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TB CARE I

TB CARE I - Ghana

Year 2

Annual Report

October 1, 2011 – September 30, 2012

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List of Abbreviations

APA	Annual Planning of activities
ART	Antiretroviral Therapy
CCM	Country Coordinating Mechanism
CP	Conditions Precedent
CPT	Cotrimozazole Preventive Therapy
DST	Drug Susceptible Testing
EQA	External Quality Assurance
GHS	Ghana Health Service
HCW	Health Care Workers
HIV	Human Immuno Deficiency Virus
HSS	Health Systems Strengthening
IPC	Infection Prevention and Control
KNCV	Royal Dutch Tuberculosis Foundation
LED	Light-Emitting Diode
LOE	Level of Effort
MDR – TB	Multi-Drug Resistance Tuberculosis
M & E	Monitoring and Evaluation
MOH	Ministry of Health
MSH	Management Sciences for Health
NTP	National Tuberculosis Control Program
PMDT	Programmatic Management of Drug Resistance Tuberculosis
PMU	Project Management Unit
PPM	Public Private Mix
PLHIV	Persons Living With HIV
PR	Principal Recipient

QA	Quality assurance
RDQA	Rapid Data Quality Assessment
STTA	Short Technical Assistance
SLD	Second Line Drugs
TA	Technical Assistance
TB	Tuberculosis
TORs	Terms of Reference
USAID	United Agency for International Development
USG	United States Government
WHO	World Health Organization
ZN	Ziehl-Neelsen

Executive Summary

Ghana has a population of nearly 25 million people. Females and children aged 0-14 years constitute a 51.8% and 38% of the total population respectively. The 2011 World Health Organization Report estimated TB prevalence rate and incidence rate to be 106 and 86/100,000 population respectively. Even though the 70% case detection rate has been achieved, intensified TB case finding is still justified and warranted.

TB CARE I in Ghana had three main expected outcomes i.e.; improved TB case notification, improved leadership and management, and improved monitoring and evaluation. TB CARE I activities continued to be implemented within the framework of the NTP Central Unit targeting the entire country population. Targeted support for improved TB case notification and TB monitoring and evaluation (M&E) was provided in the Eastern Region in the two districts as part of demonstrating high impact interventions aimed at improving TB case notification among clients who access care in various health facilities for the purpose of rolling them to other districts and regions through the Global Fund R10 Grant resources. TB CARE I continued to provide high quality technical assistance to the NTP in ensuring that the Global Fund R10 Grant is implemented in a coordinated fashion so as to achieve the largest impact.

Management Sciences for Health (MSH) is the lead partner for TB CARE I with KNCV and WHO as collaborating partners. The obligated budget for the annual plan of activities (APA 2) was \$806,496; supporting activities in seven of eight technical areas. The most significant achievements for TB CARE I during the year under review were as follows:

1. A total of 229 new sputum smear positive TB cases were diagnosed during the first nine months of 2012 (Jan to September) from only two districts out of the 21 districts in the Eastern region. This is one third of the total sputum smear positive TB cases diagnosed from 21 districts for the entire 2011 cohort.
2. 473 out of the 531 (89%) of persons living with HIV (PLHIV) were screened for TB from the two districts in Eastern region that received direct support from TB CARE I for a period of only 5 months (May-September 2012). Out of the unknown number of PLHIVs who fulfilled the criteria of a TB suspect 24 patients were diagnosed with active TB disease (all forms). This represented a 5% of the number that were screened for TB
3. Conditions Precedent (CP) of the Global Fund R10 TB Grant on the training plan successfully addressed by the Human Resource Consultant. As a result of this support, the training plan budget was approved by the Global Fund and this will permit the NTP to commence the implementation the training plan.
4. The Regional M&E Officers hired through the Global Fund Round 10 TB Grant were trained in the principles of TB M&E. This training was therefore aimed at ensuring that regional M&E officers are effectively contributing to the grant performance since they were not formally oriented at the time of assuming their roles. They were specifically trained on: a) introduction to key TB indicators and targets for the NTP and the Global Fund Round 10 Grant, b) use of the Rapid Data Quality Assessment (RDQA) tool to enable participants identify data transcriptions errors, Data inconsistencies and incompleteness with the aim of improving data quality, c) Setting

of specific regional TB case detection target based on previous performance, as opposed to using WHO estimates for the national level.

5. Provider delay (time from sputum examination to starting of TB treatment) was assessed in all the 21 districts in the Eastern region. Provider delay ranged from 5-31 d1 days which is higher than the agree 4 days.
6. A total of 444 (258 males and 186 females) health care workers completed in-service training on TB using TB CARE I funds. This is a 15% increase of the target of 385. The overachievement of the target was as a result of adopting on-job training approach thus less expensive and permitted more staff to be trained. A total of 284 and 140 HCW were trained in activities related to the universal access and M&E, surveillance and Operation research technical areas respectively.

Key next steps and activities to be implemented during APA 3 include:

- Disseminate the findings of the hospital based TB case finding interventions that were conducted in the two districts in the Eastern region to other districts and regions
- Provide TA to the NTP in conducting a comprehensive review of the TB program and the development of the new strategic plan (2014-2018)
- Complete and disseminate the national TB guidelines to permit for the standardization of TB control services across the country
- Provide TA to the NTP to develop the training curriculum for MDR-TB and childhood TB and assist the NTP address the bottlenecks that are hampering the commencement of a functioning MDR-TB treatment program
- Support district and regions to conduct data quality audit and validation through use of Rapid Data Quality Assessment tool (RDQA)
- Provide TA and support in data management for the National Prevalence Survey

Introduction

The principal role for the TB CARE I Project in Ghana is to provide high quality technical assistance to the NTP aimed at improving the overall TB control services. Ensuring that the Global Fund Round 10 TB Grant is implemented in a coordinated fashion and is achieving the largest impact remains the highest priority of TB CARE I. The three main expected outcome for TB CARE I is to have TB case notification, leadership and management and the overall NTP M&E and surveillance improved. During the year under review TB CARE I implemented activities that fell within seven of the 8 technical areas as follows: i) Universal access, ii) Laboratories, iii) Infection Control, iv) Programmatic management of Drug resistant tuberculosis (PMDT), v) TB/HIV, vi) Health systems Strengthening (HSS) and vii) Monitoring and Evaluation, surveillance and Operational research. Substantial investments went into the Universal Access and Monitoring and Evaluation technical areas.

TB CARE I activities continued to be implemented within the framework of the NTP Central Unit targeting the entire country population of about 25 million comprising of 51.28% (females) and approximately 38% of the population aged between 0-14 years. Targeted support for improved TB case notification as well as TB M&E was provided in the two districts of Lower Manya Krobo and Kwaebibirim of the Eastern Region which has a population of about 2.7 million.

Management Sciences for Health (MSH) is the lead partner in Ghana with KNCV Tuberculosis Foundation and the World Health Organization (WHO) serving as collaborating partners.

This report is organized according to technical areas providing a summary of achievements against the set indicators and targets. For each technical area key achievements, challenges and next steps are listed

Universal Access

Management Sciences for Health (MSH) and World Health Organization (WHO) were the partners for this technical area. MSH focused on supporting the NTP in implementing intensified hospital based TB finding activities in the two districts in Eastern Region. The expected outcome was that best practices from the pilot districts should be rolled out to all the districts in the Eastern region and in all the remaining 9 regions. WHO provided technical assistance to the NTP on strengthening PPM DOTS activities that involved training on the operationalization of the PPM handbook.

Technical Outcomes

Expected Outcomes		Outcome Indicators	Indicator Definition	Baseline (Year or timeframe)	Target	Result	Comments
					Y2	Y2	
1.1	1.1.1 Increased demand for and use of high quality TB services and improve the satisfaction with TB services provided (Population/Patient Centered Approach)	Smear positive notified TB cases in Eastern Region increase by 10% relative to 2010 figure	indicator Value: Percent Level: Regional Source: NTP/TB CARE I Means of Verification: Annual report Numerator: Number of SS+ TB cases notified in 2012. Denominator: Number of SS+ TB cases notified in 2010	1045 (2010)	1,150 (2012)	886 (2011 cohort) 474 (Jan - June, 2012)	From January-September 2012, a total of 229 new sputum smear positive TB cases were diagnosed in the two districts where TB CARE I is providing direct support. The data from these 2 districts indicate interventions supported by TB CARE I has the potential of increasing TB case finding as it represents almost one third of the data from 21 districts for the entire 2011 cohort
1.2	1.2.1 Increased quality of TB services delivered among all care providers (Supply)	National TB guidelines developed and printed	Indicator Value: Number of guidelines printed Level: National Source: NTP/TB CARE I Means of Verification: TB guidelines printed and distributed	0 2010	1000 2012	Second Draft available	The final draft of the TB guidelines will be produced by the end of 2012. The delay in completing the guidelines was due to competing priorities most importantly because the NTP was busy addressing several Conditions Precedents for the GF R10 Grant

1.3	1.3.1 Reduced patient and service delivery delays (Timing)	Provider Delay	Indicator Value: Number (of days or weeks)	Not available 2010	Report available 2012	Preliminary report available	<p>Due to incompleteness of data in the TB treatment registers, full assessment of treatment delay was not possible</p> <p>Next Steps To address the issue of incompleteness on job training will be conducted for all Regional TB coordinators and Regional M&E officers using the RDQA tool.</p>
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Key Achievements

Bottleneck Analysis workshop to critically analyze the root causes for the poor performance of the TB Control program in the Eastern Region was conducted in March 2012. A total of 66 root causes were identified by workshop participants and the results show that 80% of the factors are related to the health systems that include health facilities and health care workers and only 20%



Picture 1: Health workers discussing root causes of the poor performance of the TB Program in the Eastern Region

was community/patients related. The analysis illustrates that in order to improve TB control performance in the region the priority should be to focus on building the capacity of health care worker in implementing high quality TB DOTS such as intensifying TB case finding, improving clinical care of TB patients and conduct effective

monitoring and supervision. Based

on the results of the bottle analysis

TB CARE I started supporting two districts in the Eastern to implement intensified hospital based TB case finding interventions using the standard operating procedures for TB case detection that were developed under TB CAP.

In April 2012, a total of 123 health care workers (84 females and 49 males) from the two districts in the Eastern region were trained in the implementation of hospital based intensified TB case finding. These health care workers were mainly from the six big hospitals in these districts (3 hospitals from each district). The results for the first five months (May and September 2012) of implementing intensified TB case finding activities show that a total of 137 sputum smear positive TB cases were diagnosed which represents an average of 27 of new sputum smear TB patients per month compared to 23 patients/month during the first four months (January-April) which is a pre-intention period. Furthermore, these results show that 229 new sputum smear positive TB patients were diagnosed for the first 9 months of 2012 which is almost one third of the 886 sputum smear positive TB patients diagnosed from 21 districts and for the entire 2011 cohort. Significant achievement was also recorded in the area of TB screening among persons living with HIV who were registered in the ART clinics. A total of 531 PLHIVs were registered in the ART clinics and 473 (89%) were screened for TB. Out of the PLHIVs who fulfilled the criteria of a TB suspect (not known), 24 were diagnosed with active TB. It is believed that if the most sensitive technologies had been used in examining the sputum samples such as LED microscopes and Xpert, more new TB patients would have been diagnosed among PLHIVs

In July 2012 provider delay (time from sputum examination to starting of TB treatment) was assessed in all the 21 districts in the Eastern region. Provider delay ranged from 5-31 d1 days which is higher than the agree 4 days. The result of this provider delay assessment will be included in the trainings of HCW so that TB patients diagnosed are started on TB treatment as soon as the diagnosis of TB is confirmed. During the same month a short term technical assistance (STTA) by a senior WHO consultant (Dr Daniel Kibuga) was provided to train NTP staff in the operationalization of the PPM DOTS Handbook. A total of 41 participants (33 males and 8 females) from the public and private health facilities, pharmacies and laboratories in the Western Region participated in the training session. As result of this training a list of potential stakeholders to be engaged in PPM activities in the cities of Takoradi and Sekondi was generated (60 private and 8 public health facilities) and a draft work plan for rolling out PPM DOTS in the Western Region was developed

Challenges

1. The target of increasing the number of sputum smear positive TB patients by 10% in 2012 relative to the 2010 baseline in the Eastern region is likely not to be achieved due to reasons that include:
 - Only 2 districts out of the 21 districts in the Eastern region are implementing intensified hospital TB case finding activities due to delay in signing the Global Fund R10 Grant and consequent disbursement of the first tranche of funds. The two districts are supported by TB CARE I and the rest are meant to use the Global Fund R10 Grant.
 - Although a higher proportion of PLHIV (89%) were screened in the two districts that are receiving technical support from TB CARE I, fewer PLHIVs (24) were diagnosed with active TB due to lack of sensitive laboratory technologies such as LED microscopes and Xpert. These two districts are still using the ZN stain method using the light-ordinary microscopes which is less sensitive especially for sputum samples from PLHIVs.
 - There is under diagnosis of TB among children (only 8 children aged >15 years were diagnosed with active TB during the five months period (May-September 2012))
2. There continue to be a weak strategy to reduce TB deaths largely because doctors/clinicians and nurses have not been formally oriented to managing TB complications and co-morbidities including MDR-TB
3. Out of the 137 sputum positive diagnosed in the six hospitals in the pilot districts only 50 were registered for TB treatment in the hospitals where they were diagnosed, resulting into 87 patients referred to other hospitals, with no clear documentation whether they have reached their destinations and that they are on TB treatment
4. Due to competing priorities the national TB guidelines were not completed as scheduled. One of the chapters of the TB guidelines is Clinical care of TB patients and

complications and this delay will also affect quality clinical care of TB patients. The NTP Central Unit staff spent more time addressing various conditions precedent (CPs) for the Global Fund Round 10 Grant

Laboratories

MSH and WHO were the partners involved in this technical area. In APA 2 the priority was to support the NTP in building the capacity of the laboratory personnel to perform sputum smear microscopy quality assurance (QA) for smear microscopy especially now that the NTP has adopted the 2-sm ear strategy and “Front-Loading”. Over and above the country wide laboratory assessment conducted by the NTP Central Unit Laboratory Focal Person revealed some challenges such as: a) Some regions were not able to meet their targets, b) Quarterly external quality Assurance (EQA) not done in most regions, c) No regular initial and in-service training of laboratory staff and d) Perceived apathy of laboratory staff in TB microscopy.



Picture 2: *A group of highly motivated and satisfied TB Microscopists immediately after the training in Sputum smear microscopy*

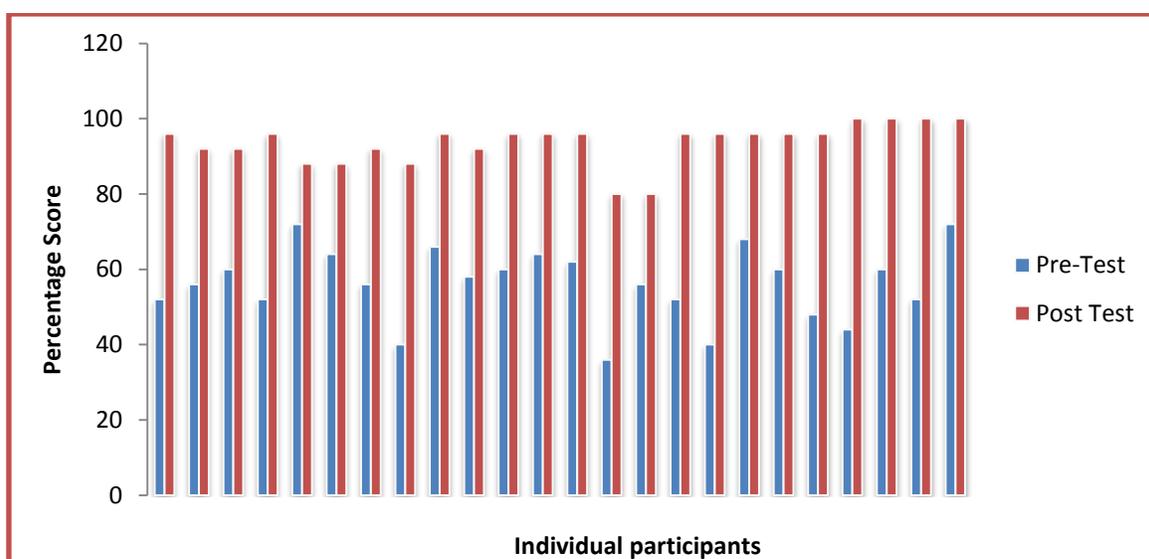
Technical Outcomes

Expected Outcomes	Outcome Indicators	Indicator Definition	Baseline (Year or timeframe)	Target	Result	Comments
				Y2	Y2	
2.1 2.1.1 Ensured capacity, availability and quality of laboratory testing in country needed to support the diagnosis and monitoring of TB patients	Laboratories (public sector) with working internal and external quality assurance programs for tests that they provide smear microscopy	Indicator Value: Percent Numerator: Number of laboratories enrolled in EQA program meeting description above in Eastern region. Denominator: All laboratories (Eastern region) that perform one or more of the above TB diagnostics.	30 (100%) 2011	30 2012	80% (24/30)	

Key Achievements

In May, 24 microscopists (**23 males and 1 female**) in the Eastern Region successfully completed one week training in sputum smear microscopy. The results of the pre-Test and Post-test show that all participants scored higher marks during in post-test compared with pre-test results (Figure 1).

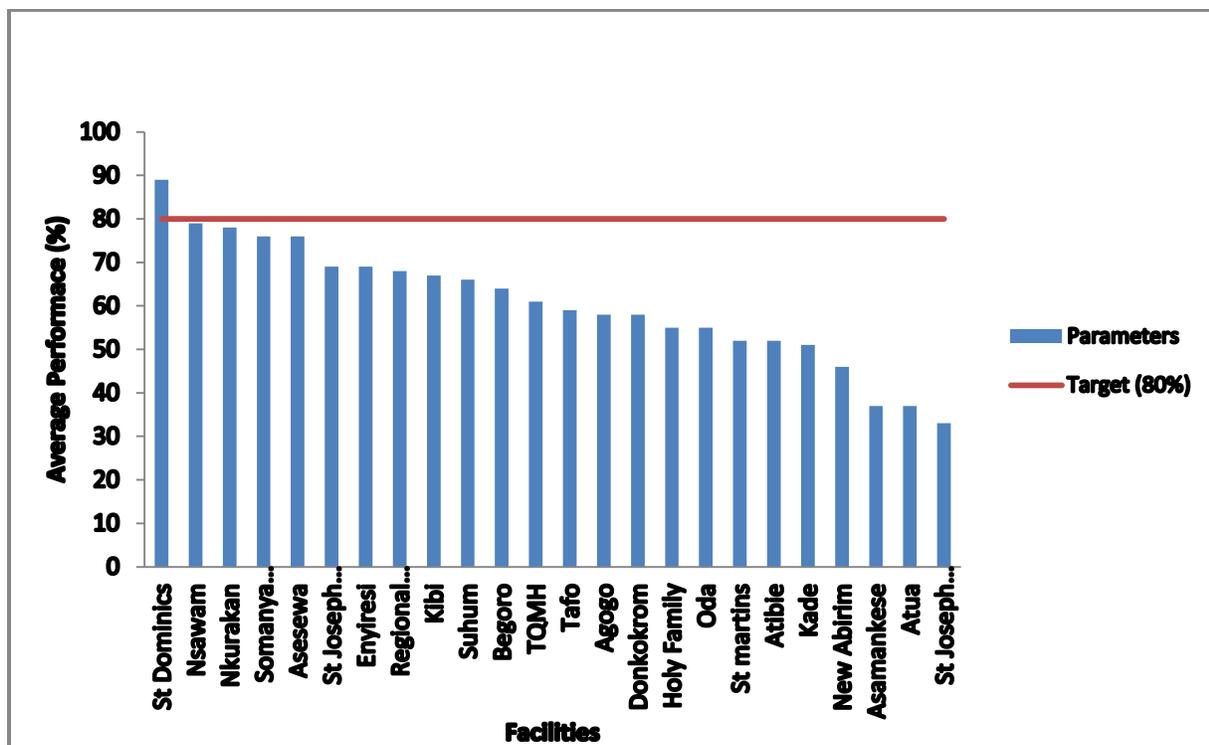
Figure I: Graphical Presentation of Pre and Post Tests Results



Quality assurance (QA) of sputum smear microscopy in the 24 TB microscopy centres in the Eastern region assessed. The national target for performance in TB microscopy is 80% and this

performance fell short of this target with a score of 61%. However, considering the individual parameters, staining quality of smears was good with an average of 83%. All other parameters were below the 80% target though there was an improvement in sputum quality (54%) compared to the 2011 third quarter EQA performance of 51% (*see figure 2*). The results have been discussed with the NTP and the TB Laboratory Focal point person at the NTP central unit has drawn a plan for building the capacity of the laboratory personnel in order to improve the quality of sputum microscopy. Within the context of PPM DOTS, TB CARE I supported training in Suhum-Kraboia-Coaltar district in the Eastern region. The training was conducted to improve TB case finding in both public and private health facilities. A total of 15 (including 2 female) laboratory staff from public/private laboratories were trained in TB microscopy.

Figure 2: Performance of Diagnostic Centers in TB Microscopy QA in Eastern Region



Challenges

- There were false results from six diagnostic centers
- Inability to attain the 80% national target for most of the parameters

Next Steps

- The 24 lab technicians who participated in the lab training will be further assessed by the Regional laboratory supervisors in APA3 to determine whether there have been quality improvements in the overall sputum smear microscopy.

- The TB laboratory manual and standard operating procedures for sputum microscopy will be disseminated to all the districts and TB microscopy centers

Infection Control

MSH implemented TB infection control within the framework of intensifying hospital based TB case finding focusing on improving managerial measures such as triage and separation and opening of windows and reporting of data on HCWs with active tuberculosis. Through the CORE Project MSH and KNCV provided technical assistance to the NTP to test the guide for monitoring active TB among health care workers.

Technical Outcomes

Expected Outcomes	Outcome Indicators	Indicator Definition	Baseline (Year or timeframe)	Target	Result	Comments
				Y2	Y2	
3.3 3.3.1 Strengthened TB IC Monitoring & Measurement	Annual reporting on TB disease (all forms) among HCWs is available as part of the national R&R system	Indicator Value: Number of HCWs with TB disease notified to the NTP	7 2009	? 2012	23	The intervention for monitoring active TB disease among HCW is still under pilot and Data collection not well established especially that there is high stigma among HCW which makes reporting of active TB disease among HCWs even more difficult

Key Achievements

The magnitude of the TB burden among HCWs for the two main teaching hospitals known based on the retrospective data review from TB treatment registers for a period from 2004 to 2011. Data from Korle Bu Teaching hospital show that between 2004 and 2011, a total of 51 HCW working at the hospital and 11 HCW not directly working at the hospital were diagnosed with active TB.

These findings above pursued senior management of the Korle Bu teaching Hospital and Komfo Anoyke Teaching Hospital committed to prioritize prevention and control of TB among HCW. The Chief Executive of KBTH stated that the hospital will establish a staff clinic when HCW will be screened and managed for TB.

The national leadership committee for spearheading HCW screening program established with representatives from: MOH/GHS: Occupational & Environmental Health Program (Chair), GHS:

National Tuberculosis Program, GHS: Institutional Care Division, MOH: Korle Bu Teaching Hospital, MOH: Komfo Anokye Teaching Hospital and USAID: TB CARE I

Challenges

- Systematic reporting of TB among HCWs is not yet part of the overall TB surveillance system to ensure that TB incidence among HCWs is monitored at facility, district, regional and national levels.
- Considering that TB stigma among HCW is still high there is still no dedicated HCW health monitoring / occupational database or register to store this confidential information.
- Standard Operating Procedures (SOPs) for infection prevention and control (IPC) have been developed and disseminated at national and regional level but not fully implemented at health facility level.
- The TB infection control budget line in the GF R10 Grant is not adequate to scale up TB infection control activities across the control



Picture 3: *The Chief Executive Officer (Prof. Nii Otu Nartey) of Korle Bu Teaching hospital engaged in an intense discussion on prioritizing TB screening among HCW with Dr. Max Meis*

Next Steps

- Mobilize additional resources for scaling up TB infection control and TB surveillance among HCWs beyond the second phase of the GF R10 Grant
- Work with in-country counterparts to finalize the work plan to roll out collection of TB incidence data among HCWs as part of routine TB surveillance system
- Identify interventions to mitigate against the high TB stigma among Health care workers
- Ensure the implementation of the SOPs for TB infection control is fully incorporated into health facility work plans.

Programmatic Management of Drug Resistant TB (PMDT)

There was no specific expected outcome for this technical area but as part of level of effort (LOE) for the Country Director and the M&E Officer, TB CARE I has been involved in the discussions to establish a functioning PMDT and the analysis of culture and DST data. Through this involvement TB CARE I made the following observations indicating that opportunities do exist:

- A budget for MDR-TB management is included in GF R10 Grant that also include the procurement of three Xpert machines
- MDR-TB guidelines have been developed
- 3 functioning culture facilities are available and equipped with MGIT machines
- Second line TB drugs (SLD) to treat 20 MDR-TB patients are available
- The need to develop an MDR-TB training curriculum identified and already been budgeted in the TB CARE I APA 3 work plan

Based on the above enabling environment for establishing a functioning PMDT the following next steps should be considered and prioritized:

- i. The NTP should establish an expert committee (with clear TORs) and this committee should develop a case management strategy
- ii. A decision should be made on the treatment facilities – hospital based and/or ambulatory care, in which facilities, in which regions. These must be clearly explicitly described in the MDR-TB treatment scale up plan;
- iii. Develop Clear plan how MDR-TB patients will be managed, monitored, recorded and reported etc.;
- iv. Describe how the drugs will be distributed to treatment facilities, follow up on the use of drugs etc.;
- v. Develop clear treatment follow up – monitoring of treatment effectiveness (especially laboratory examinations – smear and culture), diagnosis and management of side effects (observation, tests, ancillary drugs), follow up patient evaluation by the expert committee;
- vi. Develop a clear TA plan for both local and international experts

- vii. Based on the existing culture and DST information and the experience of managing the few MDR-TB cases identify areas that need to be considered when scaling up MDR-TB management
- viii. Before developing the MDR TB curriculum the following questions should be asked and answered:
- Who is the MDR/TB focal person at the NTP his/her responsibilities?
 - What is the current level of MDR TB expertise in Ghana?
 - How many doctors, nurses, pharmacists and microbiologists have been trained in MDR-TB already?
 - Which training courses did they follow (in-country or international)?

During APA 3 work plan the PMDT Officer (Dr, Gunta Dravniece) from PMU will provide TA to the NTP to support the scale up of MDR-TB management in Ghana. Dr. Grace Kahenya from MSH will also provide TA to the NTP to develop the GenExpert strategy for Ghana

TB-HIV

MSH implemented TB-HIV collaborative activities especially TB screening among persons living with HIV registered in ART clinics in the two districts in the Eastern region. This activity was implemented within the framework of intensifying TB case detection. TB CARE I through MSH and WHO have also been working with the NTP central unit and the National AIDS Control Program to find ways of improving the organization and coordination of joint TB and HIV services. The identified challenges in TB-HIV collaborative services largely are due to weak coordination TB/HIV mechanisms at all the levels of the health services.

Technical Outcomes

Expected Outcomes		Outcome Indicators	Indicator Definition	Baseline (Year or timeframe)	Target	Result	Comments
					Y2	Y2	
5.2	5.2.1 Improved diagnosis of TB/HIV co-infection	HIV-positive patients who were screened for TB in HIV ART clinics in the 28 ART sites Eastern Region	Indicator Value: Percent Numerator: Number of HIV-positive clients screened for TB at ART clinics Denominator: Total number of HIV-positive clients registered at the ART clinic.	Not known with exactness 2011	>90% 2012	89% (473/531)	The data for PLHIVs who were screened for TB and fulfilled the criteria of a TB suspect was well kept.

Key Achievements

- A target of TB screening among PLHIVs registered in ART clinics almost reached. A total of 531 PLHIVs were registered in the ART clinic and 473 (89%) screened for TB between the month of May and September 2012. Out of the PLHIVs who had undergone TB examination 24 were diagnosed with active TB, representing a 5% of those who were screened for TB

Challenges

- During the period under review there were stock outs of HIV test kits and these may have affected the uptake of HIV testing thus fewer patients identified as HIV positive
- Sensitive technology such as Xpert not yet introduced for diagnosis of active TB among PLHIV
- Weak TB-HIV collaborative and coordination mechanisms at all levels
- Low uptake of HIV testing, CPT and ART among TB patients
- TB screening among PLHIV not systematically and routinely performed or reported
- IPT for PLHIV not yet a policy in Ghana
- The implementation of TB-HIV collaborative services was last reviewed in 2007

Next Steps

- Review the TORS of the National TB-HIV Technical Working Group to support the countrywide implementation of the TB-HIV collaborative
- Ensure National TB-HIV Technical Working group meets as stipulated in the National TB-HIV Strategy and that minutes are circulated widely after each meeting
- Identify key bottlenecks hampering the implementation of TB-HIV collaborative activities through the comprehensive program review and solutions suggested and implemented
- Advocate for more resources to procure Xpert machines for use in high HIV prevalence districts
- Ensure data for PLHIVs who fulfill the criteria of a TB suspect are collected in order to have a denominator for PLHIVs who are diagnosed with active tuberculosis

Health System Strengthening (HSS)

MSH and KNCV were the two partners involved in this technical area. TB CARE I provided external assistance to the NTP by a Senior Human Resource Consultant. The TA mission was aimed at building the capacity of the Ghana NTP in assessing the quality and impact of training events utilizing the Global Fund Round 10 Grant resources as well as expounding areas of potential duplication and lack of clarity of the training activities. This was part of addressing the Global Fund R10 Grant CPs on the training plan.

Technical Outcomes

Expected Outcomes	Outcome Indicators	Indicator Definition	Baseline (Year or timeframe)	Target	Result	Comments
				Y2	Y2	
6.1	6.1.1 Ensured that TB control is embedded as a priority within the national health strategies and plans, with commensurate domestic financing and supported by the engagement of partners	TB CARE I Country Manager participates in CCM quarterly meetings and HIV-TB Oversight committee including site visit to PRs	Value: Number No 2010	10	6	
6.2	6.2.1 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	The operational plan for M&E Plan for the Health Sector (GHS) finalized	Indicator Value: report Level: National Source: GHS/ TB CARE I Means of Verification: Operational plan available No 2010	Yes 2012	NO	The M&E plan for the health sector completed and approved by the Director General of the Ghana Health Service. The operational plan will be developed after the plan has been printed and disseminated in order to incorporate some of stakeholder comments

6.2	6.2.2 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	Training impact assessment conducted and results disseminated"	Indicator value: yes/no" Indicator Value: report Level: National Source: NTP / TB CARE I Means of Verification: report available	No 2010	Yes 2012	Yes	Following the consultant mission report the Global Fund has approved the training plan for the Round 10 Grant and funds for the training plan are yet to be disbursed
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Key Achievements

- Conditions Precedent (CP) for the Global Fund R10 Grant on the train plan successfully addressed by the Senior HR Consultant. The tasks of the consultant involved systematic review of the training plan for it to be fully understood. A Training Plan Tool was developed to have a clear overview with relevant information of NTP's training courses to be used during implementation and monitoring of the training events for the Global Fund R10 Grant. The mission report was submitted to the Global Fund by the NTP and this resulted into approval of the training budget by the GF Secretariat.
- The TB CARE I Country Director continues to chair the HIV/TB oversight committee of the Ghana Country Coordinating Mechanisms (CCM). This committee reviews Dash Boards for various Round 8 and Round 10 Global Fund Grants and suggests areas of improvement to assure better performance of the grants. On September 18, 2012 the Country Director successfully chaired the HIV/TB oversight committee of the Ghana CCM. The main objective of the meeting was to review the dashboard of the Global Fund Round 10 TB Grant which as at the end of the June the absorption rate was 6.6% and a number of targets are way below the targets. At the end of the meeting suggested solutions were agree aimed at improving the grant performance.

Challenges

- Although the NTP has revised its training manual, MDR-TB and childhood TB components are not adequately covered in this manual
- Due to the delay in receiving approval for the training plan budget by the Global Fund, training activities sessions especially those aimed at building the capacity of the HCW on new TB approaches and new TB diagnostics including MDR-TB could not take place as scheduled, thus greatly affecting the speedy implementation of grant activities

- Due to competing priorities of Principal Recipients (PR) and members of the HIV/TB oversight committee of the CCM some meetings were cancelled

Next Steps

1. The NTP and TB CARE to develop, update and document training curricula for all in-service training courses especially for MDR-TB, Childhood TB and management of co-morbidities and complications in TB patients;
2. The Ghana CCM and the NTP should discuss with the Global Fund to consider the timelines for phase II negotiation from 2013 to 2014 as the implementation of grant activities were delayed due to the delay in receiving approval of the training plan budget

Monitoring & Evaluation, Surveillance and OR

MSH and KNCV were the partners involved in this technical area. The focus was to improve the overall TB monitoring and evaluation by strengthening capacity of the NTP at all levels to conduct effective supervision, conduct data quality audit and validation as well as performing operation research using routine data.

Technical Outcomes

Expected Outcomes	Outcome Indicators	Indicator Definition	Baseline (Year or time frame)	Target	Result	Comments	
				Y2	Y2		
7.1	7.1.1 Strengthened TB surveillance	Surveillance data are internally consistent	Indicator Value: % (per quarter) Numerator: # of complete reports received from DOTS clinics/quarter in one calendar year in Eastern region. Denominator: Total #of DOTS clinics in the Eastern region.	No, 2011	100%, 2012	50%	At the time of writing this report the information available was for the 1 st and 2 nd quarter of 2012
7.2	7.2.1 Improved capacity of NTPs to analyze and use quality data for management of the TB program	A data quality audit at central level has been conducted within the last 6 months	Indicator Value: Yes/No	Yes 2011	2012	Yes	At the time of writing this report data validation was carried for the 1 st and second quarter of 2012
7.3	7.3.1 Improved capacity of NTPs to perform operational research	OR studies completed and results incorporated into national policy/guidelines	Indicator Value: Number (of OR studies and instances reported separately)	1 2011	1 2012	1	HCWs from the 21 districts in the Eastern Region were trained in developing operational research protocols using routine data

Key Achievements

- The Global Fund R10 Grant supported and newly recruited Regional M&E officers were oriented to the basic principles of TB M&E. This training was aimed at ensuring that the Regional M&E Officers are effectively contributing to the grant performance since they were not formally oriented at the time of taking their posts. Some of the key topics covered during the training included: a) Introduction to key TB key indicators and targets for the NTP and the Global Fund Round 10 Grant b) use of the Rapid Data Quality Assessment (RDQA) tool to enable participants identifies data transcriptions errors, data inconsistencies and incompleteness with the aim of improving data quality c). Setting of specific regional TB case detection target based on previous performance, as opposed to using WHO estimates of the national TB case detection rate.
- A two-day meeting was successfully held in the Eastern Region wherein district teams assessed provider delay from the routinely collected TB data in the TB treatment registers. The assessment showed that treatment delay (i.e. time from the date of the sputum examination to start of TB treatment) ranged from 5-31 days which was above the accepted treatment delay of 4 days. Participants were also taught the first steps of developing operational research protocols. This process also permitted for assessment of completeness of data recorded in the TB treatment registers. (see figure 3 and 4)

Figure 3: Graph showing completeness of data on sputum smear date and date TB treatment started in the treatment

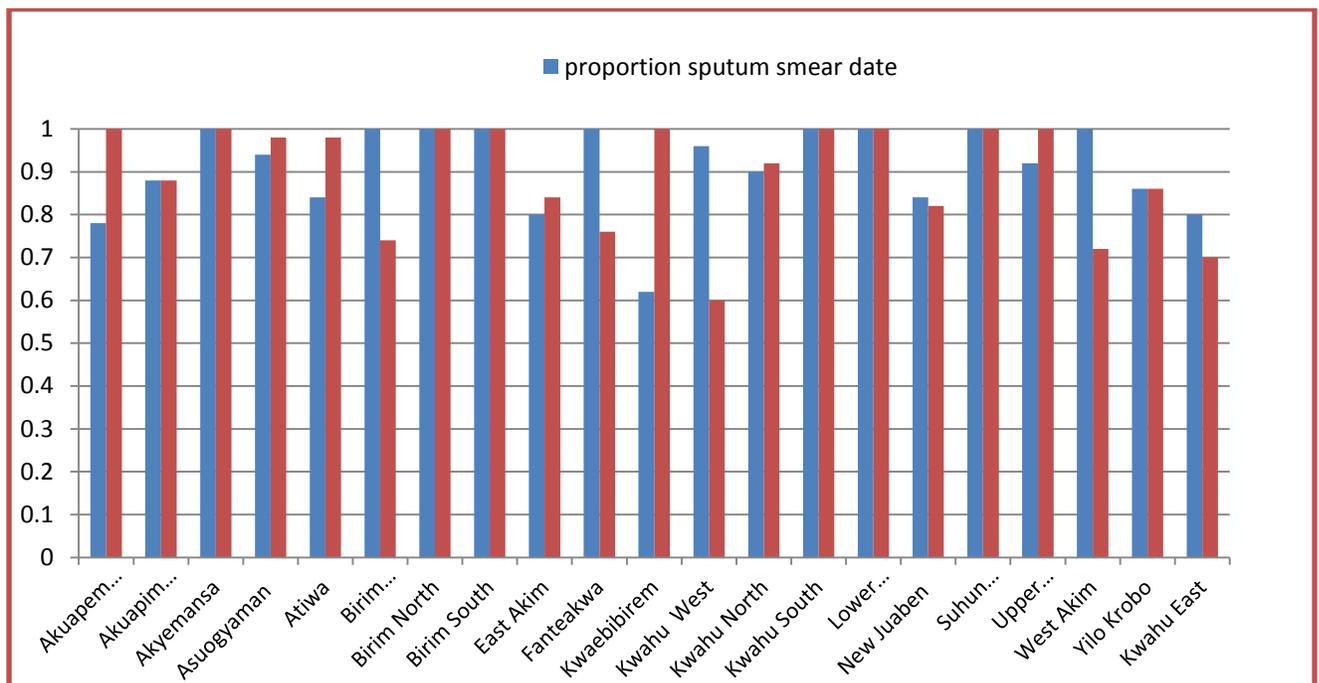
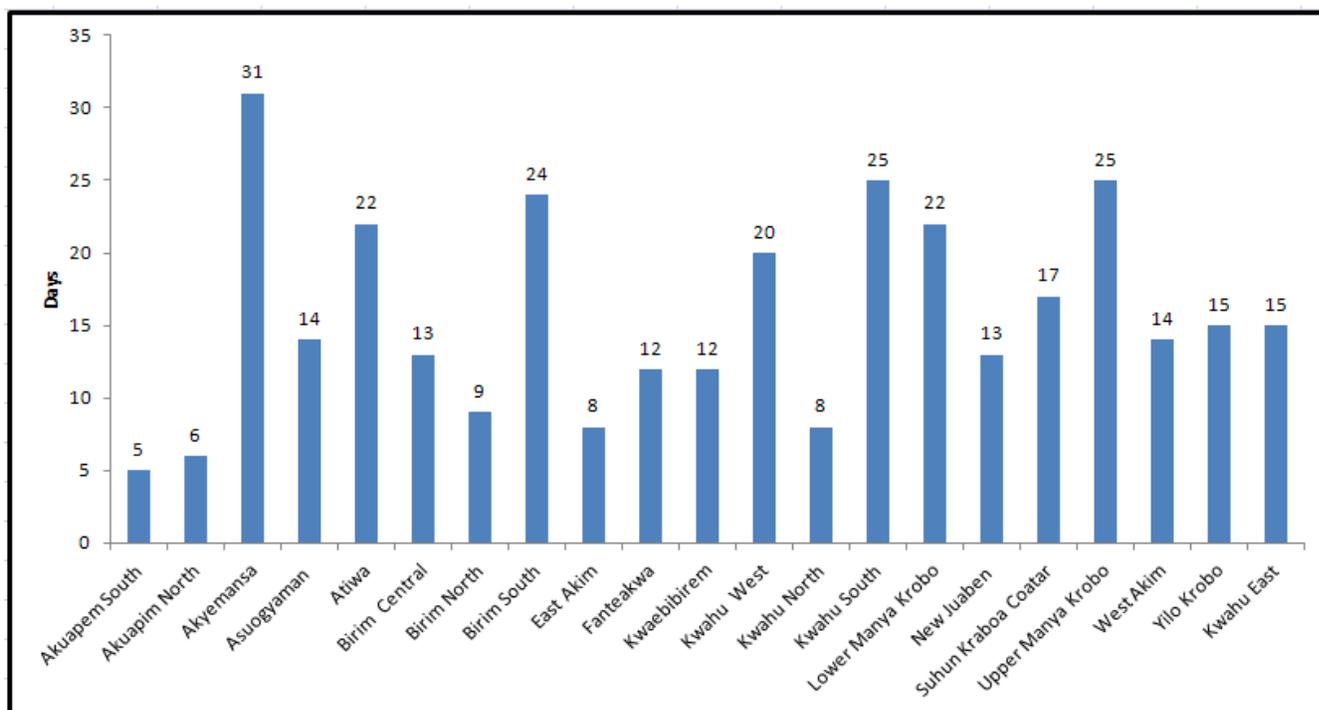


Figure 4: Results of provider delay assessment from 21 districts in Eastern Region



- The innovative approach for conducting regional TB quarterly review meetings introduced in the Eastern region. This approach involved TB treatment registers swaps among participants to permit for assessing each other’s TB register for any incompleteness and inconsistencies as part of improving the data quality. This approach has been adopted in all the regions.

Challenges

- Supervision visits from the national level to the regions and from the regions to the districts and health facilities remain irregular and ineffective
- Data quality is still not assured due to weak data quality and validation mechanisms at all levels of health services
- Weak capacity for conducting operation research

Next Steps

- a) Conducting data quality audit through use of RDQA tool should be encouraged and each region should be reporting to the NTP central unit on data validation exercise conducted in at least two facilities each quarter using the Routine Data Quality Assessment (RDQA) tool

- b) Develop a plan to review the current national Operation Research priorities as part of the comprehensive program review in 2013 for inclusion in the new strategic plan (2014-2018)
- c) Set up a national TB research task force to put TB Operational research higher on the health sector agenda and have wide engagement other research institutions such as the School of Public Health and other Research Institute (Kintampo, Dodowa and Navrongo) to increase the impact and drive the research agenda