provincial parliamentary members.

Last but not least, the Project has been achieving initial success in developing a strategic roadmap for e-TB Manager. This software with Vietnamese interface has been introduced in Ho Chi Minh City. This pilot will inform the further scale up application of the software for the management of all MDR TB patients in Vietnam.

## Introduction

The TB CARE I project in Vietnam aims to reduce the number of deaths due to TB by increasing access to timely and quality assured diagnosis and treatment of TB and MDR TB, with special attention to vulnerable groups (PLWHA, children, prisoners). KNCV is taking lead in this project implementation.

The project implementation of APA2 really started in March 2011 with KNCV being the lead partner. The coalition partner for TB CARE I in Vietnam under APA2 are WHO and MSH who participate in the collaboration and implementing some Project components. Being a lead partner, KNCV takes lead in managing and coordinating TB CARE I Project in Vietnam, and coordinating closely with the USAID mission and TB CARE I\PMU. The total buy in for TBCARE I Vietnam APA2 is 2,702,827 USD.

The focus of the project activities are in 9 provinces (out of a total of 63 in Vietnam) and in MDR diagnostic and treatment centers are established, where, based on the National Strategic Plan 2011-2015. These are Hanoi, Vinh Phuc, Thanh Hoa, Da Nang, Binh Dinh, Binh Thuan, Ho Chi Minh City, Can Tho, Tien Giang. Four provinces with high HIV prevalence (Hai Phong, Quang Ninh, Dien Bien, and An Giang) are also included in several activities. Some project activities are at national level especially for those concerning policy development and policy evaluation for TB control.

During the project implementation, the National Tuberculosis Control Program of Vietnam, Tuberculosis and Lung Hospitals/MDR-TB centers, national and international NTP partners play important roles in ensuring the Project's technical approaches and strategies are harmonized and in line with NTP strategic development directions. The TB CARE I Project in Vietnam covers 8 technical areas, in line with the National Strategic Plan for TB control for 2011-2015, focusing on gaps that the NTP of Vietnam has difficulties to fully cover, which is also technical areas of the project. Under APA2, there are 7 technical areas under TB CARE I, namely, universal and early access; laboratories; infection control; Programmatic management of Drug resistant tuberculosis (PMDT); TB/HIV; Health system strengthening; M&E, Operational research and surveillance.

## Universal Access

This technical area is responsible by KNCV. With the ultimate goal of increasing demand for and use of high quality TB services and improve the satisfaction with TB services provided and increasing the quality of TB services delivered among all care providers; in TB CARE I under technical area of universal and early access, the Project has been focusing on two key area: TB\HIV control in prison and TB in children.

### Technical Outcomes

Expected Outcomes		Outcome Indicators	Indicator Definition	Baseline (Year or timeframe)	Target	Result	Comments
					Y2	Y2	
<b>1.1</b>	Increased demand for and use of high quality TB services and improve the satisfaction with TB services provided (Population/Patient Centered Approach)	1.1.4 A multisectoral 3 year work plan for TB-HIV control in prisons is endorsed by the NTP, HIV program and Ministry of Police and supported by their partners (KNCV, MCNV, FHI, USAID)	Description: the implementation of a comprehensive TB/HIV strategy, including a model for transitional care after release is planned for the country Indicator Value: yes Level: national Source: MOH, MOP Means of Verification: physical plan and endorsement letters.	No (2011)	Yes	Yes	
		1.1.5 A model for transitional TB/HIV care and social support to ex-prisoners is piloted	Description: number of provinces implementing social support and transitional care for ex-prisoners Indicator Value: number of provinces implementing Level: provincial Source: reports Means of Verification: field visits Numerator: number of provinces implementing system for social support and transitional care for ex-prisoners Denominator: number of project provinces with prisons	0/6 (2011)	2/6	0/6	
<b>1.2</b>	Increased quality of TB services delivered among all care providers (Supply)	1.2.5 The coverage of provinces with new strategy for TB control in children	Indicator Value: absolute number Numerator: Number of provinces implementing new strategy for TB control in children Denominator: total number of project provinces	0/8 (2011)	3/8	3/8	

## **Key Achievements**

TB control in prisons: With an aim to support NTP Vietnam in establishing models for controlling TB/HIV/MDR-TB in prisons, the Project has contributed to the development of a three-year work-plan for comprehensively controlling TB/HIV/MDR-TB in prisons. A successful study tour to Jakarta, Indonesia to explore lessons on the model of TB/HIV/MDR-TB in prisons has been conducted in July 2012 to advocate the high ranking governmental officers from Vietnam Parliament's Social Affairs Committee, Ministry of Public Security, Vietnam National Tuberculosis Control Program-Ministry of Health, Vietnam Administration for HIV/AIDS Control – Ministry of Health, USAID country Mission, KNCV Country Office (TB CARE I), and FHI360 Vietnam. Many findings have been collected for referring to Vietnam's context regarding the model of integrated HIV/TB/MDR-TB service package in prisons; service linkages inside and outside prisons, especially the psychological/social/economic support to prisoners to continue treatment after release.

TB control in children: With the final aim to providing universal access to early TB diagnosis for children, the Project has been introducing new approach in managing childhood TB in children at district level. The guidelines and training material on the management of TB in children (for new strategy in line with latest WHO recommendations has been developed and approved) that includes technical guidance (diagnosis, treatment and preventive therapy), and guidance on the process for managing TB in children (conducting the management of child contacts, detection and management of children with TB) has been available as a result of different rounds of discussion and consultation from NTP's TB in children group and from experts in childhood TB, pediatrics, HIV and technical assistance from an expert of WHO-UNION (Prof. Steve Graham, Chair of the technical working group for child TB). The materials have been approved by NTP on May 5, 2012 and putting into use at 09 training courses on the management of TB in children for NTP staff and clinical staff in general and pediatric hospitals at provincial and district levels, and 30 training courses for communal staff has been organized in 3 cities/provinces with trainers being members from NTP's TB in children Group, Pham Ngoc Thach hospital, Can Tho TB and Lung hospital, and Hanoi Lung hospital.

New approach of management of TB in children has been implementing in 3 cities/provinces that are Hanoi, HCMC, Can Tho. Total number of communes is 415 with total number of 924 healthcare workers at all levels (264 male and 660 female) have been receiving training and this new approach has been applied in these three provinces.

Also regarding the TB in children technical area, under supports by TB CARE I, NTP has been preparing two draft operational research proposals. The first proposal concerned a prospective study to identify the feasibility, acceptability and operational challenges in the provision of IPT to children <5 years and HIV+ children aged 0-14 in 3 provinces (10-20 districts). The second proposal concerned a prospective study assessing the accuracy of the new proposed diagnostic algorithm and the increase in childhood TB case notification. This study aims to measure the relative accuracy of new algorithm in diagnosing childhood TB and to evaluate the increase in case notification among children and the work load of clinicians in the different level after introduction of the new algorithm. The Project's OR expert has provided comments for further finalization of the draft protocol before implementation and the evaluation and assessment results later will be the basis for recommending further scale-up of new approach of TB management in children in Vietnam.

## **Challenges and Next Steps**

The next steps for activities in this technical area are: (i) the 3 year workplan on TB\HIV\MDR-TB control in prisons will be included in GF9 phase 2, TB CARE I APA3 and other potential donors; and (ii) the operational research on TB in children shall be included in TB CARE I APA3.

## Laboratories

The activities under this technical area are largely responsible by KNCV. MSH also involves in one activity of referral system for laboratories in Vietnam and become a part of TB CARE I since APA2 Quarter IV.

## Technical Outcomes

Expected Outcomes		Outcome Indicators	Indicator Definition	Baseline (Year or timeframe)	Target	Result	Comments
					Y2	Y2	
2.1	Ensured capacity, availability and quality of laboratory testing to support the diagnosis and monitoring of TB patients	2.1.3 MDR designated laboratories with appropriate bio-safety practice.	Indicator Value: Number of provincial laboratories with appropriate bio-safety practice in project site Denominator: Number of provincial laboratories in project site	1 (2011)	6	6	
2.2	Ensured the availability and quality of technical assistance and services	2.2.3 Upgraded laboratories in term of bio-safety status and equipment	Indicator Value: number of culture laboratories equipped and functioning at the appropriate biosafety level Level: project area Source: TA reports Means of Verification: number Numerator: number of provinces with culture laboratories equipped and functioning at the appropriate biosafety level Denominator: total number of project provinces	4 (2011)	9	9	

<b>2.3</b>	Ensured optimal use of new approaches for laboratory confirmation of TB and incorporation of these approaches in national strategic laboratory plans	2.3.1 New technologies have been introduced	Indicator Value: Number for each technique below by Central, Provincial, district and Peripheral levels 1. TB culture	4 (2011)	9 (cumulative)	8 (cumulative)	In APA2, TB culture can be performed in 4/5 upgraded labs excepted in Tien giang. This technique will be implemented in Tien giang in early 2013
		2.3.2 Description: GeneXpert	2. GeneXpert	0 (2011)	17	17	17 Xpert MTB/RIF systems have been installed in Vietnam including: 14 systems at provincial levels and 3 at district level
		2.3.3 Description: LED microscopy	3. LED FM	0 (2011)	14	14	

## Key Achievements

Regarding the outcome of MDR designated laboratories with appropriate bio-safety practice, by September 30, the Project has provided several training courses on laboratory management and biosafety for laboratory staff in 6 labs in 6 TB and Lung hospital, with participants from provincial and district level in TB CARE I APA2 from Da nang (28 May - 1 June), HCMC (25-29 June), Can tho (9-13 July), K74 (6-10 August), and Binh Dinh (17-17 August). Currently, all lab technicians receiving training on lab management and biosafety (59 lab technicians including 31 male and 28 female people) have been well aware of appropriate bio-safety practice for their works.

By September 30, 2012, in total 9 MDR TB designated laboratories of Vietnam have been upgraded for improved bio-safety status and 5 laboratories in Binh Dinh, Binh Thuan, Tien Giang, Thanh Hoa and K74 have been supported by TB CARE I APA2. The upgrade mainly targets the facility layout, workflow, and ventilation system for direction airflow of all laboratories. All the facility layout, workflow and ventilation system for direction airflow developed and reviewed by the Project were based on the UFRS to the respective bio-safety levels adequate for M. tuberculosis and the workload and procedures used with close technical advice and review from DNV for each laboratory. By September 2012, all 9 MDR TB laboratories have been upgraded for improved bio-safety status. For laboratory equipment, particularly laboratory bio-safety equipment was purchased based on the technical specifications and the results of assessment of the needs from 4 (Thanh Hoa has been provided lab equipment since last year). The list of equipment, including the equipment for this lab equipment is detailed in Annex 1.

Regarding the expected outcome of ensuring optimal use of new approaches for laboratory confirmation of TB and incorporation of these approaches in national strategic laboratory plans, the Project has provided: (i) a total of 14 LED FM units and consumables to 10 districts in HCMC and 2 MDR-TB treatment centers in Binh Dinh and K74; (ii) 17 Xpert MTB\RIF and 17,000 cartridges have been procured and installed at 8 MDR treatment centers (8 provinces, 3 districts), 4 provinces with high prevalence of HIV (An Giang, Dien Bien, Quang Ninh and Hai Phong) and 2 Pediatrics Hospitals (National Pediatrics Hospital and Pediatrics Hospital No.1) for 3 targeted groups of MDR-TB suspect, HIV and children suspected having TB. With the support from TB CARE I, NTP Vietnam has developed and endorsed a national guideline on the Xpert MTB\RIF implementation plan in Vietnam with diagnostic algorithms, forms and register, cartridge supply and management system. Under TB CARE I, 588 NTP staff have received training on GeneXpert across the nation of Vietnam. And 1,203 MDR and TB suspects has been screened by this rapid test, of which 209 rifampicin resistant cases and 661 TB cases have been identified by the Xpert MTB/RIF. The operation research protocol has been reviewed for finalization to evaluate the pilot implementation and form recommendations for scale up.

MSH has been support NTP to develop the sputum sample transportation system since 2010 and a sample transportation system has been available and is being responsible for the implementation.

So far, the 7 sites originally designated in February 2011 to pilot the TB specimen referral system are currently implementing the system. 5 sites are sending specimens: Hanoi Lung Hospital; National 74 Hospital Vinh Phuc Province; Da Nang TB and Respiratory Diseases Hospital, Binh Dinh TB and Respiratory Diseases Hospital, Can Tho TB and Respiratory Diseases Hospital; 2 sites receiving specimens: NRL Hanoi and Pham Ngoc Thach Central TB Lab, HCMC.

Moreover, specimens are referred for Line Probe Assay ('Hain' test) and for DST (1<sup>st</sup> and 2<sup>nd</sup> line). Since April 2012, a private courier is being used to transport the specimens, because the Post Office has never had an arrangement with the Ministry of Health to accept and transport potentially infectious material. However, the specimens also need to be transported by air and currently there is no arrangement between the Post Office and Vietnam Airlines to transport the infectious material.

In 2012, 158 provincial and district level staff (75 doctors, 39 nurses and 44 laboratory staff) from 21 provinces were formally trained for one week in PMDT implementation and use of the referral system. MSH has provided packing materials and boxes to 8 provincial hospitals and 37 districts.

## Challenges and Next Steps

Regarding the appropriate bio-safety practice: NRL\NTP will provide further on job training during regular supervision visit; ii) SNRL will provide further site assessment.

Regarding the outcome on upgraded laboratories in terms of bio-safety status and equipment: Some minor improvements will be done by constructors/hospitals;

For the outcome of optimal use of new technologies: (i) follow up with NTP and Tien giang for implementation of culture technique in Tien giang; (ii) follow up and evaluate GeneXpert pilot implementation plan; and (iii) implementation and evaluation of LED FM implementation in selected sites.

For the activity of referral transportation, there are several challenges as follows:

- The real challenge here is the turnaround time from test request by the clinician to receiving the test result. Labs at Hanoi Lung Hospital and National 74 Hospital informed us that they receive the results of LPA tests from the NRL in 1 – 2 weeks; Da Nang reported that the DST results from HCMC are received in 4 – 5 months. However, there was no documentation in the labs to verify this. Labs also reported that the reagents for LPA have been out of stock since June and therefore they cannot get results at present. The referral labs currently use different mechanisms to report the results of tests performed. Labs reported that they are notified of the test results by email or fax. But, in Hanoi, the official written tests results frequently remain at the lab until someone from the referring site travels to pick them up or in the regular mail. In HCMC, the lab sends the results to the office of the TB Control Unit, which is then responsible for sending them to the different referring labs.
- The provincial and district level staff were formally trained in PMDT implementation and use of the referral system. However, these staff have not yet been able to refer any specimens, as they are awaiting official written authorization from the NTP, instructing them to start sending specimens to a higher level laboratory.
- GeneXpert implementation in Vietnam leads to a change in the mechanism of laboratory sample transportation system (more sites will receive the samples now). The referral system must be tailored (quickly) to facilitate the GeneXpert roll out and the guidelines and protocols modified accordingly.
- It was envisaged that the implementation of the TB specimen referral system would increase the access to diagnosis of drug resistant TB and subsequent impact on the treatment of MDRTB cases with 2nd line drugs. Although a relatively small number of specimens have been referred, there are no formal records or documentation of the test results for patients specimens were referred to a higher level. Therefore at this time, the impact of the system on MDR-TB case detection cannot be reliably estimated and is unknown.

Up until 2012, the Post Office of Vietnam was unable to accept infectious materials for transportation. Therefore, the NTP has held discussions with the Post Office about sending infectious materials by mail. The Post Office has prepared a Memorandum of Understanding to agree to cooperate with the NTP. Currently the MOU had been signed. Then the details of price and transfer mechanism need to be negotiated and agreed. In addition, it will be essential for the Post Office to have a formal agreement with Vietnam Airlines to accept and transport the specimens.

To address this challenge, the following steps are planned for addressing:

<b>Challenges</b>	<b>Actions and activities in the next step</b>
NTP staff are awaiting official written authorization from the NTP, instructing them to start sending specimens to a higher level laboratory.	Discussion and assist NTP to provide the authorization to the sites
The Post Office of Vietnam was unable to accept infectious materials for transportation. And GeneXpert implementation in Vietnam leads to a	After signed MOU, the detailed contract between NTP and Vietpost should be formed, so the sites can use post office for sample

change in the mechanism of laboratory sample transportation system	transportation.
At this time, the impact of the system on MDR-TB case detection cannot be reliably estimated and is unknown	It will be essential to set up a simple data collection system at the sites which are collecting and referring specimens for recognition and measurement of drug resistance
One of the target group for GeneXpert diagnosis is TB/HIV patients.	<ul style="list-style-type: none"> <li>•Set up a mechanism to transport TB/HIV patients from OPC to DTU for diagnosis of MDR-TB.</li> <li>•Training for NTP staff at high HIV prevalence on PMDT implementation and referral system</li> </ul>
Due to limitation of NTP budget, the sites still need a support of packing materials	Providing packing materials to the sites

## Infection Control

Activities under this technical area is responsible by KNCV.

### Technical Outcomes

Expected Outcomes	Outcome Indicators	Indicator Definition	Baseline (Year or timeframe)	Target	Result	Comments	
				Y2	Y2		
<b>3.2</b>	Scaled-up implementation of TB-IC strategies	3.2.3 number of TB and HIV facilities implementing national TB IC policy	Description: number of TB and HIV facilities implementing national TB IC policy Indicator Value: absolute number Level: project area Source: reports Means of Verification: site visits Numerator: number of implementing facilities in project provinces	4/9 (2011)	55/9	35/9	
<b>3.3</b>	Strengthened TB IC Monitoring & Measurement	3.3.1 Annual reporting on TB disease (all forms) among HCWs is available as part of the national R&R system	Indicator Value: Number of provincial TB&LD Hospital reported /number of provincial TB facilities in the country	No (2011)	45/63	63/63	

## **Key Achievements**

The upgrade of TBIC status for 5 MDR treatment wards in 5 MDRTB treatment centers of Thanh Hoa, Binh Dinh, Binh Thuan, Tien Giang and K74 are completed and put into use.

For the indicator of number of TB and HIV facilities implementing national TB IC policy, by September 30, 2012, with the support from TB CARE I, selected provincial/district units from 4 provinces of Hanoi, Da Nang, Can Tho and Ho Chi Minh have developed and being approved for their provincial/districts facilities plans improvement after trainings on TBIC for district level healthcare workers, self-assessment and facility plan development. Staff in these four provinces have been not only well- aware of the principles for TB infection control but can be able to develop plan for improving their TB infection control status. By September 30, 35 facilities plans from these four provinces have been approved TBIC facility plans and almost all of them have been completing the plan implementation.

Regarding the outcome indicator of annual reporting on TB disease (all forms) among HCWs is available as part of the national R&R system, currently the reporting system has been available that consists of 4 TBIC indicators and the data collection for 4 TBIC indicators including the data on TB disease (all forms) among HCWs from 45 provincial TB hospitals and 18 provincial TB Units, making a total of 63 TB provincial Hospitals/Units in the whole nation is available. This activity shall be integrated into the national surveillance system.

12,000 posters on TBIC were developed, printed and distributed for increasing TBIC awareness in TB patients and community

## **Challenges and Next Steps**

For remaining TBIC facility plans that have not completed the implementation, the implementation shall be continued in TB CARE I APA3.

## Programmatic Management of Drug Resistant TB (PMDT)

KNCV and MSH are responsible for activities in this technical area. MSH is specifically responsible for e-TB manager related activities.

### Technical Outcomes

Expected Outcomes		Outcome Indicators	Indicator Definition	Baseline (Year or timeframe)	Target	Result	Comments
					Y2	Y2	
4.1	Improved treatment success of MDR TB	4.1.2 MDR TB patients who are still on treatment and have a sputum culture conversion 6 months after starting MDR-TB treatment (% in roll-out phase estimated to be lower than the baseline, as the baseline was reached in a central pilot situation)	Indicator Value: Percent  Numerator: Number of MDR TB patients in a cohort who are still on treatment and had culture conversion latest at month 6 (having had 2 negative sputum cultures taken one month apart and remained culture negative since)  Denominator: Total number of MDR patients who started treatment in the cohort.	84% (2011)	>75%	>75%	
		4.1.3 e-TB manager: pilot in HCMC	System implemented, staff trained and data encoded in e-TB manager from PNT hospital and all 24 districts below it.	25 (PNT hospital + 24 districts)	100%	100%	System implemented and being regularly used by the 25 sites.
		4.1.4 Roll-out of eTB manager to other 9 MDRTB centers	System implemented, staff trained and data encoded in e-TB manager from all 9 treatment sites.	9	100%	90%	Due to the lack of information from NTP, 2 out of the 8 sites (excluding PNT hospital from HCM) have districts below them, which lead to a need of new trainings for their staff

		4.1.5 TA for eTB manager	Permanent support to NTP's demand towards a successful implementation of e-TB manager		100%	95%	There are still some customizations to be done in e-TB manager
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## Key Achievements

KNCV has provided technical support for PMDT implementation and scale-up. For the first 3 quarters of 2012, 491 MDR-TB patients have been detected and treated with second line drugs.

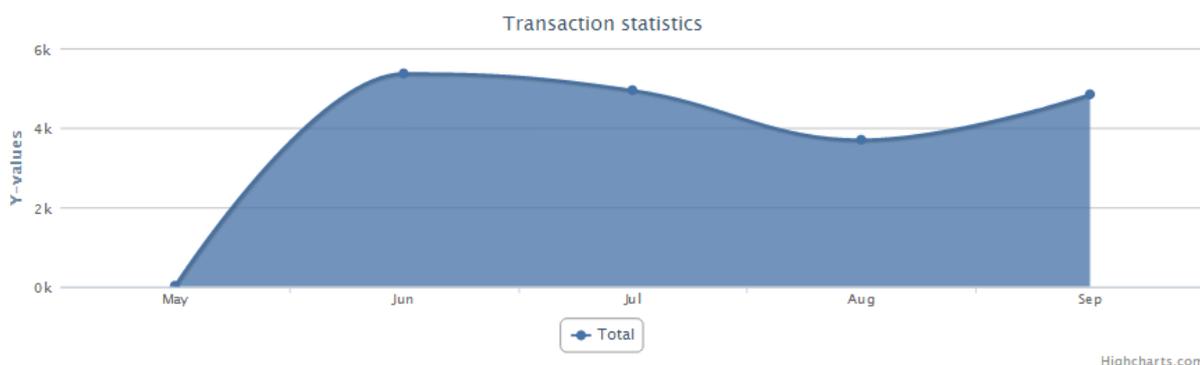
With the aim to help contribute to improve treatment success of MDR TB in Vietnam, the Project has been implementing several activities including the development, printing and distribution of 10,000 flipbooks on MRD-TB to 35 MDRTB treatment centers and satellites (Provincial, district and commune levels) for increasing awareness of MDR-TB prevention, diagnosis, treatment and social support among health care workers, patients and community.

One important activity of the Project that aims to supports the management of drug TB resistance is the introduction of e-TB manager software. This software is for managing MDR TB patients using electronic database. The implementation in Vietnam started in the end of May when e-TB Manager Strategic Roadmap and Implementation Plan was agreed with NTP and all other partners. This mission was followed by a STTA on which all staff from PNT hospital and the 24 districts below it, were introduced to e-TB manager platform.

By the end of August a new STTA had two major goals: conduct a SLD management workshop and a new round of training for the 9 treatment sites, covering this way the entire country.

The following graphs present the evolution of the data encoded in e-TB manager.

**Figure: Transaction statistics**



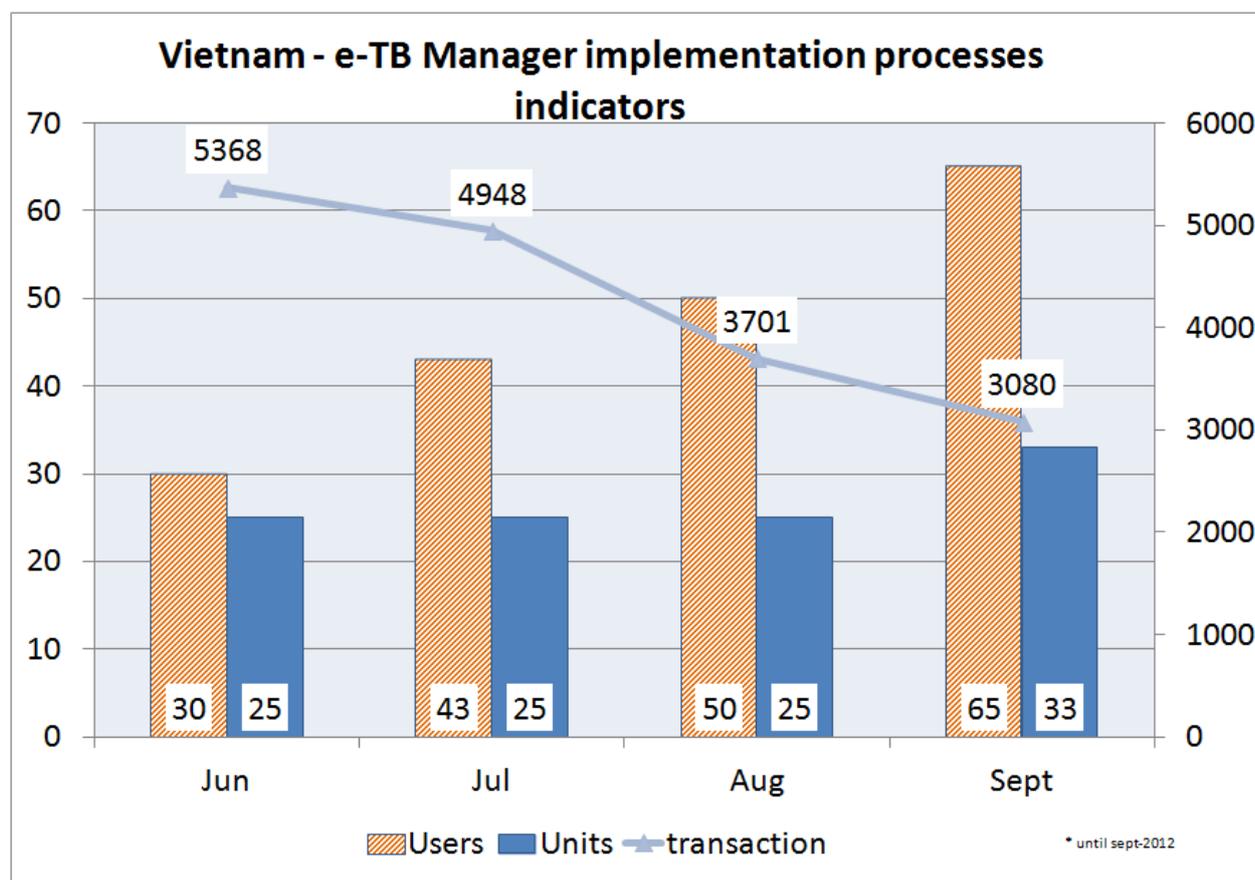
Miền	Monthly distribution					
	2012					Total
	May	Jun	Jul	Aug	Sep	
MIỀN BẮC	5	1,081	196	239	496	2,017
MIỀN NAM	23	4,254	4,752	3,462	4,092	16,583
MIỀN TRUNG		33			256	289
<b>Total</b>	<b>28</b>	<b>5,368</b>	<b>4,948</b>	<b>3,701</b>	<b>4,844</b>	<b>18,889</b>

**Figure: Data encoded in e-TB manager**

VIETNAM - e-TB MANAGER IMPLEMENTATION STATUS					
<b>CASES MODULE</b>					
# of total patients	2009	2010	2011	2012	TOTAL
screened (per year)	10	97	312	252	671
diagnosed with DR-TB and notified to PMDT via e-TBM (per year)	6	46	221	167	440
diagnosed with DR-TB and put on treatment (per year)	6	28	199	155	388
diagnosed with DR-TB and waiting for treatment (per year)	0	0	2	9	11
diagnosed with DR-TB and with a treatment outcome registered (per year)	8	16	15	4	43
<b>MEDICINES MODULE</b>					
# of sites (total of 31)	total	% of all			
# with their stock position updated in e-TBM	19	61%			
# using the e-TBM for SLD forecast/ordering and distribution (*)	0	0%			

(\*) Obs.: NTP is working on this task, it'll require more time for its implementation.

**Figure: Implementation evolution**



### Challenges and Next Steps

Technical support will be continued in APA3. And e-TB manager shall:

- Implement all the latest requests from NTP in e-TB manager;
- Monitor and supervise the update of all data in the platform;
- Cross check the information between the paper based and e-TB manager to decrease the paper based control, according to NTP's agreement;

- Update the medicine information for supporting NTP on the medicine quantification.
- Supervision visits and on the job training for strengthening the system's implementation;
- Permanent remote assistance on all issues linked to the system's implementation;
- Consolidate e-TB manager implementation by validating the data encoded in the platform (goal is to achieve 100% for cases and medicines data on all units registered in e-TB).

## TB/HIV

This activity is responsible by KNCV who signed sub-contracted to Public Health Research – a local NGO specializing in public health research. The activity has been intensively conducted in Quarter IV of TB CARE I APA2.

### Technical Outcomes

Expected Outcomes		Outcome Indicators	Indicator Definition	Baseline (Year or timeframe)	Target	Result	Comments
					Y2	Y2	
5.2	Improved diagnosis of TB/HIV co-infection	5.2.5 Baseline statistics available for screening and referral practices for PLWHA on TB in the project provinces  Description: Measurement of baseline statistics for TB screening and referral practices in the project provinces	Indicator Value: proportion  Level: province  Source: HIV and TB clinic statistics, patient interviews  Means of Verification: report on baseline statistics  Numerator: number of provinces with baseline statistics on screening and referral practices.  Denominator: Total number of project provinces	0/9 (2011)	5/9	3/9	

### Key Achievements

With the expected outcome being to improved diagnosis of TB/HIV co-infection, the Project aims to form the baseline statistics available for screening and referral practices for PLWHA on TB in the project provinces. Research has been conducted under TB CARE I APA2 funds by Public Health Research (a national NGO for health research) and the baseline statistics for screening and referral practices for PLWHA on TB in the project provinces has been available for 3 provinces of Ha Noi, Dien Bien and Ho Chi Minh City.

### Challenges and Next Steps

The final report has been finalized and the result dissemination will be conducted in October 2012.

VAAC has asked TB CARE I for supporting to develop the national guidelines and training materials for the MOH new framework of HIV\TB collaborative activities. This work will be proposed in APA3.

## Health System Strengthening (HSS)

Activities under this technical area are mainly responsible by WHO with some activity being responsible by KNCV.

### Technical Outcomes

Expected Outcomes	Outcome Indicators	Indicator Definition	Baseline (Year or timeframe)	Target	Result	Comments
				Y2	Y2	
6.1 TB control is embedded as a priority within the national health strategies and plans, with matching domestic financing and supported by the engagement of partners	6.1.4 Number of provinces expressing commitment to increased TB funding  Description: As a result of advocacy meetings with members of parliament and provincial people committee leaders TB funding is expected to increase	Indicator Value: percentage  Level: nationwide  Source: workshop documentation  Means of Verification:  Numerator: number of provinces making statement of commitment to increased provincial resources for TB control  Denominator: number of provinces attending advocacy meetings	0 (2011)	75%	100%	

### Key Achievements

Over the past recent years, while external aids to Vietnam have been decreasing, NTP is facing the financial gaps for TB control. TB CARE I Project has been supporting NTP to implement some advocacy and social mobilization activities with parliamentary members and national assembly's representatives from provincial to central level. So far, ACSM workshops have been organized on TB and TB investment for parliament members at national and provincial level. At national level, one ACSM has been organized by TB CARE I with attendance of 30 parliamentary members. At regional and provincial level, 5 ACSM workshops have been organized for provincial representatives of National Assembly and provincial people's committees of 65 provinces of Vietnam. The total participants under TB CARE I APA2 are 223 people, including 112 male and 111 female participants.

The greatest achievement of ACSM activities for parliamentary at all levels (central and provincial levels) is an increased awareness of participation on TB control which is reflected by a high commitment to maintain TB high on the agenda, i.e. remaining a National target program. There has been very clear request from National Assembly to provincial NTP to be more proactive in contacting with local People Committees and People Councils to provide/update local specific challenges for TB control such as human resource, funding, health insurance challenges. Almost all People Committees and People Councils showed their commitment to TB control (see attached the estimates of local funding for TB as transmitted upon request). In addition future commitments

were demonstrated in the request for renewal of GF TB Round 9 Phase 2 (47% vs the minimum 25% requested).

Besides advocacy workshops, the Project also succeeds in putting the issue of TB control and the TB control needs to a higher level of attention from newspapers agencies. Being the 4th power tool, the Project would target the use of this power to help increase awareness of the society to the TB control in Vietnam. In total, 3 regional training workshops have been organized for health journalists in both central and provincial newspaper and a media award was launched for submission of the best article on TB. More than 70 articles were submitted. A jury comprised of the Director of the NTP, the WHO medical officer and Chief Editor of a newspaper appraised the articles using a standard grading. Highly political commitment obtained and further possibility to work with provincial and relevant bodies to increase funding for TB.

### **Challenges and Next Steps**

There is a need to continue to organize advocacy meetings, targeting high burden TB and TB/HIV provinces to increase support for TB control. One national WS is needed to maintain the attention of the government.

## Monitoring & Evaluation, Surveillance and OR

### Technical Outcomes

Expected Outcomes		Outcome Indicators	Indicator Definition	Baseline (Year or timeframe)	Target	Result	Comments
					Y2	Y2	
7.3	Improved capacity of NTPs to perform operations research	7.3.2 Proportion of key studies supported by research consultant  Description: the research consultant is supporting the national DRS, ongoing OR and and new interventions supported by USAID	Indicator Value: proportion Level: national Source: mission report Means of Verification: field visit Numerator: number of evaluation studies supported Denominator: number of studies on new interventions in the field of MTB/Rif Xpert, LED FM, HIV/TB referral, PMDT, TB control in children, TB infection control, implementation of e-TB manager	8/8 (2011)	20/20	14/20	TB CARE I: 3 ORs  NTP: 11 ORs (cumulative)

### Key Achievements

The TB CARE I Project built capacity for operations research through the design of protocols to evaluate the new TB CARE I supported interventions. Under TB CARE I APA2, 2 missions have been conducted and provide technical assistance and capacity building for operational researches in the fields of MTB/RIF Xpert, LED FM, HIV/TB screening, TB control in children, TB infection control and other NTP operation researches. 2 PhD students from NTP are under supervision in the SOW of this research consultants

### Challenges and Next Steps

Technical support will be continued in APA3 for research implementation including data collection in the field, data analysis and writing scientific reports and results dissemination.