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**TB CARE I**

# **TB CARE I - Cambodia**

**Year 2  
Quarterly Report  
January - March 2012**

**April 30, 2012**

## Quarterly Overview

<b>Reporting Country</b>	<b>Cambodia</b>
<b>Lead Partner</b>	<b>JATA</b>
<b>Collaborating Partners</b>	<b>FHI, KNCV, MSH, WHO</b>
<b>Date Report Sent</b>	April 30, 2012
<b>From</b>	Jamie Tonsing
<b>To</b>	Chantha Chak
<b>Reporting Period</b>	<b>January - March 2012</b>

<b>Technical Areas</b>	<b>% Completion</b>
1. Universal and Early Access	38%
2. Laboratories	50%
3. Infection Control	50%
4. PMDT	36%
5. TB/HIV	50%
6. Health Systems Strengthening	50%
7. M&E, OR and Surveillance	31%
<b>Overall work plan completion</b>	<b>43%</b>

### Most Significant Achievements

- \* FHI 360/TB CARE I organized an event in Correctional Center 3 (CC3) prison to mark World TB Day and inaugurate the prison health post renovated with TB CARE I funds. Ms Monique Mosolf, Director of OPHE at USAID Cambodia, along with senior government officials from ministries of interior and health attended the event. Around 560 prisoners from CC3 prison, various government institutions, and development partners attended this event. The event received good media coverage (more details and photos in later sections).
- \* JATA/TB CARE I continued expansion of childhood TB activities to now cover 15 operational districts (ODs). During the quarter, 7526 children (F= 3454) were referred by health centres and community DOTS partners to referral hospitals for complete diagnostic work up such as clinical examination, tuberculin skin test, and x-ray examination. Of those, 973 were diagnosed as childhood TB (F=416).
- \* KNCV/TB CARE I facilitated the first operational research (OR) training course from 13-17 Feb. Participants identified four OR topics and developed protocols with assistance from the course facilitators and local mentors identified at the time of the workshop.
- \* MSH/TB CARE I visited Cambodia from 16-20 Jan 2012 to formally initiate the e-TB manager tool customization process for Cambodia and began testing of initial versions during the quarter.
- \* WHO/TB CARE I team assisted the NTP to successfully advocate for and secure a three year adult TB drug grant from the Global Drug Facility (GDF) and continue the grant for children's drugs for one more year, and conducted a vulnerability analysis of the National TB Program, following the cancellation of Global Fund Round 11.

### Overall work plan implementation status

Work plan implementation has caught up during this quarter - increase from 17% completion rate in the previous quarter to 43% in this reporting quarter. The overall work plan and implementation status is on track.

### Technical and administrative challenges

### In-country Global Fund status and update

The prolonged negotiations for Phase 2, Round 7 of the Global Fund, which lasted for almost a year, have delayed the disbursement of funds by more than a year now. GF Round 7 Phase 2 started in April 2011. However, the first tranche of funds of Phase 2 will arrive only in April 2012.

## Quarterly Technical Outcome Report

Technical Area		1. Universal and Early Access							
Expected Outcomes	Outcome Indicators	Baseline		Target		Result	Highlights of the Quarter	Challenges and Next Steps to Reach the Target	
		Data	Year	Data	Year	Y1			
1.1 Increased demand for and use of high quality TB services and improve the satisfaction with TB services provided (Population/Patient Centered Approach)	1.1.3 Patients' Charter is implemented Indicator Value: Score (0-3) based on definition	0	2010	2	2012	0	Preparatory activities ongoing, implementation will start in next quarter. Two patient-centered approach (PCA) tools have been chosen: Patients' Charter and Quote TB Light. Baseline survey has started.	The next step will involve adaptation and translation of materials, followed by implementation of the PCA tools in selected health facilities.	
	1.1.4 Referral hospitals in project sites judged to have read chest X-rays correctly by the expert cross reader (85% correct results) Numerator: Number of referral hospitals in diagnostic capacity improvement project sites able to read more than 85% of x-rays correctly according to expert reader Denominator: Total number of referral hospitals in diagnostic capacity improvement project sites	NA (new indicator)	2010	85%	2012	Q2 data: 87%	This quarter, 892 TB suspects were referred in comparison to previous quarter of 719 cases. 36.5% (326/892) were diagnosed as smear negative TB. Referral hospitals in project sites continued to maintain proficiency in reading chest x-rays. 87% of the chest X-rays were judged to have been read correctly by the expert cross reader.		
	1.1.5 Updated manual of the NTP is developed Description: The current NTP manual will be revised to include recent WHO guidelines including 2009 treatment guidelines, PMDT, Childhood TB, Three I;s etc, Indicator Value: Yes/No Level: National Source: NTP and TBCARE project report Means of Verification: A copy of the updated manual obtained from source indicated	No	2011	Yes	2012	NA	PMDT manual has been drafted. Drafting of NTP manual has not started yet.	The NTP Manual will be drafted in July-September 2012 based on feedback from the Joint Program Review of August 2012.	

<p>1.2 Increased quality of TB services delivered among all care providers (Supply)</p>	<p>1.2.5 TB patients reported in prisons among the total number of prisoners in TBCARE areas (number &amp; %)          Description: This indicator measures the performance of the prisons program with regard to case finding activities          Indicator Value: Percent          Source: TB CARE report          Means of Verification: Compare with information from TB registers of prison health posts          Numerator: Number of TB cases (all forms) reported from the TBCARE prisons project sites          Denominator: Total population of inmates at the TBCARE prisons project sites</p>	<p>101/3453 (3%)</p>	<p>2010</p>	<p>&gt; 4%</p>	<p>2012</p>	<p>NA</p>	<p>Significant proportion of the TB cases in prisons are diagnosed during the annual mass screening, planned for Quarter 4. So cumulative annual data will be reported in Quarter 4 report (Jul-Sept)</p>	
<p>1.3 Reduced patient and service delivery delays (Timing)</p>	<p>1.3.2 Provider Delay          Description: Number of days from sputum collection at Health Centres to receipt of lab results          Indicator Value: Number of days          Source: TB CARE report          Means of Verification: Cross-check with records at Health Centres and lab registers</p>	<p>NA (not reported)</p>	<p>2010</p>	<p>&lt;5 days</p>	<p>2012</p>	<p>8 days</p>	<p>Though the quarterly average is below target, the monthly data shows decrease in turnaround time - from 23 days in December to 5 days in March 2011. More in activity plan report (1.3.1 and 1.3.2), graph in photo section</p>	

Technical Area		2. Laboratories						
Expected Outcomes	Outcome Indicators	Baseline		Target		Result	Highlights of the Quarter	Challenges and Next Steps to Reach the Target
		Data	Year	Data	Year	Y1		
2.1 Ensured capacity, availability and quality of laboratory testing in country needed to support the diagnosis and monitoring of TB patients	<p>2.1.3 TB laboratories participating in smear microscopy EQA program performing with over 95% correct results in TB CARE areas (number &amp; %)</p> <p>Description: This indicator measures the quality of smear microscopy services</p> <p>Numerator: Number of laboratories enrolled in smear microscopy EQA program performing with over 95% correct results</p> <p>Denominator: Number of laboratories enrolled in smear microscopy EQA program in TB CARE areas</p>	60/79 (76%)	2010	85%	2012	72% (60/83)	Data reported for the previous quarter (Oct-Dec 2011). 83 microscopy centers in TB CARE I supported sites participated in the EQA process. Of those 83, 60 centers had over 95% of correct performance which is equal to 72%	
2.2 Ensured the availability and quality of technical assistance and services	<p>2.2.1 Technical assistance visits from a SRL through a formal link of memorandum of agreement</p> <p>Means of verification: Copy of trip report available with TB CARE</p>	Yes (outside TBCARE)	2010	Yes	2012	NA	Not yet due	
2.3 Ensured optimal use of new approaches to the laboratory confirmation of TB and incorporation in national strategic lab plans	<p>2.3.1 New technologies have been introduced</p> <p>Indicator Value: Number for each technique below by Central, Provincial, district and Peripheral levels</p> <p>1. GeneXpert (4)</p> <p>2. LED microscopy (12)</p>	2 GeneXpert and 12 LED planned	2010	3 GeneXpert and 12 LED (cumulative from Y1)		2 GeneXpert and 12 LED microscopes		

Technical Area 3. Infection Control								
Expected Outcomes	Outcome Indicators	Baseline		Target		Result	Highlights of the Quarter	Challenges and Next Steps to Reach the Target
		Data	Year	Data	Year	Y1		
3.2 Scaled-up implementation of TB-IC strategies	3.2.1 "TB IC core package" strategy has been adapted and adopted in TB CARE TB-IC project areas Indicator Value: Score (0-3) based definition.	1	2010	2	2012	2	Strategy implemented : Active case finding through referrals from community volunteers and private providers in the QI project sites, and annual mass screening of prisoners. In addition, all Health Centre staff have been trained on TB-IC to perform triage and enforce cough hygiene practices.	

Technical Area 4. PMDT								
Expected Outcomes	Outcome Indicators	Baseline		Target		Result	Highlights of the Quarter	Challenges and Next Steps to Reach the Target
		Data	Year	Data	Year	Y1		
4.1 Improved treatment success of MDR	4.1.2 MDR TB patients who are still on treatment and have a sputum culture conversion 6 months after starting MDR-TB treatment 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.	NA (not reported)	2010	65%	2012	66%	Out of 6 patients enrolled for treatment in 1st Quarter 2011, 66% converted to culture negative at month 6.	The NTP continues to focus its efforts on increasing the case finding for MDRTB. This has been increasing steadily.

Technical Area 5. TB/HIV								
Expected Outcomes	Outcome Indicators	Baseline		Target		Result	Highlights of the Quarter	Challenges and Next Steps to Reach the Target
		Data	Year	Data	Year	Y1		
5.2 Improved diagnosis of TB/HIV co-infection	5.2.2 TB patients with known HIV status Indicator Value: Percent Numerator: Total number of all TB patients registered over a given time period who were tested for HIV (after giving consent) during their TB treatment Denominator: Total number of TB patients registered over the same given time period.	77%	2010	79%	2012	Not available	84% of all registered TB patients underwent testing for HIV in 2011.	The efforts will continue.

Technical Area 6. Health Systems Strengthening								
Expected Outcomes	Outcome Indicators	Baseline		Target		Result	Highlights of the Quarter	Challenges and Next Steps to Reach the Target
		Data	Year	Data	Year	Y1		
6.2 TB control components (drug supply and management, laboratories, community care, HRD and M&E) formed integral part of national plans, strategies and service delivery of these components	6.2.4 Sound technical proposal developed and submitted for Global Fund Round 11 funding Description: TB CARE staff spend considerable time with the Global Fund process at the country level, serving on panels to identify priorities and conduct gap analysis, reviewing expression of interests from potential sub-recipients and in the proposal development itself. This will continue for the upcoming round 11 application Indicator Value: Yes/No. Yes means Round 11 proposal submitted and approved	Submitted, not approved	2010	Submitted and approved	2012	NA	<p>TB CARE assisted in drafting the proposal, as planned, with the assistance of an external WHO consultant. Unfortunately, the Global Fund cancelled Round 11. Subsequently, WHO/HQ and in-country TB CARE team have worked on a vulnerability analysis for the National TB Program.</p> <p>In addition, TB CARE I assisted the NTP to successfully advocate for and secure drug grant from the Global Drug Facility for three years.</p>	The findings of the vulnerability analysis will feed into the upcoming TWG-Health meetings, the Joint Program Review and multiple advocacy activities to ensure longer term commitments of funding for the program.

Technical Area		7. M&E, OR and Surveillance						
Expected Outcomes	Outcome Indicators	Baseline		Target		Result	Highlights of the Quarter	Challenges and Next Steps to Reach the Target
		Data	Year	Data	Year	Y1		
7.1 Strengthened TB surveillance	7.1.1 An electronic recording and reporting system for routine surveillance exists at national and/or sub-national levels Indicator Value: Yes/No	No	2010	Yes	2012	NA	Not yet due for reporting. Planned from June 2012	
	7.1.4 Joint Program Review of the NTP is conducted Description: Usually every five years, a high level joint program review of the TB programme is conducted with participation of all major stakeholders including technical and donor agencies. This serves as a technical review of the NTP to appraise its performance and guide future direction, and equally as an important advocacy event to mobilise political commitment for TB control from the Givernement and partner agencies.	No	2010	Yes	2012	NA	This is scheduled for August 2012	
7.2 Improved capacity of NTPs to analyze and use quality data for management of the TB program	7.2.3 A data quality audit at central level has been conducted within the last 6 months Indicator Value: Yes/No	No	2010	Yes	2012	Yes (2)	Two randomly selected districts were visited by a joint TB CARE I and CENAT team during this quarter. Details in SI No.7.2.1 under Activity Plan Report	
7.3 Improved capacity of NTPs to perform operational research	7.3.1 OR studies completed and results incorporated into national policy/guidelines Indicator Value: Number (of OR studies and instances reported separately)	NA	2010	2	2012	NA	Not yet due for reporting.	

## Quarterly Activity Plan Report

1. Universal and Early Access			Activity Leader	Approved Budget	Cumulative Completion	Planned Completion		Cumulative Progress and Deliverables up-to-date
Outcome	Activity #	Activity				Month	Year	
1.1 Increased demand for and use of high quality TB services and improve the satisfaction with TB services provided (Population/Patient Centered Approach)	1.1.1	ACF targeting high risk groups	WHO	41,855	25%	Sep	2012	TB CARE I is supporting efforts of the national TB program to improve MDR-TB case finding, which is also one of the top 10 indicators of the program. Active case finding is assisting in increasing the detection of MDR-TB cases.
	1.1.2	Patient Centered Care	WHO	54,305	25%	Sep	2012	Kick-off workshop conducted, ethical clearance received, workplan designed, survey instruments and protocols ready, baseline survey started. Two patient-centered approach (PCA) tools have been chosen: Patients' Charter and Quote TB Light. After the baseline survey is completed, the next step will involve adaptation and translation of materials, followed by implementation of the PCA tools in selected health facilities.
	1.1.3	NTP Manual	WHO	12,351	0%	Sep	2012	This will be done during and following the Joint Program Review so that the manual can align with the findings of the review.
	1.1.4	Childhood TB	JATA	101,913	50%	Sep	2012	During the quarter, 7526 children (F= 3454) were referred by health centres and community DOTS partners to referral hospitals for complete diagnosis work up such as clinical examination, tuberculin skin test, and x-ray examination. Of those, 973 were diagnosed as TB childhood TB (F=416).  Two trainings to improve clinical capacity of TB physicians in diagnosis and management of childhood TB were conducted at CENAT, Phnom Penh during this quarter: on 4-6 Jan 2012 attended by 50 participants (8 F), and on 13-15 March attended by 42 participants (4 F). In addition to government staff of the project sites, staff from NGOs implementing Community DOTS (RACHA, SCA, CHC) or hospital improvement projects (URC, Angkor hospital) were included so they could assist in referrals from the community and provide on-going clinical support to hospital staff. In addition, four orientation workshops were organized for the new expansion sites: Kg Speu province on 13 Jan 2012 attended by 50 participants (8 F); Kg Chhnang province on 20 Jan 2012 attended by 43 participants (12 F), in Srey Santhor OD on 03 Feb2012 attended by 45 participants (14 F), and in Prey Chhor OD on 20 March 2012 attended by 46 participants (6 F).
	1.1.5	Diagnostic capacity improvement	JATA	128,466	50%	Sep	2012	TB CARE I continues to work with CENAT/NTP to improve the diagnosis of TB including smear negative TB and quality of sputum smear. Regular monitoring and supervision were conducted jointly with central supervisors to the microscopy centers and hospitals (TB wards) to have cross check of diagnosis and quality of smear. The data from this quarter showed that there is an increase in referral of TB suspects to hospitals for x-ray examination for smear negative TB compared to previous quarter. This quarter, 892 TB suspects were referred in comparison to previous quarter of 719 cases. Of those 892, 326 were diagnosed as smear negative TB equal to 36.5%. The data from cross check indicates that the correct diagnosis is 87%.  The result of TB laboratory shows that health center staff maintain the quality of smear they made: good quality of sputum to 72.3%, good size of smear to 80.3%, good thickness to 60% and good evenness to 46%.
	1.1.6	Digital X-ray	JATA	82,031	50%	Sep	2012	One digital x-ray was procured in APA 1 and is used at CENAT hospital. A second digital X-ray machine will be procured in the next quarter.

	1.1.7	Quality Improvement	FHI	42,449	 50%	Sep	2012	Following completion of preparatory activities, full implementation of the Quality Improvement (QI) began in Nov 2012 in five Health Centres of Kampong Cham province. Monthly learning session are held regularly. The proportion of TB suspects referred by C-DOTS watchers and private providers reporting at the five Health Centres continued to increase: 52% in Nov, 68% in Dec, 81% in Jan and 86% in Feb. The number of TB cases (all forms) diagnosed increased from a baseline of 19 cases/month to 24 cases/month during the quarter. The increase in smear positive TB cases was even more significant - from 4 cases/month to 12 cases/month (see charts in quarterly photo section). Collective efforts by all stakeholders including involvement of commune council, health center chief and village chief to support transportation contributed to these achievements. At the request of the national TB programme, TB CARE I presented these findings at the annual TB conference on 28 March 2012 at Phnom Penh.
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Outcome	Activity #	Activity	Activity Leader	Approved Budget	Cumulative Completion	Month	Year	Cumulative Progress and Deliverables up-to-date
1.2 Increased quality of TB services delivered among all care providers (Supply)	1.2.1	Prisons	FHI	89,635	 50%	Sep	2012	<p>TB CARE I supports provision of TB/HIV services in 7 prisons. Quarterly coordination meetings were held in Kampong Cham province on 5 January attended by 20 participants (2 female), and joint supervisory visits to 5 prisons (Takhmao, Takeo, Preah Sihanouk, Koh Kong and Kg Speu prisons) conducted from 12-16 March.</p> <p>In collaboration with CENAT and General Department of Prisons (GDP) of the Ministry of Interior, FHI 360/ TB CARE I, organized an event in Correctional Center 3 (CC3) prison on 22 March 2012 to observe the World TB Day and inaugurate the the old prison health post, renovated by TB CARE I. Ms Monique Mosolf, Director of OPHE at USAID Cambodia, along with the Deputy Director General of GDP and Deputy Director of CENAT, inaugurated the renovated health post and stressed the need for general improvements and infection control measures in prison settings. Around 560 prisoners from CC3 prison, various government institutions, and more than 12 development partners including UNHCR, ICRC, CRS, Caritas, MSF attended this event. The event received good media coverage including in the Voice of America (VoA) and local TV</p>
	1.2.2	PPM - Implementatation	FHI	88,717	 25%	Sep	2012	<p>Memorandum of agreement signed with six of the seven provinces identified for Public Private Mix for TB (PPM). For the TB CARE I supported sites (26 ODs), attempts are being made to use the NTP system so that district and provincial health departments (PHD) channel their work plan, budget request and reports through CENAT who also assume overall leadership for the project. TB CARE I staff works closely with the CENAT focal point for PPM to provide technical assistance, participate in regular joint supervision and monitoring to PPM project sites, reviews budget request and payments for pre-approved activities in the yearly work plans. The new PPM officer joined the TB CARE I team in March 2012 and has started work to prepare a database and streamline reporting for PPM from all project sites.</p> <p>During the quarter, 353 TB suspects were referred by participating private providers, 233 (66%) arrived at the health facilities. 42 (18%) TB cases were diagnosed among those who reported to the health facilities.</p> <p>In addition, CENAT organised a PPM meeting at the request of TB CARE I on 2 Feb 2012. All PPM implementing partners (RHAC, RACHA and FHI 360) provided updates on their PPM projects and discussed ways to coordinate activities.</p>
	1.2.3	PPM - Advocacy (PAC)	FHI	35,760	 25%	Sep	2012	<p>An agreement letter with Pharmacist Association of Cambodia (PAC) was signed in Jan 2012 and a work plan and budget for 2012 was agreed upon. PAC will focus its activities to raise awareness and encourage pharmacists to restrict sales of anti-TB drugs, and to identify and refer TB suspects to public health facilities offering free TB services. During the quarter, PAC participated in sensitization workshops and coordination meetings held in three provinces (Batambang, Kandal and Phnom Penh). As suggested during the meetings, the referral forms used by private providers is</p>
Outcome	Activity #	Activity	Activity Leader	Approved Budget	Cumulative Completion	Month	Year	Cumulative Progress and Deliverables up-to-date

1.3 Reduced patient and service delivery delays (Timing)	1.3.1	IT-SMS project (InSTEDD)	FHI	20,761	50%	Sep	2012	InSTEDD provided technical assistance to develop the web-based SMS alert system for delivery of lab test results: <a href="http://tblab.instedd.org/accounts/sign_in">http://tblab.instedd.org/accounts/sign_in</a> . Following successful launch of the system, TB CARE I team is now working with the InSTEDD staff to explore how to transfer hosting of the server and SMS gateway from InSTEDD to the website for NTP under development (7.2.2). Further expansion of the same application to other sites can be handled by TB CARE I staff. However, if there is a need to expand the application to other areas (for example PPM), a new contract will be negotiated and signed with InSTEDD
	1.3.2	IT-SMS project (FHI)	FHI	30,293	50%	Sep	2012	The system logs all the transactions and provides a data-base for monitoring. The 4 TB labs and 15 Health Centers covered by the SMS pilot project have started using the system for relaying results of sputum smear tests. The number of test registered in the system as well as percentage of sputum smear test result delivered using the system increased from 39% (9/23) in Dec 2011 to 80% (186/232) in March 2012. The average turn around time for sputum smear test results decreased from 23 days in Dec 2011 to 5 days in March 2012 (See charts in Photo section of this report). CENAT and TB CARE I conducted supervisory visits to the project sites from 15 to 17 March 2012. A common challenge identified for improvement are for all Health Centres to send smear details to the system in a timely manner, and for the lab technicians to provide results using the systems as soon as it is available. Chamkar Leu hospital lab had been relaying only positive results through the system citing lack of time for the sole staff working in the very busy lab, causing pending results to show up on the web
					38%			

2. Laboratories			Activity Leader	Approved Budget	Cumulative Completion	Planned Completion		Cumulative Progress and Deliverables up-to-date
Outcome	Activity #	Activity				Month	Year	
2.1 Ensured capacity, availability and quality of laboratory testing in country needed to support the diagnosis and monitoring of TB	2.1.1	EQA-sputum microscopy	JATA	58,861	50%	Sep	2012	The activity of EQA for TB microscopy has been implemented and monitored regularly. TB CARE I is supporting 9 provinces which have 84 microscopy centers. During Oct-Dec 2011, (Jan-Mar 2012 data will be available and reported in next quarter), 83 microscopy centers (99%) participated in EQA process. Of those 83, 60 centers had over 95% of correct performance which is equal to 72%. 14 centers were reported as unacceptable performance. The NTP and team is making field visits to check those low performance centers and provide on the job training for improvement.
Outcome	Activity #	Activity	Activity Leader	Approved Budget	Cumulative Completion	Month	Year	Cumulative Progress and Deliverables up-to-date
2.2 Ensured the availability and quality of technical assistance and services	2.2.1	Technical assistance - lab aspects	JATA	17,857	50%	Sep	2012	TB lab officer continues to provide technical assistance to TB CARE I supported microscopy centers and Genexpert sitest. He made several visits to the fields to find problems and provide solutions for better improvement.
Outcome	Activity #	Activity	Activity Leader	Approved Budget	Cumulative Completion	Month	Year	Cumulative Progress and Deliverables up-to-date
2.3 Ensured optimal use of new approaches to the laboratory confirmation of TB and incorporation in national strategic lab plans	2.3.1	GeneXpert pilot	JATA	98,780	50%	Sep	2012	The two Genexperts supported by TB CARE I are placed at the national reference lab at CENAT and Battambang province. CENAT lab: During the quarter, 74 MDR-TB suspects were tested with Xpert: 18 of these were Xpert Mtb+/Rif-ve while 14 were Mtb+/Rif+. Result of the drug susceptibility test (DST) for the 14 Xpert Rif+ve cases are still awaited. Battambang lab started using Xpert in the later part of the quarter. 20 MDR-TB suspects were tested with Xpert. Of those 8 cases were detected as MTB, but not Rifampicin resistance.
	2.3.2	LED microscopy	JATA	57,594	50%	Sep	2012	TB CARE I continues to support the use of LED microscopy in 15 centers. TB CARE I monitors the use of LED microscopes including EQA. This quarter, lab officer along with with the CENAT team made visited the centers to supply reagents and perform supervision, including microscope maintenance.
					50%			

3. Infection Control			Activity Leader	Approved Budget	Cumulative Completion	Planned Completion		Cumulative Progress and Deliverables up-to-date
Outcome	Activity #	Activity				Month	Year	
3.2 Scaled-up implementation of TB-IC strategies	3.2.1	TB-IC: Implementation	FHI	19,420	50%	Sep	2012	Trainings on TB-IC for Health Centre staff of the project sites (two ODs in Kampong Cham) were completed in APA 1. In addition, TB CARE I supports these sites with regular supply of masks and provided fans to facilitate unidirectional air flow in the consultation rooms. Since the TB-IC project sites are the same as other project activities, implementation of TB-IC measures at the Health Centres (observation of triage, waiting areas and consultation rooms, cough hygiene, sputum collection area) are covered as part of the overall supervisory visits to these sites.

	3.2.2	TB-IC: Communications strategy	FHI	20,784	50%	Sep	2012	Baseline KAP survey was successfully completed during the quarter, prior to the launch of the communications campaign planned for Q3, 2012. This will be compared with the endline KAP survey to measure the impact of the communications intervention.  Communications materials and tools and key messages for TB -IC at the community level has been developed for use in the next quarter.
					50%			

4. PMDT								
Outcome	Activity #	Activity	Activity Leader	Approved Budget	Cumulative Completion	Planned Completion		Cumulative Progress and Deliverables up-to-date
						Month	Year	
4.1 Improved treatment success of MDR	4.1.1	PMDT- joint supervision (TB CARE & CENAT)	WHO	22,374	50%	Sep	2012	Planned completion: Sep 2012. Joint supervision is being done regularly by Cambodia Health Committie (CHC), a local NGO which is a sub-grantee under WHO along with CENAT and WHO.
	4.1.2	PMDT- Sputum transportation	WHO	31,640	25%	Sep	2012	Planned completion: Sep 2012. Sputum transportation using TB CARE I funds has started.
	4.1.3	PMDT-ToT	WHO	17,148	100%	Dec	2012	Planned completion: Dec 2011. The WHO/ TB CARE I completed this activity in December 2011 with assistance from WHO/WPRO and rGLC experts.
	4.1.4	PMDT - supervision by CHC	WHO	14,883	25%	Sep	2012	Planned completion: Sep 2012. CHC conducts supervision at health facility and community levels (including MDRTB patients' homes.)
	4.1.5	PMDT- enablers during treatment	WHO	123,816	25%	Sep	2012	Planned completion: Sep 2012. CHC providers enablers to health workers and patients for transportations.
	4.1.6	PMDT- ancillary drugs and supplies	WHO	18,916	0%	Sep	2012	Planned completion: Sep 2012. The WHO will use its global procurement mechanisms to procure these drugs.
	4.1.7	PMDT - Staffing & Operations cost	WHO	42,471	25%	Sep	2012	Planned completion: Sep 2012. CHC receives staffing and operations support to help implement PMDT at the levels of
					36%			

5. TB/HIV								
Outcome	Activity #	Activity	Activity Leader	Approved Budget	Cumulative Completion	Planned Completion		Cumulative Progress and Deliverables up-to-date
						Month	Year	
5.2 Improved diagnosis of	5.2.1	HIV testing of TB patients	WHO	45,200	50%	Sep	2012	Planned completion: Sep 2012. This is an ongoing activity. Proportion of TB patients of all forms who underwent testing for HIV increased from 77% in 2010 to 84% in 2011.
					50%			

6. Health Systems Strengthening								
Outcome	Activity #	Activity	Activity Leader	Approved Budget	Cumulative Completion	Planned Completion		Cumulative Progress and Deliverables up-to-date
						Month	Year	
6.2 TB control components (drug supply and management, laboratories, community)	6.2.1	NTP partner coordination	All	600	50%	Sep	2013	At the request of TB CARE I, the NTP summoned and chaired the first technical working group (TWG) meetings on PPM on 22 February, and another TWG meeting on prisons on 19 March 2012. All partners working on PPM and prisons in the country, including TB CARE I, attended the meeting which was found to be very helpful to share experiences and coordinate activities among partners. In addition, the TB CARE I team participated in the ongoing regular meetings of the laboratory TWG (12 March) and MDR-TB TWG (17 February) at CENAT, Phnom Penh.

care, HRD and M&E) formed integral part of national plans, strategies and service delivery of these	6.2.2	Resource Mobilization	All		50%	Sep	2012	TB CARE I team assisted the NTP to successfully advocate for and secure a grant from the Global Drug Facility (GDF), to provide adult TB drugs for three years following the end of the current GLocal Fund Round (7) in March 2012, and continue the grant for children's drugs for one more year. Adult TB drug grant alone is estimated to cost around US\$ 3.5 million. TB CARE I is also supporting CENAT team to apply for a research grant from PEPFAR/CDC for a study to look at performance of the recently developed diagnostic algorithm for intensified TB case finding among people living with HIV using the Xpert MTB/Rif assay
					50%			

7. M&E, OR and Surveillance								
Outcome	Activity #	Activity	Activity Leader	Approved Budget	Cumulative Completion	Planned Completion Month	Year	Cumulative Progress and Deliverables up-to-date
7.1 Strengthene	7.1.1	Joint NTP review	WHO	41,189	0%	Aug	2012	This is scheduled for August 2012

d TB surveillance	7.1.2	Drug resistance surveillance	JATA	18,000	25%	Sep	2012	In preparation for obtaining routine data on drug susceptibility patterns among MDR-TB cases in Cambodia. TB CARE I lab expert assisted CENAT/NTP national referral lab to start preparation for performing drug susceptibility testing of second line drugs. CENAT lab is already proficient in performing DST for first line drugs which continued to be carried out as usual.
	7.1.3	Begin implementation of e-TB manager for PMDT/Second Line Drugs (Year 1 of 2)	MSH	49,894	100%	Jan	2012	Dr Luis Gustavo do Valle Bastos from MSH/TB CARE I visited Cambodia from 16-20 Jan 2012 to formally initiate e-TB manager tool customization process for Cambodia. a) Key changes required to tailor the e-TB manager tool to meet the needs of the MDR-TB guidelines of the country were identified and discussed with the CENAT team during the visit. b) Customization of the Cambodia e-TB manager with their specific request identified during the above mentioned visit is ongoing and planned to be completed in May 2012.
	7.1.4	Test initial e-TBM version to identify potential bugs and need for further adjustments	MSH	45,314	25%	Jul	2012	This is being conducted remotely by the MSH team based in the US and Brazil in cooperation with the WHO staff for MDR-TB (Khan Sokhan) in Cambodia. It is planned to be concluded in May 2012 when the Cambodia eTB Manager pilot version will need to be approved by eTB Manager Technical Working Group (TWG) before pilot starts.
	7.1.5	On-site pilot w/ selected TB units	MSH	56,819	0%	Dec	2012	This activity will start in June 2012 and consists of five steps: a) e-TB Manager implementers in-country training for health workers from pilot units & TWG members. This will be done in June 2012. b) Pilot implementation plan developed and approved by the TWG (timeline, matrix of responsibilities, flows/procedures, infrastructure), and staff orientation in each pilot site. This will be done in June 2012. c) Pilot start-up: planned for three MDR-TB treatment sites from July to December 2012. Quarterly assessments are planned to provide feedback for MSH team and TWG. d) Final adjustments and further customizations performed; Cambodia eTB Manager implementation version approved by TWG; Training of trainers sessions to selected staff countrywide conducted; Training on IT issues (country server, system structure/operation, system maintenance/corrections) conducted; and Final implementation (roll-out) plan developed and approved by TWG. This will be done in December 2012. e) Expansion of the Cambodia eTB Manager implementation
<b>Outcome</b>	<b>Activity #</b>	<b>Activity</b>	<b>Activity Leader</b>	<b>Approved Budget</b>	<b>Cumulative Completion</b>	<b>Month</b>	<b>Year</b>	<b>Cumulative Progress and Deliverables up-to-date</b>
7.2 Improved capacity of NTPs to analyze and use quality data for management of the TB program	7.2.1	NTP peer-review	FHI	9,467	50%	Sep	2012	The protocol for NTP peer-review was field tested by a team from TB CARE I and CENAT in Kampong Speu OD on 24-25 Jan. Following this, the team has started conducting internal evaluation of one randomly selected district every month -Kampot OD/Kampot on 20-22 Feb and Stong OD/Kg Thom on 19-22 March. The main purpose is to assess performance of the overall national TB programme, focusing on quality of TB services and recording and reporting system, thus also serving as a data quality assessment. Through involvement of TB supervisors from other provinces as review team members, it is also expected to enable cross-learning. Additionally, health authorities and NGOs operating in the sites visited are invited to join the review and debriefed by the team before departure.
	7.2.2	Website development	FHI	9,613	50%	Sep	2012	Following several rounds of discussions with CENAT, a dummy website for the NTP was built by TB CARE I staff and presented to CENAT. The overall design and content for the website has been agreed upon and is expected to be up and running before June 2012.

Outcome	Activity #	Activity	Activity Leader	Approved Budget	Cumulative Completion	Month	Year	Cumulative Progress and Deliverables up-to-date
7.3 Improved capacity of NTPs to perform operational research	7.3.1	OR workshop: develop protocol and implementation plans	KNCV	32,879	100%	Feb	2012	TB CARE I organised Operational Research (OR) training course & research proposal development from 13-17 February 2012 at Phnom Penh. Dr Ellen Mitchell and Dr Jacques Van den Broek from KNCV, and Dr Nobuyuki Nishikiori from WHO regional office were the course faculty members. <b>23</b> participants (6 females) from CENAT and NGOs supporting the NTP, participated in the training and identified four OR topics. Local mentors for each of the four team were identified to lead and guide the teams in finalizing the proposal and during implementation.
	7.3.2	OR workshop: report writing	KNCV	39,170	0%	Sep	2012	Not yet due for implementation
	7.3.3	OR : operational costs including remote TA	KNCV	74,783	25%	Sep	2012	Dr Ellen Mitchell and Dr Jacques Van den Broek from KNCV are in touch with students of the OR course, via Skype call and emails, to provide guidance and feedback as needed
	7.3.4	OR on PPM	FHI	25,720	25%	Sep	2012	One of the four topics identified during the OR workshop (7.3.1) relates to PPM - to assess the effect of enhanced referral strategy for high risk groups through private and community health care providers. The proposed research will be jointly conducted by a team from FHI 360, WHO, HEAD and RHAC (local NGOs) with assistance from the local and KNCV mentor. It is planned to finalise the proposal by May 2012.
	7.3.5	International travel	FHI	10,684	0%	Sep	2012	Not yet due for implementation
	7.3.6	OR: IPT in children	JATA	16,235	0%	Sep	2012	Due to next quarter
					<b>31%</b>			

## Quarterly MDR-TB Report

Country	Cambodia
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Period	January-March 2012
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### MDR TB cases diagnosed and put on treatment in country

Quarter	Number of MDR cases diagnosed	Number of MDR cases put on treatment
Jan-Dec 2010	31	41
Jan-Sep 2011	31	47
Oct-Dec 2011	25	36
<b>Total 2011</b>	56	83
<b>Jan-March 2012</b>	Not yet available	Not yet available

## Quarterly GeneXpert Report

Country	Cambodia
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Period	January-March 2012
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**Table 1: GeneXpert instruments and cartridges procured or planned by quarter**

	Procured			# still planned for procurement in APA 2	Month, Year procurement planned (i.e. April 2012)
	Jan-Dec 2011	Jan-Mar 2012	Cumulative Total		
# GeneXpert Instruments	2			1	Sep-12
# Cartridges	2000			3000	Sep-12

**Table 2: Cumulative List of GeneXpert Instruments Procured to Date or Planned in the Next Quarter**

Already procured or still planned? (i.e. Write "Procured" or "Planned")	Instrument	# of Modules (1, 2, 4, or 16)	Location(s) (facility name & city/ province or TBD)	USG Funding Source (e.g., PEPFAR COP FYxx, USAID) <sup>1</sup>	Partner/ Implementing Organization; Additional Comments
Procured	1	4	CENAT, Phnom	USAID	JATA/NTP Cambodia
Procured	2	4	Battambang	USAID	JATA/NTP Cambodia
Planned	3	4	TBD	USAID	JATA/NTP Cambodia
	4				
	5				
	6				
	7				
	8				

<sup>1</sup> Differentiating between PEPFAR and USAID-funded is important. If it is PEPFAR funded, specify the fiscal year (i.e. FY2011). Add rows if there are more than 8 instruments in total.

**Table 3: Cumulative Xpert MTB/RIF Cartridges Procured to Date or Planned for Next Quarter**

Already procured or still planned? (i.e. Write "Procured" or "Planned")	Order #	# of Cartridges*	Location(s) (facility name and city/ province or TBD)	USG Funding Source (e.g., PEPFAR COP FYxx, USAID) <sup>1</sup>	Comments
Procured	1	2000	CENAT/NTP	USAID	
Planned	2	3000	CENAT/NTP	USAID	
	3				
	4				
	5				

\*There are 10 cartridges per kit, but we need the total # of **cartridges** (not kits)

Add an additional row for every procurement order of cartridges

Any additional information/clarifications to the above (optional)

Plans for procurement of the third GeneXpert machine has been deferred while awaiting finalisation of NTP algorithms for Xpert, and learning lessons from the current pilot (below)

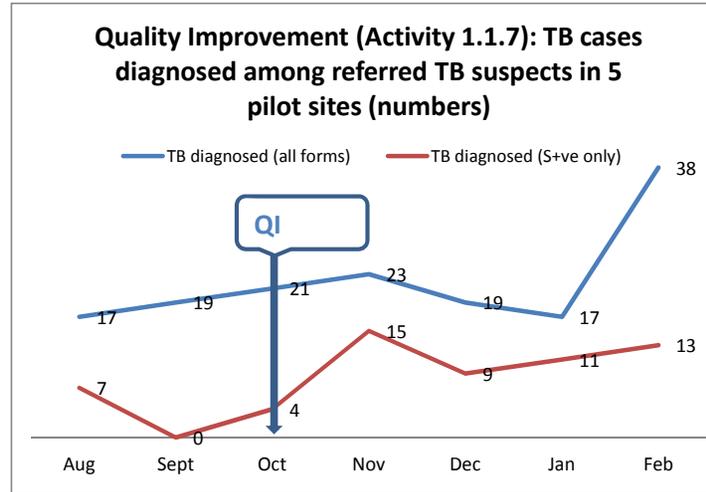
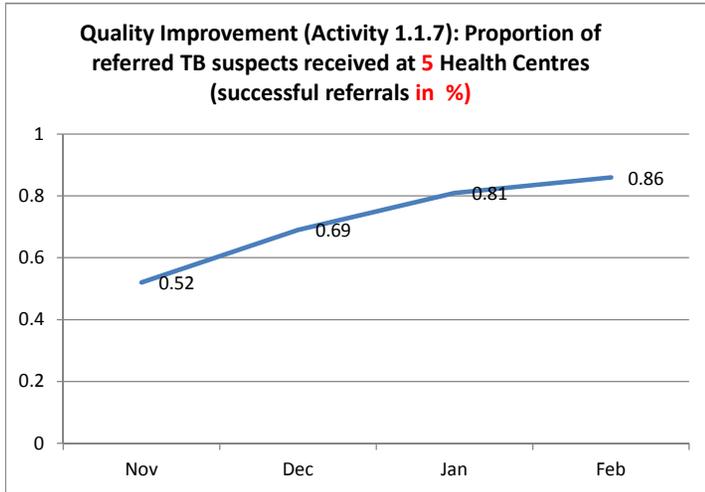
Please provide a brief description of any significant problems encountered in use of the GeneXpert machine(s) & Xpert MTB/RIF cartridges

TB CARE I began using Xpert in Nov-Dec 2011 for active TB case finding among prisoners. Xpert performance for TB case detection was determined among 196 suspects with complete set of results. Among 64 TB cases, which were defined as patients having one or more positive TB culture samples, Xpert showed a sensitivity of 40.6% (31.5% in smear-ve TB, 90.0% in smear+ve TB cases). Specifically the sensitivity in smear-ve TB is approx. 40% below of what has been reported in previous studies (i.e. 70-76% Boehme et al. 2010 and 2011). The specificity among 132 TB culture negative cases was 94.7%.

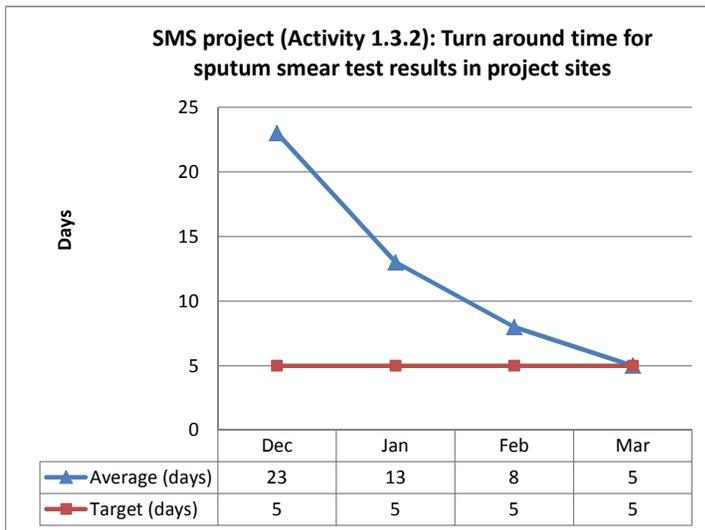
Please describe technical assistance or evaluation of implementation activities performed and planned.

Dr Manuela Rehr from PMU/KNCV visited Cambodia from 10-18 March 2012 to review possible reasons for the unexpectedly low sensitivity of Xpert MTB/RIF when used for active case finding among prisoners in Cambodia. The technical set-up and routine use of Xpert was found to be excellent and the technical set-up and routine practices of TB culture (MGIT and LJ) was found to be good. The low sensitivity in TB case detection is likely related to characteristics of selected suspects, but the fact that even a further limitation to certain suspects groups, based on clinical findings, did not result in a very high Xpert sensitivity, indicates that other factors might have played a role as well. The recommendation was to explore this through a detailed study with a larger sample size.

## Quarterly Photos (as well as tables, charts and other relevant materials)



**This renovated health post in CC3 prison was inaugurated during the World TB Day event**



**Dr Monique Mosolf from USAID Mission and other delegates release balloons during World TB Day event in CC3 prison**



**Inmates of CC3 prison participate in World TB Day event on 22 March 2012**



**Preparatory meeting with volunteers**



## **Active case finding in pictures**

Reaching out to the most vulnerable!

**People waiting for screening**



**Registration and symptom screening**



**Chest X-Ray screening on the spot**



**Xpert testing for diagnosis on the spot**



## Inventory List of Equipment - TB CARE I



# TB CARE I

<b>Organization:</b>	<b>TB CARE I</b>
<b>Country:</b>	<b>Cambodia</b>
<b>Reporting period</b>	<b>January - March 2012</b>
<b>Year:</b>	<b>APA 2</b>

Description (1)	ID numbers (2)	Acquisition date (3)	Acquisition cost (4)	V.A.T (5)	Location (6)	Condition (7)	Disposition date (8)	Title held by (9)	Insurance Policy #
Dell Latitude E6320	S/N: 9PJ66R1	03-Feb-12	\$1,460.00	N/A	FHI, Phnom Penh	New			
Dell Latitude E6320	S/N: 24K66R1	21-Feb-12	\$1,247.00	N/A	FHI, Phnom Penh	New			
Docking Station	P/N: OYN964	21-Feb-12	\$175.00	N/A	FHI, Phnom Penh	New			
Dell Optiplex 990MT	P/N: 4BKP82S	1-Mar-12	\$1,030.00	N/A	FHI, Phnom Penh	New			

- (1) Description of equipment: transportation (vehicles), administration (computers, faxes), laboratory equipment or others
- (2) Identification number (eg Manufacturer's serial number, model number, Federal stock number, national stock number)
- (3) Date of invoice
- (4) Total price including any sales tax paid. Use currency on invoice
- (5) Note any sales tax charged
- (6) Address
- (7) Good/fair or bad
- (8)+(9) Ultimate disposition data, (in the case of a vehicle) including date of disposal and sales price or the method used to determine current fair market value. where a recipient compensated TB CARE I for its share. Attach supplementary info