COMMUNITY MOBILIZATION INITIATIVE TO END TB (COMMIT) IN CAMBODIA

MIDTERM EVALUATION

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Agency for All Project
Center on Gender Equity and Health | UC San Diego School of Medicine
9500 Gilman Drive, Mail Code 0507 La Jolla, CA 92093
info@agency4all.org
www.agency4all.org
Twitter: @Agency4All

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ABBREVIATIONS

ACF	Active Case Finding
BK+	Bacteriologically confirmed
CATA	Cambodia Anti-Tuberculosis Association
CENAT	National Centre for Tuberculosis and Leprosy Control
CHC	Cambodian Health Committee
COMMIT	Community Mobilization Initiatives to End Tuberculosis
COVID-19	Coronavirus Disease 2019
CSO	Civil Society Organizations
DEI	Diversity, Equity, and Inclusion
FGD	Focus Group Discussions
FY	Financial Year
HC	Health Centre
HL	Hospital Linkages
HSD	Health and Social Development
ICT	Information & Communication Technology
IP	Implementation Partner
IR	Intermediate Results
KHANA	Khmer HIV/AIDS NGO Alliance
KII	Key Informant Interviews
LC	Lay Counsellor
LMIC	Low-and-middle income countries
MAF	Multisectoral Accountability Framework
MDR-TB	Multidrug-resistant TB
MTB	Mycobacterium Tuberculosis
MTE	Midterm Evaluation
NSP	National Strategic Plan
NTP	National Tuberculosis Programme
OD	Operational District
PHD	Provincial Health Department
PSG	Peer Support Group
RH	Referral Hospital
RIF	Resistance to Rifampicin
SBCC	Social and Behavior Change Communication
SDG	Sustainable Development Goals
TB	Tuberculosis
TB-DM	Tuberculosis- Diabetes Mellitus
TPT	Tuberculosis Preventive Treatment
USAID	United States Agency for International Development
VHSG	Village Health Support Group
WHO	World Health Organization

EXECUTIVE SUMMARY

A Midterm Evaluation (MTE) was commissioned to assess the performance of the Community Mobilization Initiatives to End Tuberculosis (COMMIT). It's a five-year project (October 1, 2019, to September 30, 2024, with a total estimated amount (TEA) of USD 8,000,000 investment) that seeks to improve early tuberculosis (TB) case finding, diagnosis and treatment of TB cases, infection prevention and control in ten operational districts (OD) of Cambodia. The project is funded by the United States Agency for International Development (USAID) and implemented by Khmer HIV/AIDS NGO Alliance (KHANA) in partnership with the Cambodian Health Committee (CHC), Health and Social Development (HSD), and Cambodia Anti-Tuberculosis Association (CATA).

Objectives of the Evaluation

The specific objectives of the evaluation are a) to assess COMMIT activity performance to date, identify strengths and weaknesses of the implemented components, key bottlenecks/challenges, and actionable recommendations for improvements to meet the activity's intended objectives; and b) to use the findings and recommendations to inform the design of a new TB activity, which will follow COMMIT. The primary audience of this midterm evaluation is USAID/Cambodia Office of Public Health and Education. The secondary audiences will be the implementing partners (IPs) including prime and sub-partners of COMMIT and the National Centre for Tuberculosis and Leprosy Control (CENAT), Ministry of Health counterparts at national and sub-national levels.

The MTE sought to address the following questions:

- To what extent has COMMIT effectively reached and facilitated TB case finding and the treatment of people with TB living in the targeted communities? What intervention strategies work well? why? What intervention strategies have not worked well? Why?
- What activity components are more effective for replication in terms of reach, yield, and cost? Are there any missed opportunities?
- What factors, internal and external, have facilitated and/or constrained COMMIT project performance, and how can these be addressed?
- To what extent are COMMIT activities contributing towards building the capacity of the NTP to manage and implement TB services to meet program targets?
- How effective has the COMMIT approach been in advocating for TB prioritization at the sub-national level in terms of resource mobilization, engagement, and transition of responsibility?
- What are key achievements and challenges in applying the multi-sectoral implementation approach to improve TB outcomes?

Project Background

The project works to detect and treat TB cases through five major strategies (corresponding implementation partners mentioned in parentheses): Snowball Approach (KHANA), Active Case Finding (CATA), Routine Community Screening (CHC), Bi-directional screening of Tuberculosis-Diabetes Mellitus (TB-DM) and Hospital Linkages (HSD). There are four Intermediate Results (IR) that COMMIT seeks to achieve while proceeding towards its goal:

- Improved access to high-quality, person-centred TB, drug-resistant TB (DR-TB), and TB/HIV services.

- Strengthened TB service delivery platforms.
- Reduced transmission and progression of TB disease.
- Improved program implementation and impact through TB operational research and innovation.

Evaluation Design, Methods, And Limitations

The MTE collected data cross-sectionally using a mixed-methods approach. Both qualitative and quantitative data were collected as part of MTE. The quantitative data was sourced from the COMMIT Project's performance monitoring system (PMS) and the National Tuberculosis Program (NTP)'s Tuberculosis Management Information System (TBMIS). Primary data collection was conducted to gather qualitative insights from various stakeholders. Thematic analysis, data mapping, pattern analysis and triangulation were some of the methods used.

The study had the following limitations:

- MTE findings do not examine causal hypotheses since the objective was to deliberate on COMMIT achievements and performance.
- COVID-19 as a disruptor of the study period under consideration made some parts of the data unsuitable for analysis.
- Lack of cost data disaggregated as per strategy meant cost per case detected could not be analysed.
- Lastly, MTE identified a few emerging findings while interacting with several stakeholders and through field observations that are beyond the scope of pre-identified learning questions such as Diversity, Equity, and Inclusion (DEI) or Social Behaviour Change Communications (SBCC) and are presented in this report. These findings may be considered for future COMMIT strategizing and may not necessarily fall within the current COMMIT mandate.

Findings and Recommendations

Findings suggest three broad areas, where COMMIT demonstrated results – *a.* increase in the number of screenings, detection and treatment, *b.* strengthening of diagnostic and treatment capacity at the health facilities and, c. Enhanced linkages between referral nodes (referral hospital-health centre) and linkages between health facilities and community.

In terms of **screening, diagnosis, and treatment of TB Cases**. Results can be categorized into three- Indicators exceeding targets, Indicators seeing upward traction but missed targets and Indicators seeing a declining trend. Screening, detection, and treatment of TB in COMMIT areas has exceeded target in the 3rd year implementation plan (October 2021 - September 2022). Highest traction has been seen between FY2 (October 2020 - September 2021) and FY3 (October 2021 - September 2022) likely due to the country's recovery from the COVID-19 pandemic and the reinstation of community mobilization activities. While COMMIT has been able to demonstrate results across cascade of care, there are indicators that have missed target such as, detection and treatment of bacteriologically confirmed (BK+) patients and BK+ screening for Tuberculosis preventive treatment (TPT). Multidrug- resistant Tuberculosis (MDR-TB) notification has seen a decline of 48% than the targeted figure in FY3. The reasons as suggested by the IPs is that Cambodia is not a high burden country for MDR-TB, therefore the target was hard to achieve.

Community mobilizers have contributed substantially in terms of TB awareness generation, increased screening, and patient follow-up for the first 2-3 months. These strategies have been successful in pushing patients towards the health system, hence contributing towards better TB control.

Mobile ACF strategy led by CATA and hospital linkage have higher outreach or screening in both FY2 and FY3. Screening has doubled in case of mobile ACF from FY2 to FY3, similar increase is seen for hospital linkages. Mobile ACF strategy involves the use of chest X-ray screening and those with abnormalities in X-ray images are then chosen for sputum sample collection, which is then analyzed with GeneXpert® rapid molecular diagnostic machines. However, both mobile ACF and hospital linkage have lesser yield as against Snowball and community TB screening. Snowball or seed and recruit strategy implemented by KHANA in 5 ODs has an outlier performance with the highest yield of 2.78 with lowest screening numbers. Community TB screening using Village Health Support Group (VHSG)/ Community-directly observed treatment, short-course (C-DOTS) also has a marginally better yield than mobile ACF and hospital linkage strategies.

MTE also assessed missed opportunities. COMMIT works closely with TB department and designated TB staff at PHD and RH, therefore lacks a "whole facility" approach[1] which is crucial for TB management. The frequency of outreach strategy for mobile ACF is sporadic. Data suggests that it leads to higher screening but lesser yield. To increase the yield, the frequency of events needs to be increased and should target men, migrant and indigenous populations, who are currently missed. COMMIT's current TB awareness modality highly relies on community health volunteers, lay counsellors, peer support groups (PSGs) and field officers. COMMIT focuses on TB education and awareness but lacks integration of social behaviour change communication (SBCC) model into program strategy. Engagement of the private sector is also another missed opportunity which the MTE observed. Private hospitals and clinics are the major entry point for most TB patients, who often miss out on the cascade of care provided by the public health facility or miss out on early detection and treatment.

With respect to performance, one finding that stood out across health facilities is the lack of **operations and maintenance** system for GeneXpert®[2]. There are supply chain issues that need to be taken care of at the national level such as shortage of cartridge. However, there are demand level challenges too, such as underestimation of cases and bad quality sputum.

Following are the potential way forward to mitigate the challenges:

- COMMIT needs to focus on moving from building capacities to sustaining built capacities.
- There is a need to refine outreach strategy from what exists at present. COMMIT needs to be intentional about Diversity, Equity, and Inclusion (DEI) strategy There is a need to deepen decentralization mandates.
- There is a need to intensify implementation of multisectoral accountability framework (MAF) and across partners.
- There needs to be a concerted effort to engage the private sector in health.
- Education and awareness about TB require top-most focus in future messaging.

[1] Agbiriougu, B. *et al.* (2013) *Aids, Population and Health Integrated Assistance, People-Centered, Local Leadership, Universal Access, And Sustainability (Aphiaplus) Nairobi /Coast Project*. rep. Washington D.C.: USAID, p. A-67.

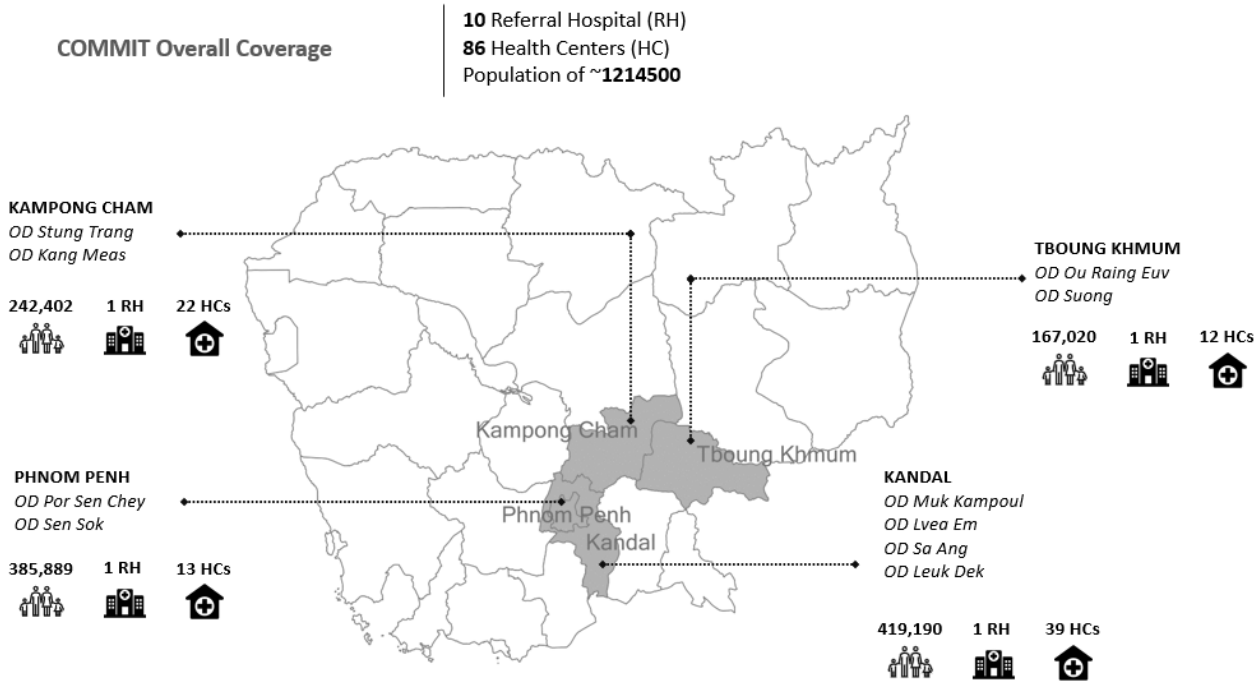
[2] See more at *https://www.cepheid.com/en-US/systems/genexpert-family-of-systems.html*

BACKGROUND

Community Mobilization Initiatives to End Tuberculosis (COMMIT) is a five-year project (October 1, 2019, to September 30, 2024) that seeks to improve early TB case finding, diagnosis and treatment of TB cases, infection prevention and control. COMMIT strategies are tailored to TB high-risk populations residing in underserved communities in Cambodia. The project is funded by the United States Agency for International Development (USAID) and implemented by Khmer HIV/AIDS NGO Alliance (KHANA) in partnership with the Cambodian Health Committee (CHC), Health and Social Development (HSD), and Cambodia Anti-Tuberculosis Association (CATA)- referred to as Implementation Partners (IPs). It is a USD 8,000,000 investment[3] and employs a multi-sectoral approach to implementation[4]. Progress against each strategic component is tracked by implementation partners in the form of intermediate results (IRs), as given in the box below.

The project is being implemented across ten operational districts (ODs) in four provinces of Cambodia – Kampong Cham, Kandal, Phnom Penh, and Tboung Khmum.

Figure 1: COMMIT Project Intervention geographies, population & number of health facilities covered



Each IPs have a unique strategy for implementation across different ODs:

Khmer HIV/AIDS NGO Alliance (KHANA) is the prime grantee and leads the implementation of COMMIT. In addition to screening TB cases at the community level, KHANA through the Snowball approach uses seeds and recruits to screen/identify people with presumptive TB. They are then referred to a lay counsellor at the Health Centre (HC) for reconfirmation of symptoms.

[3] Scope of work for MTE. USAID Cambodia
[4] Chamreun, CS. Community Mobilization Initiatives to End Tuberculosis (COMMIT): Annual Report 2022. Khmer HIV/AIDS NGO Alliance: Phnom Penh; 2022

Cambodian Health Committee (CHC) is a sub-grantee involved in case detection at the community level using routine community TB screening, contact investigations (complemented by TB preventive therapy), peer support groups for TB patients, support systematic screening for TB symptoms among those who access services at RH in five ODs, and supportive clinical supervision for health staff.

Health & Social Development (HSD) is a sub-grantee that works on bi-directional screening of TB-DM & TB-HIV cases at health facilities in five ODs. They also support systematic screening for TB symptoms among those who access services at Referral Hospitals (RH) in both the inpatient (IPD) and outpatient (OPD) wards, otherwise known as hospital linkage.

Cambodia Anti-Tuberculosis Association (CATA) is a sub-grantee involved in detection and referral of TB cases through mobile active case-finding strategies. CATA conducts regular screening events at religious centres, villages, etc., and screens for people with presumptive TB using digital X-ray units.
While CATA have their activities across the ten ODs, the community screening strategies of CHC and KHANA have been divided across the ODs, with OD Kang Meas, OD Stueng Trang, OD Lvea Aem, OD Mukh Kampul and OD Suong, having their community screening led by CHC and the rest of the ODs being led by KHANA. Despite the diversity of strategies involved, it is imperative to highlight that COMMIT is a multi-sectoral, multi-actor intervention, with each strategy complementing the other.

EVALUATION PURPOSE AND EVALUATION QUESTIONS

EVALUATION PURPOSE

COMMIT is in its third year (October 1, 2021 - September 30, 2022) of implementation, with a little over one and a half years left for the current phase to end. Therefore, a midterm evaluation (MTE) was commissioned to assess COMMIT's activity performance to date, identify strengths and weaknesses of the implemented components, key bottlenecks/challenges, and actionable recommendations for improvements to meet the activity's intended objectives. The secondary purpose is to use the findings and recommendations to inform the design of a new TB activity, which will follow COMMIT. The primary audience of MTE is the USAID/Cambodia Office of Public Health and Education, the National Centre for Tuberculosis and Leprosy Control (CENAT), and the implementation partners (IPs). The objective, design and methodology adopted by the MTE is discussed in the subsequent sections.

MTE's objective is twofold-

a) Assess the performance of COMMIT to date across pre-identified intermediate results areas or IRs (as referred to by COMMIT) and,
b) Provide recommendations to inform the future USAID's COMMIT strategy. Further inquiry into strengths and weaknesses of implementation strategies, bottlenecks, and opportunities influencing the performance has been done.

EVALUATION QUESTIONS

The purpose and objectives of the mid-term evaluation will be achieved through answering the following six evaluation questions or learning questions defined in the scope of work[5]:

1. To what extent has COMMIT effectively reached and facilitated TB case finding and the treatment of people with TB living in the targeted communities? What intervention strategies work well? why? What intervention strategies have not worked well? Why?
2. What activity components are more effective for replication in terms of reach, yield, and cost? Are there any missed opportunities?
3. What factors, internal and external, have facilitated and/or constrained COMMIT project performance, and how can these be addressed?
4. To what extent are COMMIT activities contributing towards building the capacity of the NTP to manage and implement TB services to meet program targets?
5. How effective has the COMMIT approach been in advocating for TB prioritization at the sub-national level in terms of resource mobilization, engagement, and transition of responsibility?
6. What are key achievements and challenges in applying the multi-sectoral implementation approach to improve TB outcomes?

[5] Complete scope of work is attached in the Annex.

EVALUATION METHODS AND LIMITATIONS

EVALUATION DESIGN AND METHODS

The MTE collected data cross sectionally using a mixed-methods approach. Cross-sectional design was best suited as it allows explaining a phenomenon at a specific point in time (current state) instead of incidences over time[6]. COMMIT's baseline was conducted in November 2020. This report, however, does not compare findings from MTE to baseline as the domains of inquiry between the two differ. Nonetheless, baseline findings are referred to in a few instances as context or to appreciate the MTE findings better.

Both qualitative and quantitative data were collected as part of MTE. The quantitative data was sourced from the COMMIT project PMS and the National Tuberculosis Program TBMIS. Primary data collection was conducted to gather qualitative insights from various stakeholders. A total of 21 Key Informant Interviews (KIIs) and 21 Focus Group Discussions (FGDs) were conducted with the respondents across national levels including CENAT, TB supervisors at Provincial Health Departments (PHDs), the Referral Hospitals (RH) and Health Centres (HC), Health Centre Management Committee (HCMC), laboratory technician and target population (people who experienced TB). KIIs were also conducted with USAID Cambodia, implementation partners, COMMIT project officers, and community mobilizers. At the national level, the respondents were purposely selected. The evaluation intended to cover all ten operational districts (ODs) in congruence with the COMMIT's coverage; hence all 10 RH were part of the sample. HCs were selected randomly and one HC each in an OD was covered by the MTE. Community mobilizers and people who experienced TB were also randomly selected from the HC catchment area. Details of the sample are given in Annex IV.

Data from the above respondents were collected between 7th March 2023-10th April 2023. Five researchers were part of the data collection and analysis process. KII and FGD guides/tools were prepared by the MTE team and vetted by USAID Cambodia before the commencement of data collection. Primary data collection was preceded by a review and analysis of secondary data, COMMIT PMS and NTP TB MIS, to gather preliminary insights before data collection. Qualitative data were transcribed, translated to English from Khmer, and analyzed using thematic analysis based on the learning questions. Secondary data analysis was done between February and March 2023 and was revisited and revalidated during primary data analysis to corroborate findings from both sources.

The table below summarizes the learning questions, methods for data collection and analysis, and data sources.

Table 1: Learning Questions and Methods of Inquiry

Sl. No.	Learning Questions	Respondents	Method of Data Collection
1	To what extent has COMMIT effectively reached and facilitated TB case finding and the treatment of people with TB living in the targeted communities? What	• IPs (KHANA, HSD, SHD, CATA, USAID) • CENAT/NTP • COMMIT Program Officers	• KIIs • FGDs with community • Analysis of

[6] Wang, X., & Cheng, Z. (2020). Cross-Sectional Studies: Strengths, Weaknesses, and Recommendations. Chest, 158(1), S65-S71. https://doi.org/10.1016/j.chest.2020.03.012

Sl. No.	Learning Questions	Respondents	Method of Data Collection
	intervention strategies work well? why? What intervention strategies have not worked well? Why?	• People who experienced TB (community)	Program MIS • Review of Annual Reports
2	What activity components are more effective for replication in terms of reach, yield, and cost? Are there any missed opportunities?	• Implementation partners (KHANA, CHC, HSD, CATA, USAID Cambodia)	• KIIs • Analysis of Program MIS • Review of Annual Reports
3	What factors, internal and external, have facilitated and/or constrained COMMIT project performance, and how can these be addressed?	• RH and HC staff • IPs (KHANA, CHC, HSD, CATA, USAID Cambodia) • COMMIT Program Officers • People who experienced TB (community)	• KIIs • FGDs with community
4	To what extent are the COMMIT activities contributing towards building the capacity of the NTP to manage and implement TB services to meet program targets?	• CENAT-NTP, USAID, IPs • RH and HC staff	• KIIs
5	How effective has the COMMIT approach been in advocating for TB prioritization at the sub-national level in terms of resource mobilization, engagement, and transition of responsibility?	• IPs (KHANA, CHC, HSD, CATA, USAID Cambodia) • CENAT/NTP • COMMIT Program Officers	• KIIs
6	What are key achievements and challenges in applying the multi-sectoral implementation approach to improve TB outcomes?	• CENAT/NTP, • USAID Cambodia • IPs • Commune Councils • RH and HC staff, HCMC	• KIIs

LIMITATIONS AND KEY CONSIDERATIONS

All the MTE activities were in accordance with the scope of work defined by USAID Cambodia, and no significant changes in the evaluation strategies or objectives were made. MTE worked closely with the USAID Cambodia and the IPs- KHANA, CHC, HSD, and CATA and adhered to the workplan and timelines envisioned during the inception of MTE. There are, however, a few limitations or challenges worth highlighting, which are discussed below.

a. Since the objective of the evaluation is to deliberate on COMMIT's achievements and performance, MTE findings do not examine causal hypotheses as it was not the scope of MTE. The purpose was to comment on the performance. The findings presented in this report are directional and should be viewed as COMMIT's performance in FY3 rather than attributing the results to COMMIT.

b. COVID-19 has been a major disruptor, especially between 2020 and 2021. COMMIT was launched in October 2019 and the first wave of COVID-19 in Cambodia occurred in 2020, only a few months after its launch, thus halting most of the community mobilization activities. The second wave in 2021 was severe and further disrupted activities on the ground. Given this context, the USAID Cambodia and IPs suggested considering only FY3 (2021-2022) as a reference period to comment on COMMIT's performance around IRs and most importantly not compare it with the last two financial years (2019-20 and 2020-21).

c. One of the learning questions pertains to comparing COMMIT strategies or activity components in terms

of its reach, yield, and cost. Data to analyse reach and yield were available and were analyzed, however, cost per case was difficult to compare due to the following reasons- a. component-wise cost was not available, b. the components and strategies adopted by each IPs varied in terms of outreach strategies and nature and levels of intervention and c. the allocation of cost on operations, administration and management did not necessarily reflect the level of effort of the staff working on their respective approach . Therefore, it was deemed prudent to not compare cost per case.

d. Lastly, MTE identified a few emerging findings while interacting with several stakeholders and through field observations that are beyond the scope of pre-identified learning questions such as Diversity, Equity, and Inclusion (DEI) or Social Behaviour Change Communications (SBCC) and are presented in this report. These findings may be considered for future COMMIT strategizing and may not necessarily fall within the current COMMIT mandate. The same has been mentioned in the sections where such findings are presented.

e. Availability of disaggregated data on BK+ cases as per strategy, was missing in the COMMIT project PMS to assess yield for positive cases. Similarly, TB screening data was not available in the NTP TB MIS; hence MTE has not been able to delve into these.

FINDINGS

This section is divided into six subsections corresponding to the six learning questions and sub-questions. Findings are anonymized and synthesized adhering to confidentiality of respondents. As discussed before, the findings are not causal, therefore, narrative description has been provided instead of statistical outputs.

LEARNING QUESTION -I

To what extent has COMMIT effectively reached and facilitated TB case finding and the treatment of people with TB living in the targeted communities?

Cambodia is a high-burden country with a TB incidence rate of 284 per 100,000 population and TB mortality is around 20 per 100,000 population in 2021[7]. However, the country has made significant progress over the last two decades and has been able to reduce the TB incidence rate and mortality by 53% (from 579 to 284) and 52% (from 42 to 20), respectively. Cambodia has also been able to maintain a treatment success rate of above 90% since the 2000s[8]. However, challenges persist. For instance, studies[9] estimate that 40% of people with TB in Cambodia remain undiagnosed. Another study suggests that every fourth person with TB goes undetected in Cambodia. Lack of awareness about the disease, absence of care-seeking behaviour and underlying social stigma are determinants leading to delayed diagnosis and treatment[10]. Considering this context, COMMIT comes at an opportune time to provide comprehensive support to the National Strategic Plan (NSP 2021-30) to end TB in Cambodia and is rightly placed to demonstrate change. COMMIT aligns with the NSP 2021-30 goals of ending TB by 2035[11] as well contribute significantly to the reduction of incidence in the ten Operational Districts (ODs) across the four provinces.

COMMIT's Achievement

Findings suggest three broad areas, where COMMIT demonstrated results – *a.* increase in the number of screenings, detection and treatment, *b.* strengthen diagnostic and treatment capacity at the health facilities and, c. Enhanced linkages between referral nodes (RH-HC) and linkages between health facilities and community.

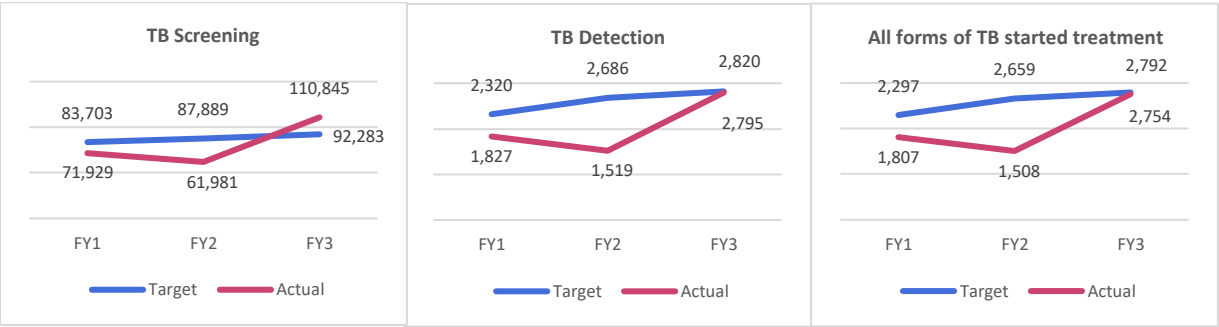
MTE analyzed the COMMIT program project management system (PMS) to ascertain its reach in terms of screening, diagnosis, and treatment of TB Cases. Results can be bucketed into three categories- indicators exceeding targets, indicators seeing upward traction but missed targets and indicators seeing a decline.

We observe that COMMIT has been successful in increasing its reach to underserved populations. From October 2019 to November 2022, COMMIT has been able to screen 244,755 people for TB and detected 6,141 people with TB of which 6,069 people started treatment for all forms of TB. Of 6,141 people detected with TB, 1,981 people with bacteriologically confirmed cases (BK+ cases) and almost all bacteriologically

[7] Global tuberculosis report 2021. Geneva: World Health Organization; 2021.
[8] CENAT. Tuberculosis Report 2021. Phnom Penh: CENAT, 2021
[9] Teo, A.K.J., Ork, C., Eng, S. et al. Determinants of delayed diagnosis and treatment of tuberculosis in Cambodia: a mixed-methods study. Infect Dis Poverty 9, 49 (2020). https://doi.org/10.1186/s40249-020-00665-8
[10] Ma, J., Vongpradith, A., Ledesma, J.R. et al. Progress towards the 2020 milestones of the end TB strategy in Cambodia: estimates of age and sex specific TB incidence and mortality from the Global Burden of Disease Study 2019. BMC Infect Dis 22, 904 (2022). https://doi.org/10.1186/s12879-022-07891-5
[11] National strategic plan to end tuberculosis in Cambodia 2021-2030. CENAT. http://www.cenat.gov.kh/cenat/en/content/national-strategic-plan-end-tuberculosis-cambodia-2021-2030

positive cases, that is 1,968 people, started treatment[12]. One of the reasons for BK+ cases not starting treatment (13 cases) could be because of loss to follow-up. The loss was too minimal to demand a deep dive into reasons in the current MTE. Future assessments could deep dive into the reasons, should the gap expand. Overall, the treatment success rate for all TB cases is 94% in the COMMIT areas.

Figure 2: Indicators achieving target- Screening, detection, and treatment of TB in COMMIT Areas



As shown in Figure 2, COMMIT has achieved more than targeted coverage for screening, and highest traction has been seen between FY2 and FY3 likely due to the country's recovery from the COVID-19 pandemic and the reinstation of community mobilization activities. Detection of childhood TB and treatment success rate for TB-MDR is also worth highlighting, as these cross the target figures in FY3 by 54% (target 282, actual 608) and 6% (target 75%, actual 81.5%) respectively. Qualitative findings from the field corroborate the above findings. When asked about the key achievement of COMMIT, one of the health facility staff responded- "*COMMIT has brought more people to the health facility than before".* The role of community mobilizers- Village Health Support Groups (VHSGs), Lay Counsellors (LCs) and Peer Support Groups (PSGs) has been crucial in terms of bringing people together for TB screening.

While COMMIT has been able to demonstrate results across cascades of care, there are indicators that need continued focus. With reference to the baseline figures these indicators have seen upward traction but missed target in FY3.

Interactions with the health staff and laboratory technicians suggest that low-quality sputum is a hindrance in testing for BK+ cases. In terms of treatment, further probes are needed to understand the trend and reasons for missing the targets, including TPT for those screened for BK+. Bi-directional testing for Tuberculosis Diabetes-Mellitus (TB-DM) has also missed targets in FY3. Interactions with people who experienced TB suggest that while the cost of TB treatment is minimal and borne by the government, cost of diabetes treatment incur higher out of pocket expenditure. This could be a potential reason for keeping TB-DM patients out of the treatment pathway or leading to their non-adherence to treatment. COMMIT over the years have been able to establish a triage mechanism to test for TB-DM at the facility levels, therefore, seeing traction. However, mechanisms to reduce the burden of out-of-pocket expenditure for TB-DM treatment can be thought through to further optimize the results.

Multidrug-resistant Tuberculosis (MDR-TB) notifications have only been 52% of the targeted figure in FY3. The reason, as suggested by the IPs, is that Cambodia is not a high-burden country for MDR-TB, making the target hard to achieve. WHO Global Tuberculosis Report 2022 suggest that the estimated proportion of TB

[12] COMMIT Performance Indicator Tracking Table (PITT): October 1, 2019, to September 30, 2024

cases with MDR/RR-TB is 12% among retreatment and 1.9% among new TB cases[13]. Lack of reliable historical data on MDR-TB is another factor impeding proper planning and management of TB-MDR, as suggested by the IPs. Therefore, a renewed focus and further research is needed for screening, diagnosis, and treatment of the same, to improve case finding rates for MDR-TB.

What intervention strategies work well? why? What intervention strategies have not worked well? Why?

Reflections on COMMIT Strategies

Following are the strategies that worked well.

Strengthening of TB Health System: The results discussed above demonstrates the joint effort by IPs and varied strategies across health facility levels. The strengthening of the TB health system is one of the key levers of COMMIT. Over the last three years, more than 3,647 person days of training were conducted with health staff at RH and HCs in 10 ODs. It contributed to building their capacity and providing better services to patients leading to increased retention of patients in the cascade of care. For instance, there is better coordination between HCs and RH, therefore, timely treatment of patients is ensured. On-the-job handholding was also highlighted by the staff as key in ensuring patient care. COMMIT field officers are stationed at the health facility to support the staff in transportation of sputum, quicker turnaround on diagnosis and treatment and communication with the patients ensuring timely treatment. Findings also suggest that there is a stronger linkage between health centres and community. Community mobilizers have contributed substantially in terms of TB awareness generation, increased screening, and patient follow-up for the first 2-3 months. These strategies have been successful in pushing patients towards the health system, hence contributing towards better TB control.

Partnership and Collaboration: Similar to the above findings, it has also been observed that partnership and collaboration at the national and sub-national level amongst IPs is key to community mobilization. A combination of factors such as, peer support amongst field staff, their past affiliations to the program of similar nature and sectoral understanding is creating a multiplier effect on program implementation as well as its performance. However, such evidence is sporadic and are mostly driven by individuals and are localized to some geographies at the sub-national levels. At the national level, CENAT has been aided in health system strengthening efforts by COMMIT in the form of support in terms of staff capacity building, strengthening TB policy guidelines and data management. Most importantly, CENAT looks forward to conducting more research, in collaboration with COMMIT, on TB in Cambodia with a renewed focus on target screening for people with TB symptoms, early detection, and treatment.

Community Mobilization: Lastly and most importantly, the community mobilization strategy has had tremendous results in pushing people to the cascade of care. Community-based events are found to be effective in terms of systematic screening of TB cases. Studies[14] suggest that ACF is proven to add to the number of case notifications and the same has been observed in COMMIT areas. In case of COMMIT, mobile ACF attracts the most footfall for screening when done at the community or village levels. The same when applied to other venues such as religious places- Pagoda, Mosque or Churches had lesser footfall. One of the

[13] WHO Global TB Report 2022

[14] Saunders, M. J., Tovar, M. A., Collier, D., Baldwin, M. R., Montoya, R., Valencia, T. R., Gilman, R. H., & Evans, C. A. (2019). Active and passive case-finding in tuberculosis-affected households in Peru: A 10-year prospective cohort study. *The Lancet. Infectious Diseases*, *19*(5), 519-528. https://doi.org/10.1016/S1473-3099(18)30753-9

key achievements of mobile ACF is also faster diagnosis of symptoms leading to early detection of TB given the use of mobile x-ray devices. All these factors have been successful in increasing the number of screenings. However, there are certain limitations to mobile ACF. Firstly, mobile ACF has reached more women than men, due to unavailability of men during the community event hours. Most men are at their workplaces when these community events are held or have migrated to other locations for employment. Therefore, by default, mobile ACF is targeting more women than men. There is a need to revisit mobile ACF strategies to suit the needs of all the target population especially men. While the frequency of mobile ACF events needs to increase for improvement of yield rate (number of TB cases identified as a proportion of the number of screened), it also has to consider time (suitable for all community members) and space (at a place which is most accessible) factors to widen the net and screen for vulnerable populations, like poor, migrant men.[15]. This is assuming that quality concerns regarding chest X-ray and sputum would be resolved simultaneously.

Following are the strategies which did not work well.

While community mobilization strategies have resulted in an increase in screening (as demonstrated by the COMMIT Performance Indicators Tracking Table (PITT)), hospital linkage strategy at health facilities has not demonstrated higher yield. The primary reason for this is that the patient profile at the health facility level expands beyond TB patients to cover all type of diseases. Considering the wider variety of patients visiting the health facilities, hospital linkage strategy would have challenges in increasing proportion of cases detected vis-à-vis the cases screened. Hence, no comparison of these strategies could be made to comment on relative efficiency, especially also considering the absence of strategy-wise disaggregated data on BK+ cases.

TB Awareness and Advocacy: Besides community mobilization and system strengthening, COMMIT intends to actively advocate for TB in Cambodia. MTE findings suggest that advocacy efforts are being made by IPs at the national and sub-national levels in the form of program and policy advocacy. Details about the efforts are discussed in the fifth section of this chapter. However, overall, these efforts are found to be sporadic and occasional. Raising awareness about TB is one of the foremost agendas, the findings suggest that awareness generation is mostly done through one-on-one interactions led by community health volunteers, lay counsellors and PSG at the local community levels and local health facility levels. Much emphasis is also on reaching the high-risk population, especially people aged 55 and above, but lacks concerted strategy to leverage other platforms (multimedia platforms like social media), people (poor urban youth[16], migrant men) other than local program staffs.

COMMIT strategies along with its concerted partnerships between IP and use of localized solution have contributed substantially towards the goal of eliminating TB especially in the 10 ODs or underserved geographies. These efforts, while immense, so far rely on key individuals or entities- TB supervisors at RH and HC, designated TB staff and so on. Moving forward there is a need for the COMMIT strategies to have a "whole facility" approach to bring the TB agenda in the mainstream and not remain concentrated to certain individuals or departments. Various studies provide empirical evidence of improved care as a result of "total

[15] Saini, V., & Garg, K. (2020). Case finding strategies under National Tuberculosis Elimination Programme (NTEP). *The Indian Journal of Tuberculosis*, *67*(4), S101. https://doi.org/10.1016/j.ijtb.2020.09.029

[16] Badiaga S, Raoult D, Brouqui P. Preventing and controlling emerging and reemerging transmissible diseases in the homeless. Emerg Infect Dis. 2008 Sep;14(9):1353-9. doi: 10.3201/eid1409.080204. PMID: 18760000; PMCID: PMC2603102.

facility" or "whole facility" approach as well as list it as best practices in improving the process of care and management[17,18,19].

LEARNING QUESTION – II

What activity components are more effective for replication in terms of reach, yield, and cost?

Successful treatment of a TB patient is preceded by the demand for finding cases or diagnosis. This eventually is expected to reduce TB incidence rate. COMMIT has been channelling various strategies of case finding at community and health facilities. There is a merit in understanding which strategy has been able to garner better rates of TB detection. MTE, therefore, deep dived into assessing the yield of a particular strategy across FY2 and FY3. Yield, by definition, is – *"a percentage of the total number of people detected with all forms of TB divided by the number of people screened[20]".* As suggested earlier, hospital linkage caters to a different patient population than community mobile ACF, therefore a comparison may not be accurate.

The table below describes the yield per strategy. The number of people screened and number of detected or identified with all forms of TB has been collated from secondary sources - IP program data and COMMIT annual report. The estimates once compiled were validated with the IPs.

Table 2: Yield per COMMIT Strategies

STRATEGIES	FY2- October 2020- September 2021			FY3- October 2021-September 2022		
	#Screened	#identified	Yield (%)	#Screened	#identified	Yield (%)
Mobile Active Case Finding (ACF)	16,577	335	2.02	34,989	518	1.48
Snowball	6,252	513	8.21	7,802	1,217	15.60
Community TB Screening using VHSG/C-DOTs	10,077	230	2.28	19,608	545	2.78
Hospital Linkages	29,075	365	1.26	48,446	515	1.06
Total	**61,981**	**1,519**	**2.45**	**11,0845**	**2,795**	**2.52**

Findings suggest that screening using mobile ACF and hospital linkage have doubled between FY2 and FY3. However, both mobile ACF and hospital linkages have lesser yield as against Snowball and community TB screening. Snowball or seed and recruit strategy implemented by KHANA in 5 ODs has an outlier performance with the highest yield of 2.78 with lowest screening numbers. Community TB screening using VHSG/C-DOTS also has a marginally better yield than ACF and hospital linkage strategies. The point to be noted here is that the strategy implementation is collaborative even though the modalities are different and therefore each strategy contributes toward the others. Moving forward there is a need to judiciously assess how yield can be improved, and what modalities work best to have a multiplier effect. There is also merit in looking at the bacteriological diagnosis rate or BK+ diagnosis rate to assess yield and curb further transmission. MTE, due to the unavailability of data that segregates BK+ cases as per strategy, has not been able to compare strategies as per yield.

[17] Nyblade L, Mbuya-Brown RJ, Ezekiel MJ, Addo NA, Sabasaba AN, Atuahene K, Kiwia P, Gyamera E, Akyoo WO, Vormawor R, Manyama W, Shoko S, Mingkwan P, Stewart C, Balampama M, Bowsky S, Jacinthe S, Alsoufi N, Kraemer JD. A total facility approach to reducing HIV stigma in health facilities: implementation process and lessons learned. AIDS. 2020 Sep 1;34 Suppl 1: S93-S102. doi: 10.1097/QAD.0000000000002585. PMID: 32881798.

[18] Kielmann, K., Karat, A.S., Zwama, G. *et al.* Tuberculosis infection prevention and control: why we need a whole systems approach. *Infect Dis Poverty* **9**, 56 (2020). https://doi.org/10.1186/s40249-020-00667-6

[19] Brandon X Lum and others, Establishing a New Normal for Hospital Care: A Whole of Hospital Approach to Coronavirus Disease 2019 (COVID-19), *Clinical Infectious Diseases*, Volume 73, Issue 9, 1 November 2021, Pages e3136–e3143, https://doi.org/10.1093/cid/ciaa1722

[20] Kakinda, M., B. Matovu, J. K., & Obuku, E. A. (2016). A comparison of the yield of three tuberculosis screening modalities among people living with HIV: A retrospective quasi-experimental study. *BMC Public Health*, *16*. https://doi.org/10.1186/s12889-016-3763-9

What are the missed Opportunities?

Since COMMIT is in its third year of implementation, MTE also assessed missed opportunities, if any. The evidence for this is drawn from findings shared in the earlier sections.

Need for a "whole Facility" Approach: COMMIT implementation does not have a "whole facility approach to implementation"[21]. Whole facility approach is crucial for TB management - prevention and treatment and to bring the TB agenda to the mainstream. Literature suggests, having a whole facility approach to healthcare improves quality of care at health facilities. Details on operationalizing whole facility approach for TB control in Cambodia and learnings from other studies is detailed in the way forward section.

ACF Frequency and Outreach Strategy: The second missed opportunity is the frequency and outreach strategy for ACF. ACF leads to higher screening but lesser yield. To increase the yield, the frequency of events needs to be increased and further, the outreach strategy can have targeted focus on other sub-populations such as people with co-morbidities (diabetes, HIV) as well as people with alcohol user disorder and smokers. Finding the right people, at the right time and at the right site should be the strategy for ACF moving forward.

TB Awareness Generation: COMMIT's current TB awareness modality highly relies on community health volunteers, lay counsellor, PSGs and field officers. The reach of awareness or SBCC needs to reach out to the general population and not only those with TB symptoms or families of those who have symptoms. Interactions with the IPs suggest that SBCC as a strategy does not fall under the current scope of work for COMMIT. There needs to be a better integration of social behaviour change communication (SBCC) model, beyond just awareness generation. Use of a multi-media/multi-channel platform for SBCC and general awareness could be considered moving forward and implementation of it to be done at scale. However, there is a merit in taking it into consideration for future strategy for ending TB.

Engagement of Private Sector also another missed opportunity which MTE observed. Private hospitals and clinics are the majority entry point for most TB patients, who often miss out on the cascade of care provided by the public health facility or miss out on early detection and treatment. Current public health regulations in Cambodia restricts private sector hospitals and clinics from practicing TB control, thus making them unsuitable for ending TB. Findings suggest that the consensus amongst the community is that the private sector hospitals and clinics are easy to access and have lesser turnaround time for treatment, with users' perception of better quality than public health facilities. Their perception is gradually changing, and more people have indicated preferences on shifting towards public health facilities because of local level advocacy and follow-up by community mobilizers. Having said that, there is still a way to go before bridging this gap.

The next section delves into the factors, internal or external that have facilitated or constrained COMMIT's performance and potential way forward to address the constraints or augment the facilitators.

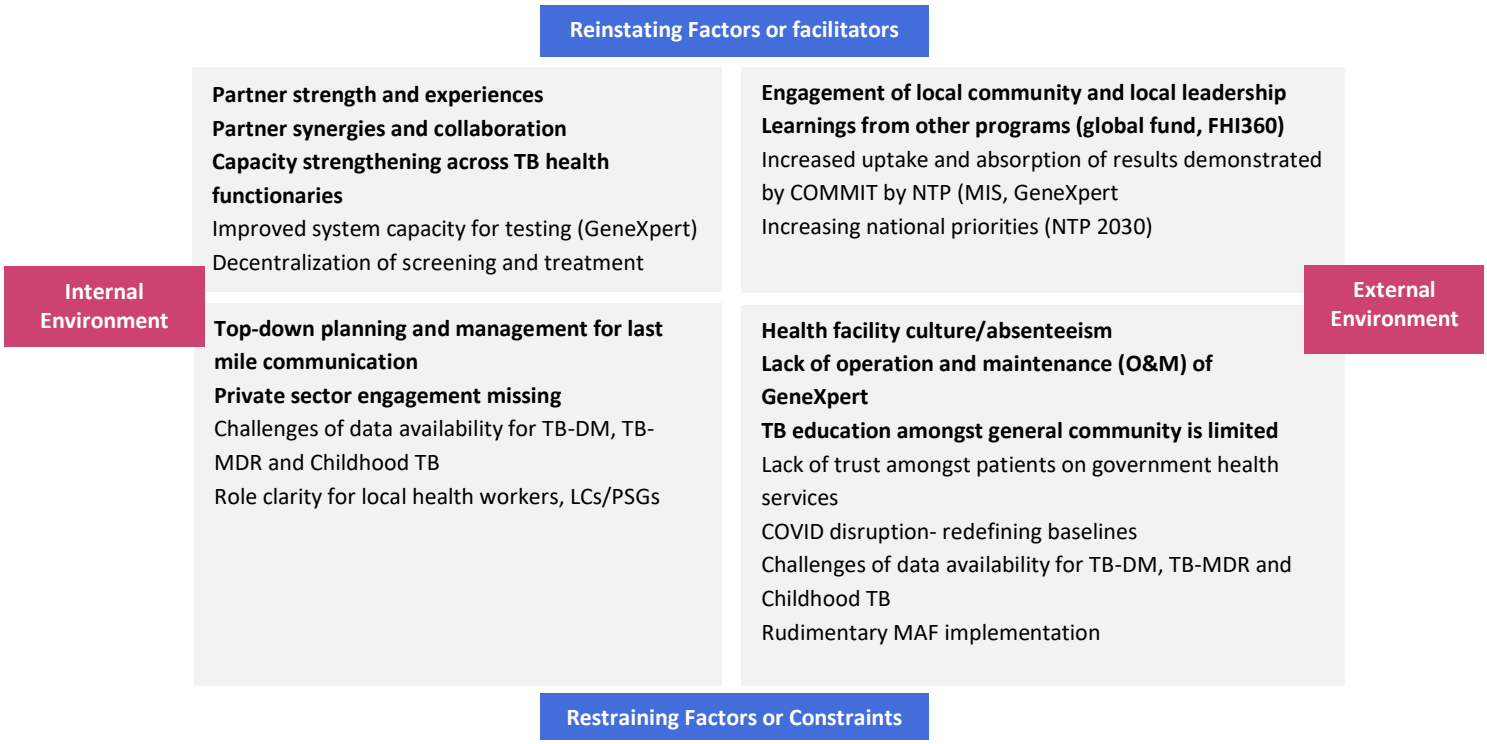
[21] Nyblade L, Mbuya-Brown RJ, Ezekiel MJ, Addo NA, Sabasaba AN, Atuahene K, Kiwia P, Gyamera E, Akyoo WO, Vormawor R, Manyama W, Shoko S, Mingkwan P, Stewart C, Balampama M, Bowsky S, Jacinthe S, Alsoufi N, Kraemer JD. A total facility approach to reducing HIV stigma in health facilities: implementation process and lessons learned. AIDS. 2020 Sep 1;34 Suppl 1:S93-S102. doi: 10.1097/QAD.0000000000002585. PMID: 32881798.

LEARNING QUESTION – III

What factors, internal and external, have facilitated and/or constrained COMMIT's performance and how can these be addressed?

MTE synthesized findings from different sources to ascertain facilitators and constraints that influenced COMMIT's performance. These are both internal and external to the project. Some of the factors may be beyond COMMIT's current mandate or scope of work but it is worth highlighting considering its contribution to its performance. The figure below summarizes the key factors, followed by a narrative discussion. The bolder and larger the text, the greater its positive or negative contribution to the performance.

Figure 3: Factors Reinstating and Restraining COMMIT Performance



Internal Environment – Reinstating and restraining factors, potential way forward

The existing partner strength and experience, especially that of KHANA, CHC, HSD, and CATA, has helped create relevant localized strategies for TB control across the TB health system- community and health facilities. MTE observed that COMMIT implementation processes are streamlined, and synergies are built between partners and strategies which has a positive influence over COMMIT performance. Capacity building of TB health staff is a recurring theme when it comes to factors reinstating COMMIT performance. Capacity building of staff is no longer a one-time activity. Moreover, COMMIT plays an on-the-job handholding, supportive supervisory role in improving clinical and managerial capacities of the health staff across RH and HCs. This further ensures timely

screening, detection and adherence to treatment as discussed in the earlier sections. However, there are factors constraining or limiting COMMIT's ability to generate optimum results.

While synergies are built between partners at the national levels, the findings suggest that the planning and management has been top-down, especially communication to the last-mile field officers. It was observed that data-driven decisions, especially in terms of coverage by field officers, lay counsellors, PSGs etc was missing. Their role often overlaps, with all of them helping with the collection and transportation of sputum to the laboratories and establishing backward and forward linkages between the health facilities and communities. The need for data-driven decision making arises especially when the footfall of patients or incidence rates are lower in certain geographies, making it hard for the health workers to achieve their targets.

Another challenge or factor restraining COMMIT performance is unavailability of reliable and population-level data for evidence-based decision making. This is particularly true for TB-DM, MDR-TB and childhood TB, where the absence of population-level data contributes to the lack of information on the social determinants driving TB infection. While COMMIT has been working with CENAT to develop data systems and MIS overall, collecting data on the above-mentioned TB types needs to be a priority. It is crucial to have population-level estimates at the national level as well as the sub-national level, and make customized decisions based on context, e.g., low burden vs. high burden ODs. Lack of private sector engagement in the current COMMIT strategy also contributes towards data ambiguity especially since around 54% of those exhibiting TB symptoms seek initial care in the private sector[22]. Private sector hospitals and clinics can help detect and report on these cases and potentially find the missing TB cases.

External Environment – Reinstating and restraining factors, potential way forward

Beyond the program domains, there are facilitators and barriers which are external and contextual factors having high implication on both day-to-day implementation as well as program strategizing. Starting with the facilitators, the role of the local community especially village heads and commune councils has been crucial in reinforcing TB awareness and mobilization of people for screening. For instance, community mobilizers solicit support from village chiefs or heads to reach out to households reluctant to screen for TB. Therefore, the role of local leadership becomes critical in conflict management between community mobilizers and communities. They also help in coordinating community events for mobile ACF and support in community mobilization and reinforce the importance of TB detection, treatment and adherence using key-note speeches.

At the national level, knowledge sharing amongst development partners has proved efficient in planning of intervention activities. Mention of Global Fund, WHO and other partners was found in almost all the national level interactions with CENAT, IPs, and USAID Cambodia. COMMIT in the future strategies can further leverage on the strengths and expertise of the external partners to strengthen regulations and policies around TB control. At the same time, while CENAT appreciates

[22] Teo AKJ, Morishita F, Prem K, et al. Where are the missing people affected by tuberculosis? A programme review of patient-pathway and cascade of care to optimise tuberculosis case-finding, treatment, and prevention in Cambodia. BMJ Global Health 2023;8:e010994. doi:10.1136/ bmjgh-2022-010994

the results of COMMIT project, there is continuous reliance on COMMIT for case finding and eventual elimination of TB as per the NSP 2030.

Structural Challenges: There are structural challenges that COMMIT faces which are external in nature. One key example is **staff absenteeism** at the health facilities. COMMIT completely relies on the health staff at both RH and HCs to deliver TB care. While COMMIT has been working towards building their capacity and strengthening the supply chain for diagnostics, health staff are the interface between COMMIT and TB patients. Absenteeism in turn fuels feelings of ambiguity or distrust amongst the patients on government health services. These are also factors that are beyond COMMIT's scope of work but directly contribute to its performance. Moving forward, there is a merit in catalyzing change in facility culture using advocacy means and in partnership with organizations or mandates that aim to strengthen health systems. There is a need to augment facility culture with a "whole-of-facility" approach that goes beyond merely the concerned TB personnel to include all the health facility staff. For instance, this would require aligning Health Centre Management Committee (HCMC) priorities to the overall TB agenda. As a part of the decentralization and deconcentration process[23], since budgetary and human resources would be a part of local authorities' domain (Administrative District level), there is also a need to consider the structural challenge of working with multiple stakeholders, separated across silos. This would, however, be required to strengthen HR management and performance at health facilities.

Operation and Maintenance of Diagnostic Tools: With respect to performance, one finding that stood out across health facilities is the lack of operations and maintenance system for GeneXpert®. GeneXpert® machines are proven to have better sensitivity and specificity for diagnosis. It's considered a gold standard and endorsed by WHO[24]. However, the facilities with GeneXpert® machine were facing challenges sourcing cartridges for the machine. This was the case across all the facilities visited as part of the MTE. The machines had either completely exhausted the cartridges or had only one or two modules (of four) functional for testing. The machines were without cartridges for over 2 weeks to 3 months. Indenting requests were sent to CENAT for refurbishing, but the gap is not filled. There are supply chain issues that need to be taken care of at the national level, however, there are demand-level challenges too. For instance, the changes in screening algorithm and underestimation of cases lead to testing, increased caseload, and quicker exhaustion of cartridges, therefore, data-driven planning becomes important. Secondly, the quality of sputum is often poor, often leading to wastage of cartridges during testing.

MTE found that infrastructure and biosafety requirements prescribed by the WHO for introduction of GeneXpert® MTB/RIF assays are not being met at most RHs across the ODs. Challenges included lack of adequate waste disposal bins (prescribed as per national guidelines on infection prevention), safety gear for laboratory personnel, defects in ambient temperature control within laboratories, unsafe storage of sputum samples, unstable electricity supply, etc. Having a proper operations and maintenance protocol is, therefore, crucial to strengthen both the supply chain and diagnostic capacity in the long run. COMMIT can provide technical support to CENAT to develop the protocol moving forward as part of its system strengthening strategies.

[23] Annear PL, Jacobs B, Nachtnebel M. The Kingdom of Cambodia health system review. Geneva: World Health Organization, on behalf of the Asia Pacific Observatory on Health Systems and Policies; 2015., p.26-27

[24] ICMR. Rapid Health Technology Assessment for incorporating TrueNat as a diagnostic tool for tuberculosis under RNTCP in India. https://htain.icmr.org.in/images/pdf/Rapid_HTA_of_Truenat-Call_For_Comments.pdf

Multisectoral Accountability Framework (MAF): When it comes to partnerships and collaboration, there is also a merit in talking about the Multisectoral Accountability Framework (MAF). COMMIT since the very beginning seeks to undertake a multi-sectoral and multi-stakeholder approach to implementation. This means two things: first, multiple partnerships within the implementation team and working with partners in the same sector (TB). Second, it would mean engaging with stakeholders in other sectors such as Human Rights, Labour and Migration, Health, and Education etc. More evidence on the two levels of partnerships is presented subsequently under Learning Question-VI. While there is some evidence of partnership within stakeholders working in the same sector, not much has been accomplished when it comes to partnership between other sectors and stakeholders. Given its rudimentary nature of implementation, MTE has not been able to comment much on what has worked or not. Concerted efforts are needed to actualize MAF to address multiple vulnerabilities attached with TB, such as social stigma, risk to the livelihoods and in advocating for TB health care as a basic human right.

LEARNING QUESTION – IV

To what extent COMMIT activities contributed to building capacities of the NTP?

Strengthening NTP or CENAT capacity has been key to COMMIT success. Some of the major activities conducted as part of this initiatives is as follows:

Facility level: COMMIT has worked towards improving the diagnostic capacity of health facilities in the ten OD RHs, with activities like installation of GeneXpert® and hands-on training of healthcare providers including laboratory staff. GeneXpert® is a real-time PCR testing system that detects both the presence of Mycobacterium Tuberculosis and drug-resistance. Besides this, the bi-directional screening of TB-DM and TB-HIV at health facilities has also been a contributing factor to improved diagnostic capabilities.

Systems level: In addition to this, the community screening strategies of COMMIT have led to linkages between the health facility and the community in terms of referral of presumptive TB cases. The implementation of streamlined data entry systems at facilities at the behest of COMMIT implementation partners has led to improvements in contact investigation, TB preventive treatment therapy and follow-up. To ensure consistency in treatment protocols across the health system, COMMIT has also contributed to the creation of treatment guidelines for TB infection control, TB-DM, Childhood TB, and programmatic management of drug-resistant TB (PMDT).

Partnerships: COMMIT in association with the Stop TB Partnership has facilitated the establishment of a national network of people affected and infected by TB, named TB People Cambodia. This has strengthened the capacity of TB response at the sub-national level through both the existing and newly established peer support groups (PSGs) and district networks of people living with and experienced TB (DNPET). There is a strong recognition of these groups and networks by the provincial health departments (PHDs) and ODs, which suggests that the real issues directed from the TB-affected community have been inculcated into the meetings of commune councils (CCs) and ODs.

Having availability of data, research and evidence around TB in Cambodia is a continuous need, as stated by the stakeholders across CENAT, PHDs and RH. As a part of COMMIT, KHANA and sub-partners have worked towards strategy-building with other civil society organizations (CSOs) working on TB – like SSI, Global Fund, STAR, EQHA, etc. and have also conducted joint research activities with them to generate knowledge. Learnings from other project sites on best practices in systematic TB screening approaches have been transferred to COMMIT partners through coordination and advisory meetings, joint monitoring and supervision visits, conferences (with CENAT involvement), etc. This builds on the repository of working knowledge of NTP overall and builds their capacity in ensuring data or evidence-based decision making. As highlighted in the annual report 2021, COMMIT and TBDIAH's work in the development of M&E training, pre-training assessment, and initial discussions on the TB-MIS roadmap is another example of role of partnership in building NTP capacities.

LEARNING QUESTION – V

How effective has the COMMIT approach been in advocating for TB prioritization at the sub-national level in terms of resource mobilization, engagement, and transition of responsibility?

KHANA, as the prime partner for COMMIT, has led advocacy initiatives at the national and sub-national levels to enable resource mobilization for TB. Advocacy efforts are assessed at three levels- Policy, Program, and Media. Additionally, these efforts have also been directed towards strengthening community-based processes for TB screening and towards promoting a rights-based discourse on TB care.

Policy Advocacy: Efforts are taken for awareness generation on TB during the "World TB Day" annually, where political leadership (at national, sub-national and local levels) along with other stakeholders like policymakers and media are brought together to undertake a discussion on existing level of preparedness of the country in combating TB. This platform is also utilized to provide messaging on existing country-level targets with respect to TB and the commitments made by Cambodia in existing international forums for combating TB. Besides awareness generation, such events also reemphasize partnership mechanisms and help generate consensus on the requisite action to be taken.

Program Advocacy: Project documentation shows that regular coordination meetings are also held with PHD, OD, HCMCs and the local commune/Sangkat administrations. Annual reviews of workplans at the sub-national level are also conducted to monitor progress and document the lessons learned.

Media Advocacy: COMMIT, while accounting for the significance of advocacy in the implementation pathway, has also not been able to synergize its social and behavior change communication (SBCC) strategies with its advocacy strategies. The evaluation team found that SBCC was currently restricted to outreach through community health workers and through facilities. The lack of awareness about TB symptoms among the general population, as pointed out by the people who experienced TB, highlights the need for a Media Advocacy strategy that goes beyond the existing channels of dissemination. Similarly, the two prongs of Policy Advocacy (events and engagements with

policymakers, lawmakers, and celebrities) and Program Advocacy (engagement of village heads and commune councils through COMMIT field staff) would require to be in sync with an active and intentional Media Advocacy strategy.

Engagement and Transition of Responsibilities: In terms of transition of program ownership, MTE found that there is a high reliance on COMMIT partners across the ten ODs, regarding the continuation of TB strategies, both in terms of resources and technical capacities. The training of the health facility staff on GeneXpert® and Molbio Truenat™, is led by COMMIT and partners working under the IDDs project in 10 ODs. This includes operational maintenance of Truenat™ equipment, as evidenced by the MTE visit to the health facilities where the equipment has been stationed. While technical assistance to the maintenance of the equipment is not the sole responsibility of COMMIT, there is a need to improve the skills of TB supervisors (at provincial and OD level) to ensure sustainment of capacity gains. Therefore, the need for the intervention to transition from 'donor-supported' to 'community-owned' needs to be inbuilt into future program design. The conversations initiated by MTE with the sub-national stakeholders indicate that the need for transition has yet to be made part of the communication strategy.

The focus on TB control remains low on priority within the national budget, and specifically, even within the Ministry of Health, with funds allocated to TB prevention accounting for only 0.67% of the total annual expenditure of the Ministry[25]. While there are complementary effects of broader health system strengthening efforts on TB management at facilities, an enhanced focus on TB-specific budgeting will help catalyze transition of program ownership and ensure sustainability of program outcomes. This also needs to be supplemented by social protection measures such as income and nutritional support for TB patients, with interventions tailored for mental and psychosocial support, while being cognizant of the social determinants of TB (since TB has been conventionally a disease closely associated with poverty[26]). The national Health Financing Policy drafted in 2012-13 could provide a roadmap for integration of TB within existing plans for universal health coverage[27].

Resource Mobilization: Another challenge with respect to resource allocation has been the decentralization of responsibilities without a corresponding decentralization of resources[28]. This has contributed to an 'implementation dichotomy' at the health facility level due to different management streams for operations and financial matters. While an increasing share of the budget is being disbursed through health facilities[29], it is imperative to also follow-through on delegating accountability and decision-making powers at the provincial and district-levels.

Advocacy efforts for tuberculosis are crucial in bringing attention to the disease, its symptoms, and its effects on the patients and on the need to invest public resources in combating them (through investment on care and on scientific research). Historically, HIV/AIDS witnessed a virtuous cycle of

[25] Open Development Cambodia [Internet]. Cambodia Budget in Brief Fiscal Year 2022 [cited 14 June 2022] Available at https://data.opendevelopmentcambodia.net/library_record/budget-in-brief-fiscal-year-2022
[26] Janssens JP, Rieder HL. An ecological analysis of incidence of tuberculosis and per capita gross domestic product. Eur Respir J. 2008 Nov;32(5):1415-6. doi: 10.1183/09031936.00078708. PMID: 18978146.
[27] Annear PL, Jacobs B, Nachtnebel M. The Kingdom of Cambodia health system review. Geneva: World Health Organization, on behalf of the Asia Pacific Observatory on Health Systems and Policies; 2015., p.132-133
[28] Ibid, p. 26
[29] Ibid, p. xxxi

vigorous activism and large scientific investment in HIV research as a consequence of the former[30]. TB, though a major cause of mortality in low-and-middle income countries (LMICs) has not witnessed such strong advocacy movements. Consequently, global resource mobilization for TB has also remained insufficient[31].

LEARNING QUESTION – VI

What are key achievements and challenges in applying the multi-sectoral implementation approach to improve TB outcomes?

The MTE through interaction with USAID Cambodia, implementation partner, CENAT and program field officers found that the implementation of multi-sectoral approach to TB control is still in its nascent stages. The intervention itself needs to be mature to garner learnings and understand the challenges in its implementation. Therefore, MTE delved into understanding the premise on which the multi-sectoral implementation approach to COMMIT was conceptualized and list activities conducted by the implementation partners so far.

To ensure that progress towards SDG 2030 goals and WHO End TB Strategy milestones were on track, the Ministerial Conference on TB, held in Moscow in 2017 came up with a Declaration consisting of a 'multisectoral accountability framework for tuberculosis' (MAF-TB) to inform the United Nations General Assembly high-level meeting on tuberculosis[32]. Subsequently, at the Seventy-first World Health Assembly in 2018, a political declaration was developed that called upon the WHO to continue developing the draft MAF-TB and "ensure its timely implementation by 201[33]. Cognizant of the need for multisectoral action to combat TB, COMMIT had inculcated MAF-TB activities within its intermediate results (specifically IR 2.1-2.3)[34]. COMMIT's engagement with government stakeholders at all levels of the political system was mentioned in the sections above. Some of the other multi-sectoral actions promoted by COMMIT include:

Engagement with key stakeholders in the non-health private sector: Project documentation states that COMMIT was able to conduct screening activities at brick kilns, garment factories and construction sites. Besides this, COMMIT was also able to engage RHs, HCs and local authorities to work with the private sector.
Access to social welfare mechanisms: COMMIT has engaged with commune/sangkat administrations in determination of eligibility of TB-affected patients for health equity funds.
Decree on TB: COMMIT held 17 advocacy events/meetings held between 2019 and 2022 for the enactment of a law on the prevention and elimination of TB.
Engagement of stakeholders in private sector in health: COMMIT has worked closely with CENAT in reviewing and finalizing the public-private mix (PPM) strategies for engagement of private health providers in screening, treatment, and referral for TB. They constitute a large section of Cambodia's

[30] Harrington M. From HIV to tuberculosis and back again: a tale of activism in 2 pandemics. Clin Infect Dis. 2010 May 15;50 Suppl 3:S260-6. doi: 10.1086/651500. PMID: 20397957.
[31] Ibid., p.S260
[32] World Health Organization, Multisectoral Accountability Framework to Accelerate Progress to End Tuberculosis by 2030, Geneva:WHO; 2019. p.1
[33] Ibid., P. 2
[34] Chamreun 2022

healthcare system[35]. At present, private health providers are forbidden from administering anti-TB drugs.

Engagement with multilateral organizations and other CSOs: COMMIT has worked in tandem with NTP, USAID Cambodia, WHO and other local CSOs and exchanged valuable insights and practices on TB control.

Research partnerships: COMMIT has conducted studies with the National University of Singapore and WHO (patient pathways analysis) to contribute to the evidence base on TB care in Cambodia.

Engagement with stakeholders in the non-health private sector has encountered challenges due to lack of inter-ministerial coordination. Garment factories and construction sites, being under the Ministry of Labour, are often inaccessible to program staff on the ground due to lack of permissions. While access to health equity funds is not meant to be comprehensive, the FGD revealed that out-of-pocket expenditures is a major barrier in seeking care, for people with presumptive TB. While PPM strategies are being drafted and discussed, there is no clear existing pathway for referral between private providers and public facilities. This is even though private providers (physicians and pharmacists) are major entry points for people with initial signs and symptoms of TB.

There are possible green shoots around multi-partner collaboration. However, the exchange of technical expertise from development partners needs to be accelerated and the strengths of the National TB Programme (NTP), in scaling-up interventions across the country, also need to be leveraged. While recognizing the strengths of the MAF-TB, it is to be noted that partnerships across sectors are long-drawn and require investments of time. They therefore need to be intentional and focus on imminent opportunities with respect to national-level targets.

[35] See Annear et al., p.xxiv

CONCLUSION AND WAY FORWARD

Findings from MTE suggest that COMMIT has been able to bring more people into the TB health care system through systematic screening strategies. Community mobilization has been a key contributor to this. TB health service providers (TB supervisors and doctors) perceive that the training sessions conducted for facility staff by COMMIT have led to improved treatment pathways and follow-up as seen in the treatment success rates and contact investigation numbers. This has resulted in better perception of services at public health facilities among community members. Similarly, the installation of GeneXpert® at referral hospitals have improved the turnaround time for bacteriological confirmation of sputum samples for pulmonary TB cases, although meeting targets on bacteriological diagnosis has been a challenge, due to operational and maintenance issues, the most significant of which is shortage of cartridge for the GeneXpert®.

The primary data collection exercise conducted as a part of the MTE revealed that decentralization of the cascade of care has led to strengthened forward-backward linkages for referral at the community level. Adequate support structures required for efficient TB management at the health facilities have been put in place in HCs and RHs across the ten ODs. Effective linkages with VHSGs and commune councils have led to the establishment of a better architecture of care at the community level. Nevertheless, the transition from 'community partnership' to 'community ownership' would be a long-drawn process that would require further efforts in advocacy and decentralization of care pathways.

Notwithstanding the achievements by COMMIT in developing capacities at the national and the sub-national level, certain barriers remain. Findings suggest that the improvement in community-level screening rates (as seen in the performance data presented earlier in the findings section) has not been adequately responded to by health facilities, owing to inherent challenges in diagnostic capabilities and human resource shortages (either due to vacant positions or absenteeism). Therefore, future program design needs to account for supply-side interventions that would aid health facility readiness in addition to improving detection rates for TB.

Following are the potential way forward for future TB strategies. Some of the suggestive recommendations may be difficult to implement within the ongoing COMMIT strategies but can be considered in other TB programming in the country or next phase of COMMIT.

Building Sustained Capacities

There is a need for the TB health systems to be strengthened to bear the load of increasing screening and detection figures. COMMIT so far, has been able to build technical and infrastructural capacity but there's still a high reliance of the government on COMMIT's resources. However, conversations around institutionalization of COMMIT strategies or transition of responsibility to government/CENAT has not happened.

Having a "whole facility" approach to implementation could be a steppingstone in bringing TB to the mainstream health agenda, which will help build sustained capacities. It is also needed to further augment the supply chain management and quality of TB health services. The whole facility

approach to health care is not a new phenomenon. It has been strongly promoted in primary health care, reduction of HIV related stigma, critical care and so on[36,37,38]. Nested within the health systems approach to health care, Fertie and Shortell[39] categorizes health care system into four levels- *a.* individual patients, *b.* care team-including professional care personnel, *c.* the organization (hospital, clinics etc.) and *d.* the political and economic environment (including but not limited to policies, regulations, payment regimes, supply chains and operations).

To begin with COMMIT can focus on two levels- the care team, that is the professional care team and the organization. So far, activities under COMMIT for TB control is geared towards TB health departments hence not mainstreamed into the health system per se. COMMIT can further leverage the existing committees such as HCMC, hospital management committee meetings at the RH to mainstream TB control into their agenda as a priority. To begin with COMMIT can ensure that TB patient care is standardized with triage happening across departments, standardizing best practices in streamlining TB cases and their treatment. This engagement can be further leveraged to strengthen the TB supply chain (including placement, operation, and maintenance of GeneXpert®) rather than relying on a different pathway. The role of organization (RH and HC management) becomes crucial as they are also the key decision makers for not only clinical care but financial, human resources and infrastructural. It is therefore critical to ensure the hospital management is adequately positioned to respond to the TB control needs and build on the technical and diagnostic capacities COMMIT has been able to build so far and sustain it[40].

Regarding the operational maintenance of the rapid molecular diagnostic machines, while there are limitations to the mandate given to COMMIT in terms of improving diagnostic capability, there are some very clear gaps that can be assessed through time-motion studies[41] to highlight the geographies with distinct supply chain issues, where delays happen, and at which specific touchpoints in the care cascade. The findings from further operational research on diagnostics could also help CENAT with forecasting demand for cartridges at various levels of facilities and at specific geographies, thereby, also helping with efficiency.

Similarly, there is a need to ensure sustainability of capacity gains to ensure future efforts at community mobilization are not lost due to lack of motivation or risk of failure[42]. The critical role played by COMMIT field officers in the building linkages between the communities and the health facilities (both at HC and RH levels) needs to be imbibed into the public health care delivery mechanism. As mentioned earlier, the overlap between roles and responsibilities among COMMIT field staff can be avoided through proper delineation of tasks, to be distributed among existing public health staff or to be delegated to a dedicated cadre of frontline health workers.

[36] Nyblade L, Mbuya-Brown RJ, Ezekiel MJ, Addo NA, Sabasaba AN, Atuahene K, Kiwia P, Gyamera E, Akyoo WO, Vormawor R, Manyama W, Shoko S, Mingkwan P, Stewart C, Balampama M, Bowsky S, Jacinthe S, Alsoufi N, Kraemer JD. A total facility approach to reducing HIV stigma in health facilities: implementation process and lessons learned. AIDS. 2020 Sep 1;34 Suppl 1:S93-S102. doi: 10.1097/QAD.0000000000002585. PMID: 32881798.
[37] https://www.pepfarsolutions.org/solutions/2020/1/16/transforming-service-delivery-for-improved-outcomes-a-total-facility-approach-to-reducing-stigma-and-discrimination#:~:text=The%20total%20facility%20approach%20can,community%2Dbased%20testing%20campaigns).
[38] https://www.who.int/news-room/fact-sheets/detail/primary-health-care
[39] National Academy of Engineering (US) and Institute of Medicine (US) Committee on Engineering and the Health Care System; Reid PP, Compton WD, Grossman JH, et al., editors. Building a Better Delivery System: A New Engineering/Health Care Partnership. Washington (DC): National Academies Press (US); 2005. 2, A Framework for a Systems Approach to Health Care Delivery. Available from: https://www.ncbi.nlm.nih.gov/books/NBK22878/
[40] Clark, William & Harley, Alicia. (2020). Sustainability Science: Toward a Synthesis. Annual Review of Environment and Resources. 45. 1-56. 10.1146/annurev-environ-012420-043621.
[41] Kranzer K, Lawn SD, Meyer-Rath G, Vassall A, Raditlhalo E, et al. (2012) Feasibility, Yield, and Cost of Active Tuberculosis Case Finding Linked to a Mobile HIV Service in Cape Town, South Africa: A Cross-sectional Study. PLOS Medicine 9(8): e1001281. https://doi.org/10.1371/journal.pmed.1001281
[42] Shediac-Rizkallah MC, Bone LR. Planning for the sustainability of community-based health programs: conceptual frameworks and future directions for research, practice and policy. Health Educ Res. 1998;13(1):87–108.

Refining Outreach Strategies

Women by default are at the locus of COMMIT implementation. Mobile ACF leads to higher screening, however, misses out on men, other high risk and migrant population. The intensity of mobile ACF also needs to be increased. The events need to be customized to find the right people, at the right time and at the right site. Collaborations with other departments and decentralized government bodies is needed to actualize this and make ACF more efficient and increase the yield. If women continue to be the locus of implementation, it is important to intentionally strategize women's needs such as – gendered roles, social stigma, and risk of their livelihood. The outreach strategy could be a comprehensive package of health care and social protection, recognizing that TB is also a "disease of poverty"[43] . For instance, specific measures to reduce out-of-pocket expenditure (OOPE) could be a good start, considering it figured prominently among patient concerns in the ten ODs.

While revisiting or redefining outreach strategy, there is an emerging need to incorporate Diversity, Equity, and Inclusion (DEI) strategies into it, both from the program side as well as community side. Actualization of MAF could again be a key to breaking ground for a DEI strategy. There are few key areas which can be raw grounds for the implementation of DEI, these are- first, identifying and inclusion of strategies catering to the needs of poor and vulnerable communities, including migrants and indigenous communities. Second, outreach strategy to move beyond community-based events to workplaces, sources and destination of migration, and time targeting all population, elderly, youth, men, and women. The outreach strategy can have targeted focus on other high risk populations such as people with co-morbidities (diabetes, HIV) as well as people with alcohol user disorder and smokers. Third, be intentional about the needs of men, women, and children.

Deepening Community Ownership

COMMIT has been successful in actuating its element of partnership and collaboration within partners and strategies. Since Cambodia's health system is decentralized, there is a need for COMMIT to push the agenda of decentralized implementation actively. Findings suggest that engagement of local leadership (village heads) and HCMCs has an additive effect on COMMIT performance even when the collaboration is only of partnership. There is a merit in going beyond partnership with community and decentralized bodies such as commune councils to ownership of implementation for sustained results.

Intensifying implementation of Multisectoral Accountability Framework (MAF) and across sectors and partners

COMMIT since the very beginning intended to have a multi-actor and multi-sector approach to implementation. The findings suggest that the efforts towards it have been sporadic and mostly concentrated at the national levels. This is not without acknowledging that COMMIT's existing mandate did not have advocacy as a specific lever for influencing TB control in the operational districts.

[43] Lonnroth K, Jaramillo E, Williams BG, Dye C, Raviglione M: Drivers of tuberculosis epidemics: The role of risk factors and social determinants. Soc Sci Med. 2009, 68: 2240-2246. 10.1016/j.socscimed.2009.03.041.

While there is some evidence of partnership within stakeholders working in the same sector, not much has been accomplished when it comes to partnership between other sectors and stakeholders. Given its rudimentary nature of implementation, MTE has not been able to comment much on what has worked or not. Concerted efforts are needed to actualize MAF to address multiple vulnerabilities attached with TB, such as social stigma, risk to the livelihoods and in advocating for TB health care as a basic human right.

One of the ways in which MAF can be actualized is through internal and external convergence between actors and sectors where needed. Andrew et.al[44] states that co-innovation and knowledge sharing is crucial in ensuring this multi actor partnership. Therefore, it is important to define the roles each actor could play along with allocation of responsibilities and resources to ensure convergence and collaboration. For instance, in case of TB control, co-innovation can be explored to integrate SBCC into program strategies. While SBCC remains outside of the COMMIT's scope of work, USAID Cambodia has engaged PSI for SBCC purposes. COMMIT along with PSI can co-innovate SBCC strategies building on the programmatic learning and leveraging finances/resources allocated for SBC partners or through additional funding. Funding gaps tend to be a key barrier to innovation which USAID Cambodia together with its partners can strategize upon. On the other hand, Evelien et. al.[45] suggests that collaboration itself is insufficient to ensure innovations take root and it needs social mediation which means having a social learning system across sectors. In case of COMMIT, multi-sectoral partnerships have been envisioned and entails engaging with various government bodies, such as Ministry of Interiors, Ministry of Labour and Vocational Training, Ministry of Health and so on. Beyond government entities, COMMIT continues to ensure sharing of knowledge with partners working for TB control such as WHO, FHI360, Global Fund to name a few. There are a few pre-requisites to ensuring external collaboration and convergence – *a.* active networking (for both learning sharing and TB control advocacy). *b.* agreement on mutual advantages and impact domains or ascertaining co-benefits of partnerships, c. being critical about the context each partner comes with, that is, appreciating each other's strengths and limitations. USAID Cambodia and COMMIT can further conduct a landscaping of actors and sectors focus on these pre-requisites for multi-sectoral and multi-actor partnership and make informed strategies for the implementation of MAF-TB.

Engagement with Private sector

Private hospitals and clinics are the majority entry point for most TB patients, who often miss out on the cascade of care[46]. While the present scope of work for COMMIT didn't have the provision of engaging with private sector, the finding suggests the need for an engagement. A key reason for it being a necessity, going forward, is to identify TB cases which go undetected. Private sector outreach can be leveraged by NTP as they are potentially the first point of contact to the health system for many TB patients. The pilot study conducted by USAID Cambodia with individual pharmacies following the public-private mix (PPM) highlights the same[47]. Based on the pilot learning, CENAT, in consultation with its partners (PATH, PAC, URC, JATA, WHO, and TBCAP) and with funding from

[44] Andrew F. Fieldsend, Evelien Cronin, Eszter Varga, Szabolcs Biró & Elke Rogge (2020) Organisational Innovation Systems for multi-actor co-innovation in European agriculture, forestry and related sectors: Diversity and common attributes, NJAS: Wageningen Journal of Life Sciences, 92:1, 1-11, DOI: 10.1016/j.njas.2020.100335

[45] Cronin, E., Fosselle, S., Rogge, E., & Home, R. (2021). An Analytical Framework to Study Multi-Actor Partnerships Engaged in Interactive Innovation Processes in the Agriculture, Forestry, and Rural Development Sector. *Sustainability*, *13*(11), 6428. MDPI AG. Retrieved from http://dx.doi.org/10.3390/su13116428

[46] See Teo et al. (2023)

[47] Public-Private Mix -- Involving Pharmacies in TB Control; A Cambodia Case Study chrome-htpp://media.path.org/documents/CP_cambodia_ppm_tb_cs.pdf

USAID, developed the national PPM strategy and guidelines to be implemented in phases. The first phase focuses on engaging with private clinic, pharmacies, and laboratories for referral of people with TB like symptoms. The second phase focuses on creating a comprehensive TB management model for private sector to provide both diagnostic and treatment services. MOH, as part of national PPM strategy approved the creation of official linkage between the nation's public and private providers and authorized CENAT to institute and strengthen integrated systems of support, coordination, and referrals between all health service providers in 2005. While the national PPM strategy has been formulated, its implementation is yet to see fruition and needs to be put into practice. USAID Cambodia can play a catalytic role in nudge the NTP/CENAT to further the PPM dialogue and not miss out on these opportunities.

Successful examples of PPM can be drawn from HIV strategies where they leverage private sectors reach by making reporting mandatory, private sector players were incentivized[48]. Similarly, the use of (Information and communication technologies) ICT/call centres to loop private sectors into the system is a best practice[49]. Having said that, Cambodia's context may vary, and these practices may not be suitable for adoption. Therefore, a landscaping study could be conducted to understand private sector engagement around TB in Cambodia and most importantly identify possible entry points, motivation, and apprehension of private sector actors.

Education and awareness need top-most focus

There is a need to make TB visible. COMMIT's current TB awareness modality highly relies on the community health volunteers, lay counsellor, PSGs and field officers. There needs to be a better integration of social behaviour change communication (SBCC) model, beyond just awareness generation. The reach of awareness or SBCC needs to reach out to the general population and not only those with TB symptoms or families of those who have symptoms. Use of a multi-media/multi-channel platform for SBCC and general awareness could be considered moving forward and implementation of it to be done at scale. Digital 2023 report states that 88% of the Cambodia's population above 18 years of age are social media users, that accounts to 9.75 million users[50]. Internet user base accounts to 96.3% used at least one social media platform in January 2023. Social media or digital media can be a powerful tool for advocacy, education, and awareness on TB control and at scale.

COMMIT has been cognizant of the successes, missed opportunities and enablers to its performance. MTE intends to emphasize these further to validate assumptions and provide potential way forward. The way forwards presented above are key in creating a further enabling ecosystem as the country drives to eliminate TB. With concerted efforts it can be achieved and further the threshold of success.

[48] WHO. Overcoming India's TB challenge: Success of the private sector engagement models
[49] Hazarika I. Role of Private Sector in Providing Tuberculosis Care: Evidence from a Population-based Survey in India. J Glob Infect Dis. 2011 Jan;3(1):19-24. doi: 10.4103/0974-777X.77291. PMID: 21572604; PMCID: PMC3068573.
[50] https://datareportal.com/reports/digital-2023-cambodia

ANNEXURES

1. MTE Timeline

Note: To accommodate work closure during Khmer New Year (April 14-21), we began data collection (KIIs) at the national level and with COMMIT implementation partners starting second week of March 2023. We concluded the rest of the primary data collection by second week of April 2023.

#	Activities	January		February				March				April				May				June				July			
		W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14	W15	W16	W17	W18	W19	W20	W21	W22	W23	W24	W25	W26
1	Engage with USAID and other thematic implementation teams to understand the program and its evolution																										
2	Finalize assessment design, learning questions, and expectations from the evaluation																										
3	Collect program documents and reports, develop a list of stakeholders, Map and analyze secondary data sources																										
4	Finalize respondents for KIIs, and FGDs at all levels (National, Province, Individual)																										
5	Prepare MIS data and progress report data for secondary analysis																										
6	Analysis of MIS data, Program Data, Financial Reports along with Literature review																										
7	Develop tools for primary interactions with stakeholders																										
8	Conduct primary data collection (KIIs) at the national level																										
9	First round of meetings with USAID/COMMIT partners to discuss preliminary findings + inception workshop to kickoff primary data collection																										
10	Collect primary data with provincial and community stakeholders																										
11	Khmer New Year																										
12	Analysis of Qualitative Data																										
13	Synthesis of Primary and Secondary Data																										
14	Stakeholder workshops to share and obtain feedback on preliminary findings and recommendations																										
15	Dissemination workshops with implementing partners, USAID, and the Government																										
16	Development of a report of findings and recommendations																										

ANNEX II: EVALUATION SCOPE OF WORK

BUDGET CEILING: _____$250,000_____

PERFORMANCE PERIOD

Expected start date (on or about): _____October 31, 2022
Anticipated end date (on or about): _____February 15, 2023

LOCATION(S) OF ASSIGNMENT

Please indicate the location(s) where work will be performed: Cambodia's four provinces: Phnom Penh, Kandal, Kampong Cham, and Tbong Khmum provinces ___

II. TYPE OF ASSIGNMENT

Please indicate the type of assignment (see Annex 1: Assignment Choices) and the timing (mid-term, endline, other) here: ___Mid-Term Evaluation_____

III. ASSIGNMENT BACKGROUND

Note: If any item is not applicable, insert "N/A".

PROJECT/PROGRAM BEING EVALUATED/ANALYZED/REVIEWED

Project/Activity Title:	Community Mobilization Initiatives to End TB (COMMIT)
Award/Contract Number:	Cooperative Agreement Number 72044219CA00002
Award/Contract Dates:	
Activity/Project Funding:	$8,000,000
Implementing Partner(s):	Prime: Khmer HIV/AIDS NGO Alliance (KHANA) Sub partners: Cambodian Health Committee (CHC), Cambodia Association for Anti-Tuberculosis (CATA) and Center for Health and Social Development (HSD)
Activity/Project COR/AOR:	Sotheara Nop, AOR and Lenna Neat Arango, Alternate AOR
Activity/Project Start Date:	October 01, 2019

Activity/Project End Date:	September 30, 2024

B. BACKGROUND OF ACTIVITY/PROJECT/PROGRAM/INTERVENTION AND CONTEXT

Provide a brief background on the country (or countries) and/or sector context; specific problem or opportunity the intervention addresses; and the development hypothesis below:

COMMIT is a five-year project led by Khmer HIV/AIDS NGO Alliance (KHANA) in partnership with Cambodian Health Committee (CHC), Cambodia Association for Anti-Tuberculosis (CATA) and Center for Health and Social Development (HSD) aims to address TB diagnosis, treatment, and prevention, addressing stigma and discrimination, using responses tailored to high-risk populations and communities in Cambodia. COMMIT is a program jointly developed by USAID, KHANA, CHC, CATA, and HSD and aims to improve access to high-quality and person-centered services for drug susceptible (DS) and resistant-TB (DR-TB), and co-mobility patients, strengthen TB service delivery platforms, reduce TB transmission and disease progression, and accelerate TB research and innovations with improved impact on program implementation.

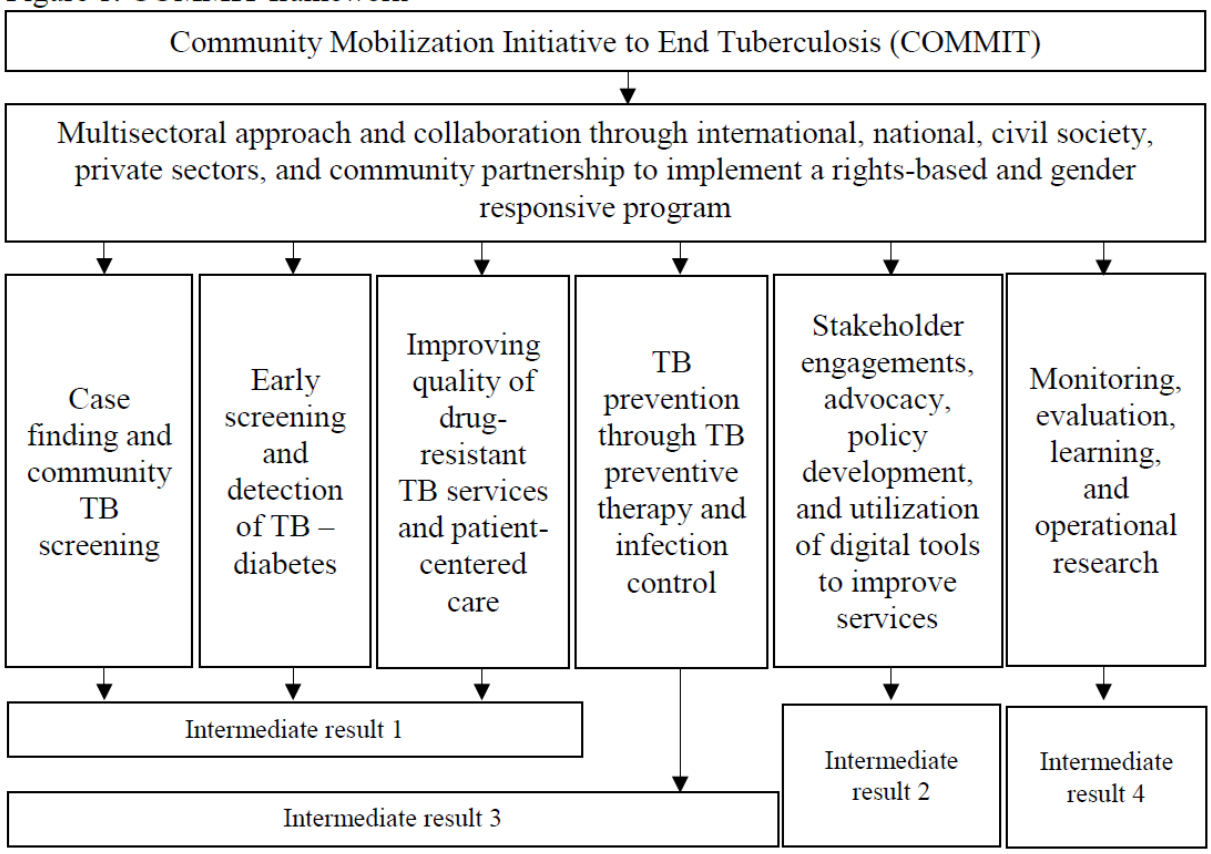
C. THEORY OF CHANGE OF TARGET ACTIVITY/PROJECT/PROGRAM/ INTERVENTION

Please paste the Theory of Change below:

To end TB, COMMIT seeks to undertake a multi-sectoral approach using locally generated solutions to improve early TB case finding, linkage to diagnosis and treatment support, TB infection control and prevention, and to enhance community and multi-stakeholder engagements in Cambodia.

D. STRATEGIC OR RESULTS FRAMEWORK FOR THE ACTIVITY/ PROJECT/PROGRAM/ INTERVENTION

Figure 1: COMMIT framework



IR 1: Improved access to high-quality, person-centered TB, DR-TB, and TB/HIV services
IR 2: TB service delivery platform strengthening
IR 3: TB disease transmission and progression reduced
IR 4: Improved program implementation and impact through TB operational

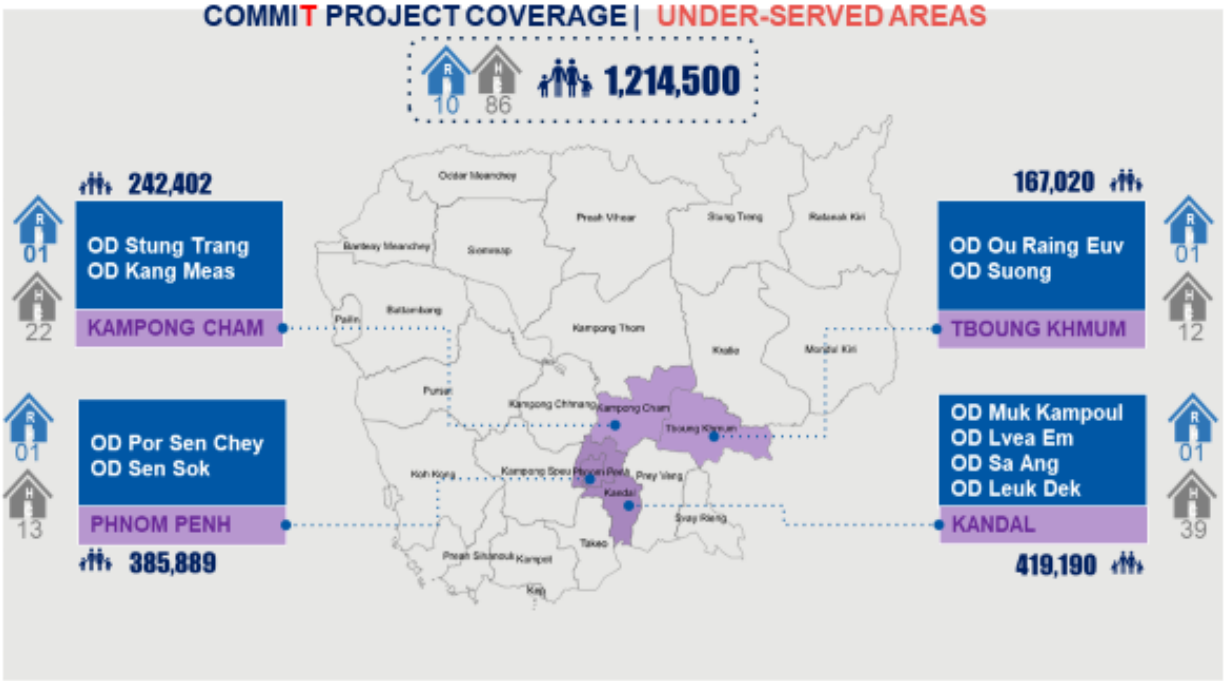
E. GEOGRAPHIC COVERAGE

What is the geographic coverage and/or the target/beneficiary groups for the activity, project or program that is the subject of this assignment?

COMMIT is working at the national level in technical areas such as TB-MIS, MDR-TB, and advocacy, and at the sub-national and community levels in 10 operational districts highlighted in purple color in the map below. Within 10 ODs, there are 10 referral hospitals and 86 health centers covering 818 villages.

Kampong Cham: 113 km (about 2 hr 30 min drive from Phnom Penh)
Stueng Trang OD: 159 km (about 3 hr drive)
Kang Meas OD: 85 km (about 2 hr drive)
Tbong Khmum: 188 km (about 3 hr 45 min drive from Phnom Penh)
Ou Reang Ov OD: 132 km (about 2 hr 40 min drive)
Suong OD: 151 km (about 3 hr drive)
Kandal: 78 km (about 1 hr 50 min drive from Phnom Penh)
Muk Kampou OD: 28 km (about 50 min drive)
Lvea Em OD: 26 km (about 50 min drive)
Sa Ang OD: 28 km (about 40 min drive)

Leuk Daek OD: 68 km (about 1 hr 30 min drive)
Phnom Penh
Po Sen Chey OD: 19 km (about 20-30 min drive from central of Phnom Penh)
Sen Sok OD: 13 km (about 20-25 min drive from central of Phnom Penh)



OTHER REFERENCE MATERIALS

Please note documents and materials needed and/or useful for consultant assignment that are not listed above:

COMMIT Program Description (MOD2)
Progress reports (9 quarterly and 2 annual reports)
MEL Plan (latest version)
Intervention approaches (Seed and recruit, ACF, Community screening, TB-DM, HL, etc.)

IV. PURPOSE, AUDIENCE, & APPLICATION

A. PURPOSE

Why is this assignment being conducted (purpose of assignment)? Provide the specific reason for this assignment linking it to future decisions to be made by USAID leadership, partner governments, and/or other key stakeholders below:

The primary purpose of this mid-term evaluation is to assess Community Mobilization Initiatives to End Tuberculosis (COMMIT) activity performance to date, identify strengths and weaknesses of the implemented components, key bottlenecks/challenges, and actionable recommendations for

improvements to meet the activity's intended objectives. The secondary purpose is to use the findings and recommendations to inform the design of a new TB activity, which will follow COMMIT.

B. AUDIENCE

Who is the intended audience for this analysis? Who will use the results? If listing multiple audiences, indicate which are most important? Please answer these questions below:

The primary audience of this mid-term evaluation is USAID/Cambodia Office of Public Health and Education. The secondary audiences will be the implementing partners including prime and sub-partners of COMMIT and the National Center Tuberculosis and Leprosy Control, Ministry of Health counterparts at national and sub-national levels.

C. APPLICATIONS AND USE

How will the findings be used? What future decisions will be made based on these findings? Please answer these questions below:

To ensure the award is moving on track to meet its intended objectives
To inform the design of a new TB activity

V. ASSIGNMENT QUESTIONS & MATRIX

Instructions: Questions should be: a) aligned with the assignment purpose and the expected use of findings; b) clearly defined to produce needed evidence and results; and c) answerable given the time and budget constraints. Include any disaggregation (e.g., sex, geographic locale, age, etc.) that must be incorporated into the assignment questions. USAID Evaluation Policy recommends 1 to 5 evaluation questions (ADS 202.3.6.7).

State the method and/or data source and describe the data elements needed to answer the questions.

	Assignment Question	Suggested Data Sources	Suggested Data Collection Methods	Suggested Data Analysis Methods
1	What factors, both internal and external, have facilitated or constrained COMMIT performance and how can these factors be addressed? *(Institutional capacity and synergy, sub-partner management, leverage enough technical expertise with proven international standard practices and synergy to achieve the project intended objectives?)*	Partner agreement, workplan, progress report	KII (please select # of KII based on thematic of program and intervention) Prime: KHANA (2) Subpartner: CHC(1), SHD (1), and CATA (1) NTP (three key people) Subnational TB program (PHD, OD, RH, and HC). COMMIT key Field Officers	Thematic and content analysis of qualitative data
2	To what extent has COMMIT supported high quality, effective interventions for finding and treating TB patients? – Please consider how COMMIT has reached the needs of vulnerable communities, in particular, with TB control interventions. The current intervention models include seed and recruit, hospital linkage, bi-directional screening for TB-DM, contact investigation, community screening and active case finding events. – What activity components are most effective for replication in terms of reach, yield and cost? – Are there any missed opportunities under COMMIT that should be considered for future programming?	COMMIT progress and financial reports, TB-MIS Interview (program and finance)	Desk review and quantitative analysis of COMMIT data 2) 2 FGD with COMMIT Field Officers 3) 3 KII with NTP (Program, Lab, TB-MIS, MDR-TB) 4) 1 Group interview with COMMIT program, finance and grant manager.	**Cost here** focuses on basic operation cost. Descriptive analysis of quantitative data, including cross-tabs and Chi Square as appropriate Thematic and content analysis of qualitative data

	Assignment Question	Suggested Data Sources	Suggested Data Collection Methods	Suggested Data Analysis Methods
3	To what extent are the COMMIT activities contributing towards building the capacity of the NTP to manage and implement TB services to meet program targets? – Consider looking at capacity to take on operational research, manage the TB Management Information System (TB-MIS), and monitor TB activities at the community level.	Progress reports Interview TB-MIS	Desk review 5 KII with NTP (Director, Lab Manager, TB-MIS Manager, Program Manager, MDR-TB Manager) 5 KII with subnational level (OD TB Supervisors, selected HC TB focal persons) 5 KII with relevant stakeholders: STAR Advisors, WHO, IPC, NUS, CHAI	Thematic and content analysis of qualitative data

	Assignment Question	Suggested Data Sources	Suggested Data Collection Methods	Suggested Data Analysis Methods
4	What are key achievements and challenges in applying the multi-sectoral implementation approach involving partners from all the sectors including the NTP and other relevant institutions, healthcare providers, community leaders, cured TB patients, decision makers in the community (*commune council and health center management committee*), and the private sector, and –W hat could further improve multi-sectoral participation?	Progress reports Meeting notes Interview	3 KII with NTP 4 KII with relevant line ministries (MOSVY, MOP, MOH), parliament member. 2 KII with provincial and district governors 3 KII with relevant stakeholders: WHO, Media & Journalist Association, celebrity focal persons, private institution (garment factory, brick) 5 KII with VHSGs, local authorities (health center management committee (HCMC), commune council), 3 KII with COMMIT 5 FGD with a network of people who experience living with TB.	Thematic and content analysis of qualitative data
5	How effective has the COMMIT approach been in advocating for TB prioritization at the sub-national level in terms of resource mobilization, engagement and transition of responsibility?	- Desk review - Interviews - Meeting notes	5 FGD with the health center management committee and commune council 5 KII with provincial and district governors, RH and OD directors.	Thematic and content analysis of qualitative data

ANNEX III: DATA COLLECTION AND ANALYSIS

Due to file size constraints, the links to the external folder (Google Drive) where the guides were stored are being shared.

Google Folder link to Key Informant Interview Guides used for MTE:
https://drive.google.com/drive/folders/1_XKPR2q3W7mt6H02eE9bYuhBR7xoWDqq?usp=sharing

Google Folder link to Focus Group Discussion Guides used for MTE: https://drive.google.com/drive/folders/19vUWSQ-LHWVEM6S3k2OLJau58Kf_cIFd?usp=sharing

ANNEX IV: SOURCES OF INFORMATION

The sampled sites and stakeholders for the study are as follows:

Method of Data Collection	Respondent	Sample	Total Sample
Key Informant Interviews	National and Sub-national Level Stakeholders (NTP, PHD, OD, RH, HC)	2 national level stakeholders	2
		All RH, 2HC from each province	10 RH 8 HC
	Implementation partners (KHANA, CHC, HSD, CATA)	• **KHANA (prime) :** 1 KII • **CHC**: 1 KII • **HSD**: 1 KII • **CATA**: 1 KII	4
	USAID Cambodia representative group interview	1 USAID Cambodia Representative	1
	COMMIT field staff	2 per Province	8
	Provincial Health Department Supervisor	1 per Province	4
Focus Group Discussions	Community Direct Observation Treatment - Short-Course (C-DOTS) Watchers (Expect 5-8 people per FGD)	2 FGD per province	8
	People who experienced living with TB (Expect 5-8 people per FGD	2 FGD per province	8
	Community level FGDs (general community)	1 FGD per province	4
	Health Center Management Committee (HCMC)	1 FGD per province	4