

# PUBLIC-PRIVATE MIX

INVOLVING PHARMACIES AND OTHER PROVIDERS  
IN TB CONTROL – A CAMBODIA CASE STUDY



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# ACRONYMS

<b>ACSM</b>	Advocacy, Communication, and Social Mobilization
<b>CDR</b>	Case Detection Rate
<b>CENAT</b>	National Centre for Tuberculosis and Leprosy Control
<b>DOTS</b>	Directly Observed Therapy, Short-Course
<b>C-DOTS</b>	Community Directly Observed Therapy, Short-Course
<b>CMC</b>	Cambodia Medical Council
<b>IEC</b>	Information, Education, and Communication
<b>ISTC</b>	International Standards for TB Care
<b>JATA</b>	Japan Anti-Tuberculosis Association
<b>JICA</b>	Japan International Cooperation Agency
<b>MDR-TB</b>	Multidrug-Resistant Tuberculosis
<b>MHD</b>	Municipal Health Department
<b>MOH</b>	Ministry of Health
<b>MOU</b>	Memorandum of Understanding
<b>NTP</b>	National Tuberculosis Program
<b>OD</b>	Operational District
<b>PAC</b>	Pharmacy Association of Cambodia
<b>RACHA</b>	Reproductive Alliance for Child Health
<b>RHAC</b>	Reproductive Health Association of Cambodia
<b>PHD</b>	Provincial Health Department
<b>PPM</b>	Public-Private Mix
<b>PPMB</b>	Phnom Penh Medical Board
<b>SPSS</b>	Statistical Package for Social Sciences
<b>TB</b>	Tuberculosis
<b>TOR</b>	Terms of Reference
<b>URC</b>	University Research Co., LLC
<b>USAID</b>	United States Agency for International Development
<b>WHO</b>	World Health Organization

# CONTENTS

<b>Acknowledgments</b> .....	<b>i</b>
<b>Acronyms</b> .....	<b>ii</b>
<b>Document Organization</b> .....	<b>v</b>
<b>Part I: Project Background</b> .....	<b>1</b>
The national context .....	2
Cambodia’s private health care sector.....	3
PPM in the global strategy for TB control .....	4
<b>Part II: Cambodia PPM project start-up activities</b> .....	<b>7</b>
Designing the national PPM strategy.....	8
Forming the PPM partnership.....	9
Creating a framework for collaboration: the PPM/C-DOTS technical working group .....	12
Developing referral tools .....	12
Integrating the PPM structure into the national TB program.....	13
Designing the PPM information flow .....	14
Selecting PPM sites and providers .....	15
Holding sensitization workshops .....	15
Developing PPM annual work plans and budgets .....	16
<b>Part III: Field implementation activities</b> .....	<b>17</b>
Training of private and public providers.....	18
Training of pharmacy staff .....	18
Training of DOTS providers .....	19
Supportive supervision .....	20
Quarterly PPM meetings.....	22
Site visits to DOTS facilities .....	22
Partner meetings .....	23
Annual PPM workshops .....	23
Advocacy, communication and social mobilization for PPM.....	23
Monitoring & evaluation.....	27
Pilot expansion.....	27
Technology transfer .....	28

<b>Part IV: PPM results .....</b>	<b>29</b>
<b>Part V: Lessons learned .....</b>	<b>35</b>
Geographic application.....	36
Partnerships.....	36
Supportive supervision .....	37
Regular meetings .....	37
Importance of advocacy and communication.....	38
Flexibility and innovation .....	38
Incentives .....	39
Government support .....	39
<b>Part VI: Annex of PPM practical tools.....</b>	<b>41</b>
1. TB PPM Partner Matrix .....	42
2. Terms of Reference.....	43
3. Memorandum of Understanding.....	44
4. Partnership Agreement between MOH and technical partner.....	46
5. PPM Referral Slip .....	49
6. TB PPM Database .....	51
7. Private Pharmacy Participation Form.....	52
8. Annual PPM Work Plan Sample .....	53
9. Training Agenda.....	55
10. Supportive Supervision Checklist for Private Providers .....	56
11 Tool 11: Action Plan Matrix (PPM Meetings).....	58
12. Form for Unreported TB Client Follow Up .....	59
13. Training Certificate.....	60

# DOCUMENT ORGANIZATION

This document describes the successful introduction of a public-private mix (PPM) program designed to increase the detection of tuberculosis (TB) in Cambodia. It is hoped that health programs in other high TB-burden countries will find this a useful guide for introducing or scaling up their own PPM activities. While differing local conditions and situations will require modifications of some of the methods presented here, the underlying techniques employed by the PPM project in Cambodia are valuable for any organization seeking to bring public- and private-sector service providers together to address this pressing health issue.

## The document is divided into six parts:

- **Part 1** describes the background of the project, including the national context and Cambodia's private health sector and discusses PPM in the global strategy for TB.
- **Part 2** provides insights into project start-up activities.
- **Part 3** provides insights into field implementation activities.
- **Part 4** presents the results of the Cambodia PPM project.
- **Part 5** discusses lessons learned and recommendations.
- **Part 6** provides annexes with examples of PPM practical tools that PATH, the National Centre for Tuberculosis and Leprosy Control (CENAT), and the Pharmacy Association of Cambodia (PAC) have found instrumental in implementing PPM activities.

## Key information is presented in figures and tables throughout the report, listed in the order they appear:

- **Figure 1:** Various partners collaborate in PPM activities to improve TB control.
- **Figure 2:** Relationship within the PPM partnership.
- **Figure 3:** The referral process for a person with TB-like symptoms.
- **Figure 4:** Municipal health department (MHD), provincial health department (PHD), and operational district (OD) PPM implementing structure.
- **Table 1:** PHD/OD task matrix.
- **Figure 5:** PPM information flow.
- **Table 2:** Supportive supervision task matrix.
- **Figure 6:** Private providers in the Cambodian TB PPM network.
- **Figure 7:** Increases in PPM referral activity and TB cases.
- **Figure 8:** Follow-up on unreported referrals from October 2008 to September 2010.
- **Figure 9:** Number of sputum smear-positive cases compared to total number of TB cases.
- **Figure 10:** PPM contribution to case notification

**Practical tools for planning and implementing PPM activities are available in Part 6, as listed in the Table of Contents.** They can also be downloaded from [www.path.org](http://www.path.org).

**Other PPM training and client information materials are available** in both English and Khmer. Electronic copies can be downloaded from [www.path.org](http://www.path.org). Materials available include the following:

*Training materials:*

1. PPM pharmacy training guide with the video *What our clients think of us; what our clients expect from us*.
2. Communications guide for public-sector DOTS staff with video.
3. Supportive supervision guide for PHD and OD TB supervisors.
4. **Fact sheet:** The Basic TB Facts.

*Client materials:*

1. TB booklet with envelope.
2. Leaflet on how to collect sputum.
3. Posters on TB and the referral process.
4. PPM advocacy package.





# 1

## PROJECT BACKGROUND

- ❖ The national context
- ❖ Cambodia's private health care sector
- ❖ PPM in the global strategy for TB control

## The national context

Tuberculosis is a major cause of illness and death worldwide, and Cambodia is one of the most affected countries. The World Health Organization (WHO) classifies Cambodia as one of 22 “high-burden countries” —nations that together account for 80 percent of TB cases worldwide. The country’s 2007 incidence rate for all forms of TB was 495/100,000 people, with a sputum smear-positive incidence rate of 219/100,000. Furthermore, approximately 65 percent of Cambodians are infected with *Mycobacterium tuberculosis*.<sup>1</sup> Although TB is curable—most patients can be successfully treated with a six-month course of a combination of antibiotics—approximately 13,000 Cambodians die from the disease annually, giving the country a death rate of 87/100,000.<sup>2</sup>

Efforts to stop the spread of the disease are consistently hindered by a case detection rate that hovers around 60 percent, which means that people with active TB are not being found by the national health system and referred to DOTS (directly observed therapy, short-course) centers for treatment.

The government has made increasing the TB case detection and treatment success rates a national priority, in large part because, if not treated, each Cambodian with active TB has the potential to transmit the disease to an average of 10 to 15 additional people and has a greater than 50 percent chance of dying within five years.<sup>3</sup>

The Cambodian government recognized the serious nature of the TB problem as far back as 1980 when it established CENAT. Over time, this program led to the creation of some 145 TB units throughout the country, including the TB referral hospitals in Phnom Penh and TB supervisors and TB

units in all provinces and the majority of operational districts (ODs). Presently, the Global Tuberculosis Report (WHO 2009) shows that Cambodia has sustained high treatment success rates of over 90 percent for more than a decade. Case detection rates are reported to be less than 70 percent. However, the findings of a recent national population census show that the target of 70 percent may have been achieved.<sup>4</sup>

The National Tuberculosis Program’s (NTP) strategic plan for 2006–2010 laid out an ambitious set of goals and objectives, in line with the Global Plan to Stop TB, in order to achieve universal access to high quality care for all Cambodians with TB and to reduce the human suffering and economic burden associated with the disease. The plan explicitly states the importance of public-private sector collaboration to achieve its goals. “Output 1, Policies, Plans and Guidelines” advises that a key activity for the period 2001–2005 should be to explore ways of working with the private sector in relation to TB control.

*“ I am fighting tuberculosis because I am the responsible person for TB control in Cambodia’s Ministry of Health. I will work hard to mobilize resources from all circles in order to meet the implementation of the Ministry of Health’s 2006–2010 Strategic Plan to fight TB. I will do whatever possible to implement this plan successfully in line with the overall strategic plan of the Ministry of Health as well as the world’s TB strategic plan 2006–2015. ”*

*H.E. Dr. Mao Tan Eang,  
Director of CENAT*

1 Ministry of Health (Cambodia) Tuberculosis Report 2009.

2 CENAT annual report 2005.

3 World Health Organization Tuberculosis Fact Sheet. No. 104. March 2010.

4 Global Tuberculosis Control, WHO report 2009: Country profile—Cambodia.

Similarly, “Output 5, Service Provision” indicated that private-sector health services should be included in DOTS and other TB control pilot testing and that private sector engagement should be expanded if found effective. “Output 10, Partnership” states that the program will establish coordination mechanisms among international, government, nongovernmental, private sector, and community organizations working on TB case detection, treatment, and prevention in Cambodia.

The National Centre for Tuberculosis and Leprosy Control (CENAT) adopted WHO’s six-component Stop TB Strategy in 2005, placing particular emphasis on the strategy’s public-private mix (PPM) component. By enlisting the participation of private-sector providers, WHO explains that a PPM can “increase TB case detection and reduce diagnostic delays by involving all health care providers in timely referral and diagnosis, and by ensuring proper notification of all diagnosed cases and enrolment on appropriate treatment.”<sup>5</sup>

For Cambodia, the PPM principle was put into action through a pilot program funded by USAID that focused on working with pharmacies in Phnom Penh. Pharmacies were chosen because they have been shown to be the first point of contact for people seeking health care in Cambodia and, therefore, can play a critically important role in the national public health system. It is indicative of Cambodia’s Buddhist-based value system, which encourages doing good deeds in the community as a way of accumulating merit, that the pharmacies agreed to participate in the pilot for no monetary compensation.

To ensure that the engagement of the country’s pharmacies was efficiently managed and that the pharmacies and their staff would be able to undertake their responsibilities capably, CENAT began the pilot with a coordinated program of selecting and training the groups and organizations that could best contribute to program success. These groups included: The field-level implementing bodies of the Ministry of Health—

the nation’s DOTS centers, which are located at referral hospitals and health centers.

- The professional organization representing the country’s pharmacies—the Pharmacy Association of Cambodia (PAC).
- The individual pharmacies and their staff members and groups providing technical and coordination assistance, such as Program for Appropriate Technology in Health (PATH), the Pharmacists Association of Cambodia (PAC), Japanese Anti-Tuberculosis Association (JATA), and TBCAP.

*“After I got the TB training I did refer more than 12 suspected TB patients to health center. One of them was a man who lives in Sangkat Boengkak II, Khan Toul Kork. He came to thank me for referring him to cure his TB at health center. He was very happy because he was cured without paying much money. I was very happy to hear that it seemed like I made charity at seven pagodas. I was so proud of myself when there was someone who came to thank me in front of many people. Also, I made my pharmacy store able to earn many customers.”*

*—Nov Vansan,  
Toul Kork Pharmacy*

## Cambodia’s private health care sector

Cambodian law permits trained, qualified physicians and pharmacists to obtain licenses to open private health care service delivery points. There are three different types of pharmacy licenses. The first provides full rights and privileges to sell all types of legal drugs from private outlets opened in the pharmacist’s name. The second, pharmacy depot A license, allows a pharmacy to sell 60 different kinds of essential drugs. Pharmacies

5 The Global Plan to Stop TB 2006-2015.

holding the depot B license can sell 20 different kinds of essential drugs. Legal pharmacies are allowed to display a green pharmacy cross in the front of their establishment.

Typically, physicians sell medicines to their patients in addition to providing medical advice and diagnosis. Their license allows them to display a blue medical cross indicating a licensed medical clinic.

Rough estimates suggest that there are 1,000 registered private pharmacies and approximately 500 registered private health clinics in the country today. In addition to these visible outlets, there are many thousands of less visible drug sellers. These people run small shops in villages or markets, or ride around on bicycles, and sell medicines ranging from paracetamol and contraceptive pills to antibiotics like tetracycline and penicillin.

For reasons related to such factors as trust, convenience, accessibility, cost, availability, and (most importantly) the ability to purchase drugs without prescription, the majority of Cambodians prefer to use private-sector pharmacies for problems ranging from simple to serious. This preference for care is important in planning interventions to address the country's TB situation. It was the primary reason that the development and introduction of a PPM model focused initially on pharmacies.

## PPM in the global strategy for TB control

In 2006, WHO launched its global Stop TB Strategy, a significant expansion of the original DOTS strategy. It showed the intention to go beyond the original six basic elements and to use innovative techniques in TB diagnosis, care and prevention to “dramatically reduce the global

TB burden by 2015.”<sup>6</sup> In 2009, following the release of WHO's global progress report, the expanded strategy's six components were refined to reflect changes in state-of-the-art TB control.

### The Stop TB Strategy components are to:

1. *Pursue high quality DOTS expansion and enhancement.*
  - a. Secure political commitment, with adequate and sustained financing.
  - b. Ensure early case detection and diagnosis through quality-assured bacteriology.
  - c. Provide standardized treatment with supervision and patient support.
  - d. Ensure effective drug supply and management.
  - e. Monitor and evaluate performance and impact.
2. *Address TB/HIV, MDR-TB, and the needs of the poor and vulnerable populations.*
  - a. Scale-up collaborative TB/HIV activities.
  - b. Scale-up prevention and management of MDR-TB.
  - c. Address the needs of TB contacts and of poor and vulnerable populations.
3. *Contribute to health-system strengthening based on primary health care.*
  - a. Help improve health policies, human resource development, financing, supplies, service delivery, and information.
  - b. Strengthen infection control in health services, other congregated settings, and households.
  - c. Upgrade laboratory networks and implement the Practical Approach to Lung Health.
  - d. Adapt successful approaches from other fields and sectors, and foster action on the social determinants of health.

<sup>6</sup> The Global Plan to Stop TB 2006–2015



4. Engage all care providers.

- a. Involve all public, voluntary, cooperate, and private providers through Public-Private Mix (PPM) approaches.
- b. Promote use of the International Standards for Tuberculosis Care.

5. Empower people with TB and communities through partnership.

- a. Pursue advocacy, communication, and social mobilization.
- b. Foster community participation in TB care, prevention, and health promotion.
- c. Promote use of the Patient’s Charter for Tuberculosis Care.

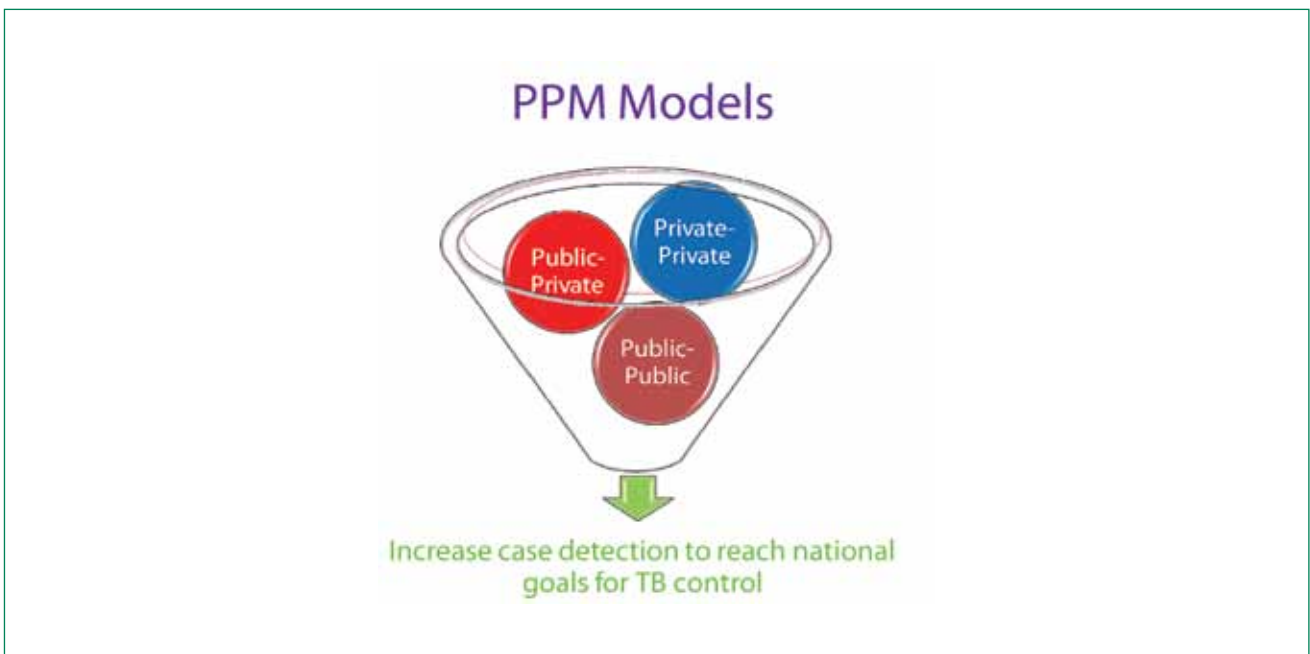
6. Enable and promote research.

- a. Conduct programme-based operational research.
- b. Advocate for and participate in research to develop new diagnostics, drugs, and vaccines.

The fourth component of the strategy, in particular, articulates the importance of PPM activities. WHO explains why it has included private sector groups by saying that involving “public, voluntary, corporate and private providers through PPM approaches” is a strategy that can “improve cure rates and reduce the risks of drug resistance development.” It achieves that by “helping to increase TB case detection and reduce diagnostic delays by involving all health care providers in timely referral and diagnosis, and by ensuring proper notification of all diagnosed cases and enrollment on appropriate treatment.”

As shown in Figure 1, PPM can contribute to TB control using diverse collaborative strategies such as public-private (partnership between the NTP and the private sector), public-public (partnership between the NTP and other public sector facilities, such as a public hospital or prison), and private-private (partnership between private providers or a private hospital and an NGO).

Figure 1: Various partners collaborate in PPM activities to improve TB control.









# 2

## CAMBODIA PPM PROJECT START-UP ACTIVITIES

- ❖ Designing the national PPM strategy
- ❖ Forming the PPM partnership
- ❖ Creating a framework for collaboration: the PPM/C-DOTS technical working group
- ❖ Developing referral tools
- ❖ Integrating the PPM structure into the national TB program
- ❖ Designing the PPM information flow
- ❖ Selecting PPM sites and providers
- ❖ Holding sensitization workshops
- ❖ Developing PPM annual work plans and budgets

Careful planning is essential for a successful PPM project. It requires leadership and coordination from the country's national tuberculosis program and commitment and collaboration from key partners.

The start-up steps can be summarized as:

1. Design the national PPM strategy.
2. Form a PPM partnership.
3. Establish a PPM technical working group (TWG).
4. Develop PPM tools for referral, supportive supervision and other key PPM functions.
5. Integrate the PPM structure into the national TB plan.
6. Design the PPM information flow.
7. Do site selection and mapping of providers.
8. Engage key stakeholders through sensitization workshops or other methods.
9. Develop PPM annual work plans and budgets.

The following section briefly describes how CENAT and its partners conducted these nine steps in preparation for the implementation of the PPM pilot in two operational districts in Phnom Penh.

## Designing the national PPM strategy

CENAT, donors, and implementing partners have made improved case detection an important objective for bringing TB under control in Cambodia. Based on the TB indicator data described above, addressing the country's low TB case detection was identified as a priority for the national TB control program. With a goal of significantly increasing case detection rates, the Ministry of Health (MOH) approved the creation of official linkages 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.

In 2004, CENAT, in collaboration with the University Research Co., LLC (URC), conducted an assessment in the four operational districts in Phnom Penh to determine the involvement of private-sector providers in TB control and to better understand the behavior of people seeking care for TB-like symptoms. The assessment revealed that 75 percent of respondents went to a pharmacy for care prior to going to a public health facility. However, the assessment also found that 70 percent of people with TB-like symptoms were diagnosed and treated at the public hospital or health center.

CENAT, in consultation with its partners (PATH, PAC, URC, JATA, WHO, and TBCAP) and with funding from USAID, developed the national PPM strategy and guidelines based on the assessment findings and an understanding of the Cambodian context. The strategy includes two phases for PPM implementation and expansion as described below.

Phase I is designed to involve pharmacies, private clinics, private hospitals, and laboratories. It focuses on the **referral** of all people with TB-like symptoms to public DOTS facilities for further evaluation and diagnosis. After careful consideration of the data, CENAT and its partners agreed to pilot Phase I primarily using pharmacies, where a large percentage of people first seek care.

Phase II of the strategy is designed as a comprehensive TB case management model involving only select private hospitals and clinics. These providers would provide both diagnosis and treatment to



TB patients in collaboration with the national program, rather than only referrals to the public sector. However a feasibility assessment of Phase II conducted in two operational districts in Kampong Cham province revealed that these providers are hesitant to engage in the full comprehensive case management of TB patients and prefer to refer.

## Forming the PPM partnership

CENAT was very strategic when selecting its PPM partners, basing the decision on the key features of effective partnerships (see Figure 2).

As illustrated below in Figure 2, the PPM partnership includes various partners from different sectors and with different expertise. The **technical partner** (PATH) works very closely with CENAT in all aspects of project design, strategy, and guidelines development, and provides technical support to implementing partners. The municipal health departments (MHD), provincial health departments (PHD), operational districts (OD), the Pharmacists Association of Cambodia (PAC), and the participating pharmacies implement PPM on a daily basis and report on PPM contributions. Throughout this document we will refer to these partners as the implementing partners. Each partner’s role and key responsibility is discussed in detail in the following section. Besides the technical and **implementing partners**, other partners (namely WHO, JATA, JICA, TBCAP, and



USAID) are very much engaged and supportive of the PPM initiative. Their role is to provide guidance around strategy and guidelines. These are CENAT’s **collaborating partners**.

Tool 1 (available in the Annex) is a partner matrix that includes all sets of providers in addition to the implementing partners. Support tools like this offer an “at a glance” overview of the project’s actors and summarizes several partnership agreements and terms of reference in one page.

The TB PPM partner roles are as follows:

### National Center for Tuberculosis and Leprosy Control (CENAT)

CENAT leads the PPM initiative. In addition to providing oversight and strategic leadership of all program activities, CENAT ensures that policy and treatment guidelines are implemented at all levels, advocates for TB resources at the highest levels of Cambodia’s government and with the donor community, and ensures that program integration and partner collaboration among its C-DOTS (community-based DOTS), PPM, TB/HIV, TB in prison, and MDR-TB programs are established. Moreover, CENAT creates and chairs the PPM/ C-DOTS Technical Working Group (TWG), whose members guide the implementation of the PPM strategy and the development of guidelines and tools. CENAT also played a key role in the selection of partners and the specific tasks each partner was to undertake.

Figure 2: Relationships within the PPM partnership







### **Municipal, provincial health departments and operational districts**

Since the PPM activities are part of the Ministry of Health national strategy, the municipal and provincial health departments and the operational districts take the lead role in project design and implementation. These public-sector partners are responsible for assigning teams to implement, monitor, and oversee PPM activities at provincial and district levels. With the support of the technical partner, they also lead the development of annual work plans and budgets, undertake regular supportive supervision visits to pharmacies, and implement and monitor strategies to improve reporting of PPM activities by public- and private-sector facilities. Where decentralization of tasks has occurred, operational district staff assume greater implementation responsibilities from their municipal and provincial health departments.

### **DOTS facilities**

The DOTS facility is the end destination of the person with TB-like symptoms who has been referred by the pharmacies in the PPM network. Upon arrival at one of the 538 participating DOTS facilities, the suspect presents the referral slip given by the pharmacist. At this point, the facility is supposed to definitively diagnose the symptomatic individual as being a TB case or not. If the patient is a TB case, the health center then provides complete treatment free of charge.

### **Pharmacists Association of Cambodia (PAC)**

PAC represents over 800 registered pharmacies in the country, 400 of which are located in Phnom Penh (70 percent of the capital city's registered pharmacies are members). The professional organization has vast experience in mobilizing its membership, including previous efforts to enlist pharmacies to participate in public health programs. PAC's strengths in advocacy and mobilization of pharmacies make it a natural collaborator for CENAT and its technical partner, playing a critical role in supporting the strategy of strengthening public-private networks.

PAC is a direct sub-partner to the technical partner that is primarily responsible for advocacy and the mobilization of pharmacies. PAC is funded through a subcontract with PATH to implement a range of activities, including advocacy, communication, and social mobilization, and training. PAC is also co-funded directly by USAID— this funding supports the development, printing, and distribution of the bimonthly PAC newsletter.

Tool 2 in the Annex, which outlines the PAC-PATH collaboration and scope of work, is an example of a Terms of Reference (TOR). The TOR was developed and agreed upon by both partners.



## Pharmacies

The country's pharmacies are the main component of the PPM program's "private" half and, because of the critically important role they play in the health-seeking behavior of Cambodians, the most indispensable. Since the initiation of the PPM pilot, more than 1,047 pharmacies signed Memoradums of Understanding (MOU) to participate in the PPM program, thereby committing themselves to attend PPM orientations, trainings, and regular review meetings; to refer patients who exhibit TB symptoms to the nearest public health facilities; and to be open to supervision from the public sector. The majority of the pharmacies are registered. However, the PPM initiative has also encouraged the participation of pharmacies that are not registered or are currently undergoing registration process.

Tool 3 in the Annex is an example of a MOU template between pharmacies and the MHD and PHDs. The MOU helps formalize the public-private partnership at the local level by summarizing program objectives and outlining the responsibilities of each party.

*" TB = poor people in our communities and the fast spread from one person to another, inside their own family. We, the public sector, appreciate very much that pharmacy staff know about TB and send their clients to us. We are all from the same communities and we work together to stop TB. In my health centre we provide TB treatment services with clean and soft two hands as well as pure heart and great pleasure. "*

**Mrs. Sin Naykim,  
chief of Roka Kaong Health Center  
in Roka Kaong Commune,  
Kandal Province**



## PATH

PATH has been actively contributing to improving Cambodia's public health since 1996, when it initiated another PPM project in coordination with the country's pharmacies. That program worked to promote enhanced treatment rates and referral rates for childhood illness. PATH has also implemented PPM solutions to diarrheal diseases, acute respiratory infections, malaria, HIV/AIDS, sexually transmitted infections, youth-friendly and reproductive health services, and influenza.

For the TB PPM pilot, PATH's role is defined as leading technical assistance and providing expertise and coordination support to all implementing partners. PATH works within the government system, establishing linkages to create a successful PPM model and build capacity for public and private providers and partners alike. PATH believes that collaborative design is the backbone of a sustainable program and accomplishes goals in a manner that works for all participants.

PATH enters into official partnership agreements with the participating MHDs and PHDs. Tool 4 in the Annex provides an example of a Partnership Agreement between PATH and a PHD. This brief document summarizes the goals and status of the project and then outlines the parties' complementary roles. It defines specific responsibilities and contributions and can double as a tool

to evaluate partners' commitment to the project. The agreement is officially approved by the MHD and PHD directors and is revised and signed annually to reaffirm partner commitment and fit the changing needs of the project over the course of its implementation.

## Creating a framework for collaboration: the PPM/C-DOTS Technical Working Group

The PPM/C-DOTS TWG was formed and functions under the leadership of CENAT. All partners first agreed upon the need for a TWG. They then drafted terms of reference and a list of proposed organizations to serve on the TWG, which were submitted to the MOH for approval. Once the request was approved, a broad range of members joined the TWG, including representatives from various government ministries, professional organizations, technical TB organizations, and the target group of private providers.

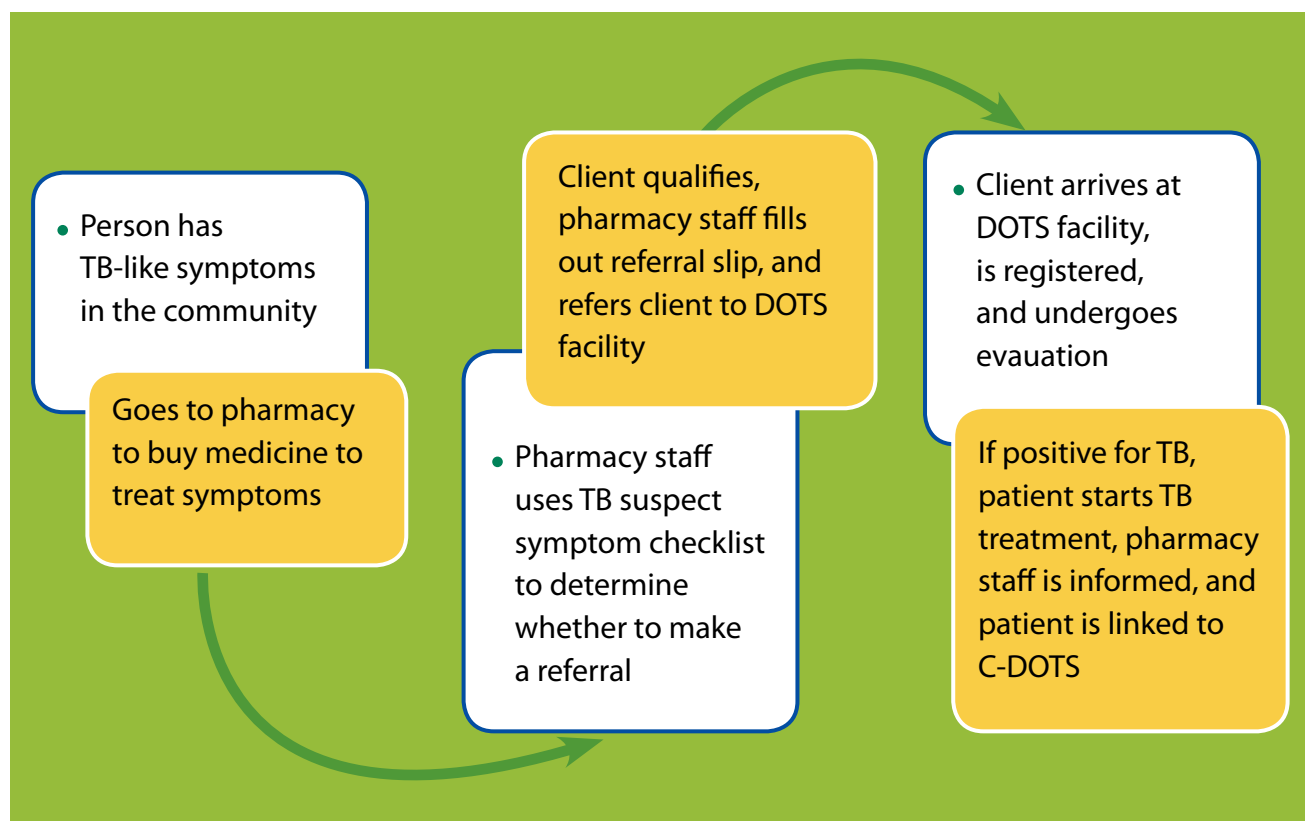
The TWG guides the strategy and supports the development of national guidelines and policy for PPM and C-DOTS programs, as both are community-based approaches for reducing TB prevalence. Quarterly meetings are led by CENAT, which sets the agenda and determines when meetings will be held. CENAT also designated a national-level PPM focal person with the responsibility for partner coordination and support of MHD, PHD, and OD teams as they implement provincial and district PPM activities.

## Developing referral tools

### 1. Referral slips

Developing an effective referral system is crucial to the success of any PPM project (see Figure 3). Defining how this referral system will work must include discussions between the public sector and pharmacy representatives. Referral slips are important tools for project monitoring and need

Figure 3: Illustration of the referral process for a person with TB-like symptoms.



to be constructed very carefully to measure project targets. The referral slip (Tool 5 in the Annex) was developed in collaboration with all partners and was approved by CENAT. Each slip has four carbon copies. The original is kept at the pharmacy, one copy is collected by the OD pharmacy supervisor during supportive supervision visits, and two copies are given to the client with instructions to bring one to the DOTS facility and keep the other. Referral slips from the DOTS facilities are collected by the TB OD supervisors during routine TB supervision visits.

## 2. PPM indicators and the PPM database

Three of the standardized global PPM indicators are used to track the progress of PPM activities. These include:

1. Number of referrals made from pharmacies or other providers in the network to the DOTS facilities.
2. Number of referrals recorded as having attended DOTS facilities.
3. Number of TB cases identified out of those referred.

The national recording and reporting forms at the DOTS facility level were modified to include the PPM indicators. This enabled the PHDs and ODs to capture the PPM data and include it in quarterly and annual reports.

Implementing partners at MHD and PHD PPM sites were provided with desktop computers and printers. An excel database was developed to report PPM data. This included the name, location, and type of each private provider in the network, the indicators, and the name and location of the DOTS facility, which was necessary in order to match the referral with the data received. PATH also invested in the Statistical Package for Social Science (SPSS) database software program. The software was installed at CENAT and at PATH's main office. The monitoring and evaluation officer at PATH received the data from the MHD/PHD teams, cleaned and analyzed it and then developed the PPM data reports. (Tool 6 in the Annex is an example of the PPM database.)

The reports are sent to CENAT and back to the MHD/PHD to be included in the quarterly and annual reports.

## Integrating the PPM structure into the national TB program

Figure 4 shows the structure of the Cambodian national tuberculosis program at the MHD, PHD, and OD levels. There is a TB unit at each level responsible for the implementation, monitoring, and reporting of all routine TB activities. The TB units at the MHD and PHD levels work closely with the OD TB unit, delegating tasks, overseeing the implementation of activities, supervising TB staff, and building capacity.

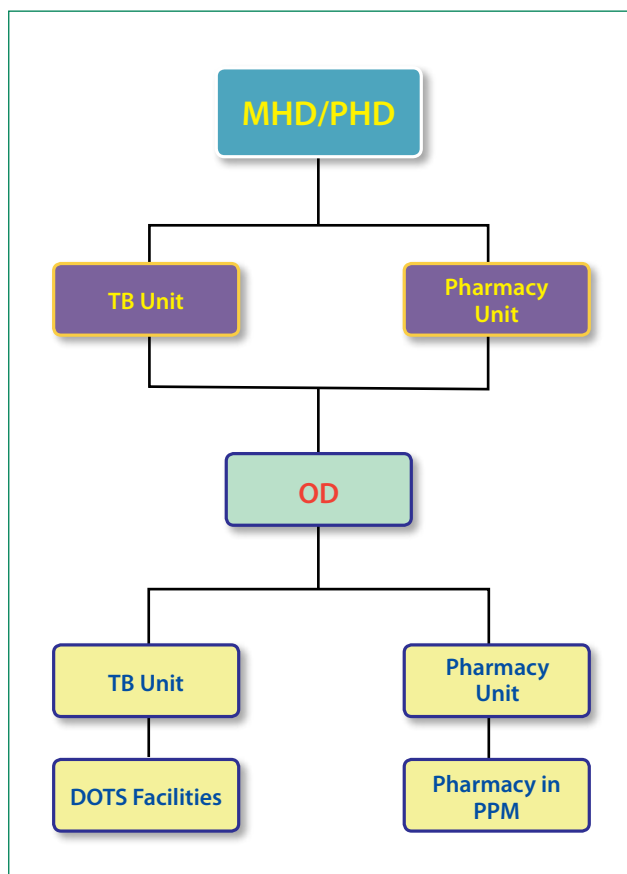
The primary responsibility of the pharmacy unit at each level is to oversee registration of private-sector providers and ensure that they adhere to policy and guidelines, especially for drug quality and management. The pharmacy unit at the MHD and PHD level has inspection teams that perform regular supervision visits to private-sector providers. These teams have the authority to close down a private practice if, after being given warnings, it is still not operating according to standards set by each PHD.

To promote sustainability, the TB PPM pilot was integrated into routine TB activities and was implemented at all levels of the health system. The TB and pharmacy units carried out joint efforts and worked closely together to design, implement, monitor, and report on the PPM. The MHD and PHD team worked closely with the OD teams to build capacity and ensure adequate reporting of the PPM. The OD teams worked directly with the private providers and the public DOTS facilities.

To support the workload and to build capacity for PPM approaches, one provincial coordinator, seconded from the technical partner organization, was based in each PPM province, and given the responsibility of supporting the PHD and OD teams with the day-to-day coordination and implementation of the PPM activities.

Table 1 outlines the responsibilities of each team at each level.

Figure 4: Municipal health department (MHD), provincial health department (PHD), and operational district (OD) PPM implementing structure.



## Designing the PPM information flow

The contribution of the PPM project to TB control, and specifically to case detection, depends solely on how available data are collected, analyzed, and reported. As shown in Table 1, one of the key tasks of the OD pharmacy unit was to conduct monthly supportive supervision of participating pharmacies to 1) collect information on all the referrals initiated by the pharmacy during the month and 2) bring copies of the referral slips to the OD. Similarly, one of the tasks of the OD TB unit was to provide supportive supervision of TB staff at DOTS facilities and follow-up and record the status of the referrals that have arrived at DOTS facility. The OD team then reviewed the referral slips and the records of the referrals collected from the DOTS facilities and matched the data. A list was developed with the names and contact information of referrals that couldn't be collected from the DOTS facility for follow-up. The data were sent to the MHD and PHD teams where they were entered into the PPM excel database and sent to the technical partner for further analysis and reporting.

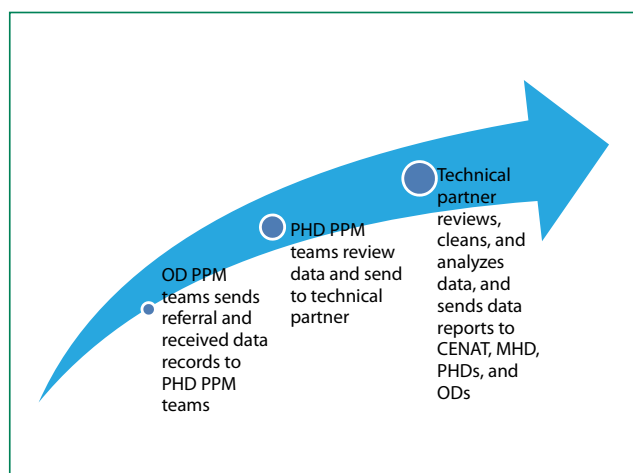
Figure 5 illustrates the referral data information flow from the lower level of the health system to the national level. PPM data reports were used by CENAT, the MHD, and the PHD and were

Table 1: PHD/OD Task matrix

Task	MHD/PHD TB unit	MHD/PHD pharmacy unit	OD TB unit	OD pharmacy unit	Seconded PPM coordinator
Develop PPM work plans and budgets	✓	✓	✓	✓	✓
Budget allocation	✓				
PPM capacity building for OD teams	✓	✓			✓
Supportive supervision of OD teams	✓	✓			
Supportive supervision of DOTS facilities and PPM data collection			✓		
Monthly supportive supervision of private providers and PPM data collection				✓	✓

incorporated into TB quarterly and annual reports. Data were also used by the implementing partners to monitor program progress and guide strategy design.

Figure 5: PPM Information flow.



## Selecting sites and mapping providers

With tools in place to help guide program activities, the next pre-implementation step was to select pilot PPM sites and map the potential local-level partners—both private and public—that were located in the targeted operational districts.

The partnership used the following criteria to select the pilot sites:

- OD has low TB case detection rates.
- OD TB teams have clear understanding of the national PPM strategy and are willing to engage pharmacy staff in TB control.
- OD has capacity and adequate human resources to enable regular monitoring and supervision of participating pharmacies.
- OD has no less than 25 registered pharmacies in close proximity (no more than 10 kilometers) to the public facilities.
- Pharmacy staff are eager to collaborate with the PHD and OD teams and refer people with TB-like symptoms to public DOTS facilities.

It was critical for all parties to fully understand the implications of participating in the PPM project in terms of capacity, workload, and human resources. For example, the PHD and OD TB teams needed to integrate the PPM into their routine TB control supervision and capacity building activities, and to work closely with the MHD, PHD, and OD pharmacy units, especially around the supervision of pharmacy staff, data collection, and reporting. Depending on the number of pharmacies and the location of each pharmacy in the specific OD, this could mean the need for additional staff or for support from an NGO partner. PATH, in collaboration with the national PPM focal staff, met several times with the MHD, PHD, and OD teams to discuss the PPM strategy in detail.

To select pharmacies for the project, information on the name, number, and location of each pharmacy in the area was gathered from the MHD, PHD, and OD private providers database. In some cases, the data needed to be updated as pharmacies occasionally go out of business or move.

The teams conducted initial visits to pharmacies to introduce the PPM strategy to staff and get a sense of their interest as well as availability to participate in the referral process. This valuable information was later used to plan for upcoming training activities and for developing the PPM database.

## Holding sensitization workshops

In the preparatory stages, the MHD, PHDs, or national government partners organized sensitization workshops, inviting key stakeholders, local authorities, and all pharmacy staff in the relevant area. ODs took on this role for decentralized programs.

The objectives of these sensitization workshops were fourfold:

1. To engage everyone involved with the forthcoming project.
2. To orient them to the implementation plan.





3. To accumulate support from governors and other high-ranking public officials who could endorse and advocate for the project.
4. To provide a forum for discussion of planning, identifying problems to address with PPM interventions, and the benefits of engaging in a PPM activity.

Pharmacy staff in attendance offered their thoughts on needed resources and anticipated constraints and shared their interest in the program. Partners used this information to revise parts of the work plan or adjust the budget according to the number of predicted participants. The inputs from the sensitization workshop were important for modifying the PPM work plan to address the individual needs of the specific sites and for the careful planning and costing of training workshops.

At the end of the workshop, pharmacy staff were asked to fill in the PPM participation form in which they indicated their commitment to participate in the PPM pilot (or, if not, to give the reason they were declining) and their preferences for training times and days. Tool 7 in the Annex is an example of a sensitization workshop form that pharmacy staff can use to commit to participate in the program.

## Developing PPM annual work plans and budgets

In preparation for field implementation, and building on the individual agreements with MHD and PHD partners, detailed work plans are created to outline the project’s implementation. The technical partner leads this process with input from the implementing partner. The work plans state the project strategy and goals, itemize activities according to the project objectives and targets, and schedule monitoring and evaluation procedures. Based on the work plans, detailed activity budgets are developed and funds are allocated. Work plans and budgets are discussed and agreed upon by the respective project partners. Tool 8 is an example of an annual work plan used in TB PPM activities.





# 3

## FIELD IMPLEMENTATION ACTIVITIES

- ❖ Training of private and public providers
- ❖ Training of pharmacy staff
- ❖ Training of DOTS providers
- ❖ Supportive supervision
- ❖ Quarterly PPM meetings
- ❖ Site visits to DOTS facilities
- ❖ PPM meetings
- ❖ Annual PPM workshops
- ❖ Advocacy, communication and social mobilization for PPM
- ❖ Monitoring & evaluation
- ❖ Pilot expansion
- ❖ Technology transfer

With the start-up activities completed, the partners were ready for PPM field implementation. This section outlines and briefly describes 12 key PPM implementation activities:

1. Training of public and private providers.
2. Training of pharmacy staff.
3. Training of DOTS providers.
4. Supportive supervision.
5. Quarterly PPM meetings.
6. Site visits to DOTS facilities.
7. Partner meetings.
8. Annual PPM workshop.
9. Advocacy, communication, and social mobilization.
10. Monitoring and evaluation.
11. Pilot expansion.
12. Technology transfer.

## Training of public and private providers

A model of training of trainers (TOT)—in which competencies are matched and trainers facilitate cascade trainings to public providers and pharmacy staff—builds local capacity and has a greater opportunity for sustainability. The Cambodia partnership identified and assembled a national master trainers team based on the members' capacity and the technical expertise needed to deliver the pharmacy training curriculum.



*PATH and the PPM partners conducted a five-day training course for the PPM master trainers:* two days of preparatory building blocks and three days of program-related technical and implementing information curriculum.

*The basic curriculum was divided into four components:*

(1) policy and guidelines for pharmacies, (2) basics of TB and the relationship between TB and HIV, (3) provider-client interactions, and (4) the referral process. The curriculum also covered such topics as how to organize a workshop, adult learning principles, responsibilities of a training facilitator, and methodologies for effectively relaying information. Tool 9 is an example of the training of trainers' workshop agenda.

*The key national-level partners each played an important role in the training of trainers:*

- CENAT trained pharmacy staff on the program's TB and TB/HIV technical components and the referral system.
- PAC, with its knowledge of the role pharmacies play in the larger national health picture and the MOH operational requirements for pharmacies, took responsibility for sessions in policy and guidelines for pharmacies. These focused on the guidelines for registration, drug quality, drug management, and counterfeit and illegal drugs.
- PATH focused on communication and provider-client interaction.

## Training of pharmacy staff

Building the capacity of the pharmacy staff to participate effectively in the PPM project was the utmost priority for the partnership. Specifically, the pharmacy staff needed to be able to deliver on the following objectives:

- Completely understand the program's rationale.
- Accurately identify people with TB-like symptoms and effectively explain TB—especially its curability and the fact that treatment at DOTS facilities is free—to their clients.





- Refer people with TB-like symptoms to public DOTS facilities or referral hospitals for diagnosis and treatment.
- Correctly fill in the referral slip that is the central part of the program's data collection and case notification component.

The training sessions for pharmacy staff were generally open to all pharmacy employees, but it was rare that more than two staff members from any pharmacy attended. (The implementing partner encouraged each pharmacy to send at least two people for training, but in the rural areas and smaller towns, only one staff member could usually participate.)

The three-day training sessions were staggered over five days to accommodate different work schedules and to limit the size to 20 to 25 trainees per session. Employees from the same pharmacy were invited to different training sessions to help minimize business problems for those pharmacies that send more than one employee.

An "Alternative Training" strategy was designed to reach pharmacies with only one staff member who was unable to participate in the official training due to time constraints (i.e., he/she would have to close the shop for the duration of the training). The staff member was trained by the OD pharmacy unit over a period of three months as part of the supportive supervision activity. At the end of the three months, the staff member completed the course and received the course certificate.

At the end of the training, participants received a complete package of materials to launch the program in their facilities. This included TB reference and client education materials, the TB fact sheets for pharmacy staff, the referral slip booklet, a list with the name and location of nearby public DOTS facilities, contact information of the PHD/OD TB PPM team, a schedule with upcoming supervision visits, and a certificate of attendance.

## Training of DOTS providers

Public health providers at DOTS facilities represent the public-client interface component of the PPM program. Their capacity and commitment to effectively serve the referred clients was a key measure of the success of the pilot program.



Two training workshops— 1) Communication Skills and 2) Professional Performance and Positive Thinking—were designed with the aim of strengthening these providers' skills and improving their interaction with their clients, thus improving the overall delivery of TB services. Providers from DOTS facilities and referral hospitals in six PPM sites attended both trainings. Professional Performance and Positive Thinking was particularly well received and appreciated by the providers.



Sites where these trainings were conducted experienced increases in the numbers of referred clients reported as having reached the DOTS facility. In these sites, reporting of referred clients from DOTS facilities increased from 40 percent before the training to up to 85 percent. In PPM sites where DOTS staff are not trained, the reporting of referred clients continues to be below 50 percent.

## Supportive supervision

A system of supportive supervision helps trained pharmacy staff to successfully implement PPM activities and provides a means of monitoring their activities and providing feedback on the cases they identify. The regular interaction between supervisors and pharmacy staff also encourages two-way communication, strengthens collaboration among partners, and provides an opportunity to motivate staff and recognize achievements. As a result, it encourages the pharmacy staff to continue their participation.

Supportive supervision to pharmacies is conducted by the PHD or OD pharmacy unit officer (This person is also responsible for collecting referral slips kept at the pharmacies and the matching forms from DOTS facilities for national TB case monitoring). However, if this structure is not present, the task can be assigned to an NGO or a professional organization partner working with the OD.

Supervision visits are scheduled based on performance and training needs. Priority is given to pharmacies that are not making any referrals, are not filling out the referral slip correctly, and do not have reports that referrals made reach a DOTS facility, or TB is not found among the TB suspects referred. Pharmacies that perform well are visited quarterly.

Tool 10 in the Annex provides an example of the PPM supportive supervision checklist used by the supervisors during supervision visits. Table 2, below, outlines the supportive supervision tasks implemented by the PHD or OD pharmacy supervisors and the TB teams.





Table 2: Supportive supervision task matrix

Task	Who	Support	
<b>At the pharmacy</b>			
Conducts routine supportive supervision visits to pharmacy staff.	OD TB pharmacy unit	Technical partner Provincial coordinator	
Reviews referral records for accuracy and collects referral slips.	OD TB pharmacy unit		
Identifies gaps in knowledge and skills in need of improvement and develops a refresher training plan.	OD TB pharmacy unit		
Provides refresher training based on the plan developed in the previous supervision visit.	OD TB pharmacy unit		
Provides on-the-job training of new pharmacy staff if needed.	OD TB pharmacy unit		
Records distribution of information, education, and communication (IEC) provider and client materials and develops and fills out an IEC request list when needed.	OD TB pharmacy unit		
Agrees with the pharmacy staff about the date and time for the next supervisory visit.	OD TB pharmacy unit		
<b>At the DOTS facility</b>			
Reviews TB register and lab and treatment book during routine supportive supervision to DOTS facility and records status of PPM referrals.	OD TB unit	MHD/PHD TB unit	
<b>At the DOTS facility</b>			
Matches referral slips collected from the pharmacy with the information collected from the DOTS facility, compiles data, and sends to MHD/PHD PPM teams.	OD TB pharmacy unit OD TB	Technical partner Provincial coordinator	
<b>At the MHD/PHD level</b>			
Reviews data and enters into the PPM excel database. Lists out the “unreported” referrals.	PHD TB pharmacy unit PHD TB unit		
Submits PPM data to technical partner for cleaning, analyzing, and reporting.	MHD/PHD TB unit MHD/PHD TB pharmacy unit		

## Quarterly PPM meetings

CENAT and its partners also organize quarterly PPM meetings with private and public sector providers to help sustain their commitment and to ensure ongoing implementation of planned activities. The meetings begin with an update on the status of referrals made in the three months since the last meeting, as this information is of significant interest to the pharmacy staff who want to know the outcomes of the people they have referred.



The providers then discuss their experiences, achievements, and challenges. A list of issues is compiled and ranked in order of priority. The implementing partners work together to develop an action plan for addressing the most pressing issues during the following quarter. Tool 11 in the Annex is an example of a follow-up plan developed as an outcome of these meetings.

The quarterly meetings are vital in that they create a forum for information exchange and partnership building. Moreover, they allow the program teams to collect feedback on PPM activities and improve their implementation program.

There are numerous examples of useful innovations that were designed because of these exchanges. For instance, at one meeting, the providers decided to determine why 50 percent of referrals were lost in follow-up. Their input yielded

important information and resulted in redesigning the strategy used by the PHD to encourage pharmacies to make referrals as well as to encourage DOTS providers to report the clients arriving to DOTS facilities from the pharmacies. It also led to the creation of a TB Client Information Pocket Guide, which includes a step-by-step pictorial information booklet on actions clients need to take if they have TB symptoms and the diagnostic process at DOTS centers, and a leaflet, which provides written and pictorial instruction on how to collect sputum. These materials were developed based on comments from providers who expressed frustration that clients knew they had symptoms, but were unaware of the actions they needed to take and where they should take them. The client materials are also useful in cases where there is limited time to educate the client or no opportunity for privacy. All materials were pretested with the target group before being finalized.

## Site visits to DOTS facilities

In addition to the PPM meetings, orientation field visits to DOTS facilities are very important. Pharmacy staff familiarize themselves with the TB services provided at public facilities, meet face to face with DOTS providers, and learn the steps their clients have to take once they arrive at the DOTS facility with the referral slip. They also learn about sputum collection and slide preparation and



become aware of the time needed to complete each step. As a result, they are more confident that the clients they refer will receive quality services, and they are better able to deliver accurate information to clients about what to expect at a public DOTS facility.

Another positive outcome of these visits is that both the private and public health providers increase their understanding of each other's responsibilities in the PPM and the challenges they each face. This new understanding generates greater respect and results in deeper collaboration and stronger working partnerships.

## Partner meetings

The holding of bimonthly meetings with all levels of CENAT and technical and implementing partners was a critical foundation of the PPM program. USAID played a major role in the direction of the PPM and actively participated in these meetings. This highlighted the importance of the meetings and the support and commitment for the PPM from the donor perspective. Moreover, the regular gatherings played a critical role in maintaining the PPM momentum, ensuring that each partner remained committed to program goals, and addressed any concerns or issues before they became serious enough to threaten program success. Programmatic issues or concerns identified during these meetings were brought to the PPM TWG for further discussion and decision-making within the larger group. Partner meetings were conducted at both the national and PHD levels.

## Annual PPM workshops

PATH, in collaboration with CENAT, organizes yearly PPM workshops that bring together all the implementing partners and stakeholders from both the public and private sector. These gatherings provide a unique opportunity for partners from the different geographic areas and functional backgrounds to meet and exchange lessons learned.

At the workshops, the representatives from each PPM province present their own PPM experiences during the previous year, and explain their successes, challenges, and emerging focus areas. These presentations are followed by a collaborative, participatory process to review the next year's work plan with all partners asked to provide feedback based on their own experience and planning. By engaging and empowering all participants, the annual workshop becomes another tool for ensuring the program achieves sustainability.

## Advocacy, communication, and social mobilization

Various advocacy, communication, and social mobilization (ACSM) activities are conducted to raise awareness about why involving private-sector providers—and especially pharmacies—is critical to increase TB case detection rates. It is important that advocacy activities target key stakeholders and decision-makers at all levels, as well as participating professional organizations and pharmacy staff themselves. The most important advocacy objective is to gain support for PPM from high-level Ministry of Health officials who then are willing to approve the provincial annual operational plans and commit the necessary financial resources for PPM implementation.

### Examples of advocacy activities

- A short film, *I'm stopping TB 2*, reminds Cambodians of the urgent need to stop the spread of TB. The video features the voices of different stakeholders, as well as the inner thoughts of TB patients and former TB patient. The video was endorsed by the MOH and is aired on public television.
- A TB advocacy information package, with fact sheets for key stakeholders, donors, and partner agencies, provides updated information on TB and the efforts of CENAT and its PPM partners to bring the disease under control.

- PATH, PAC, and CENAT conducts lobbying and sensitization meetings with local authorities and provincial governors, as well with such professional organizations as the Cambodia Medical Council and the Phnom Penh Medical Board.

**Examples of communications activities**

- Training curricula for private and public providers were developed along with supporting training video materials.
- Information materials, such as the TB booklet and the “Steps to produce and collect sputum” leaflet, provide important information to clients.
- Signs are posted at all DOTS facilities to direct clients with a pharmacy referral slip.
- All providers in the PPM network are trained on how to communicate effectively with clients who display TB-like symptoms.
- A radio talk show with featured guest speakers, including the director of CENAT, described specific TB-related topics. At the end of the PAC-hosted program, listeners were invited to call in with questions.
- Health fairs encourage and strengthen the linkages and relationships between the community, pharmacies, and the formal health services, and increase awareness of TB and the availability of TB services in remote areas. DOTS centers that treated very few or no clients with



TB-like symptoms over preceding six-month period, according to a review of their TB registers, are selected to hold the fairs. The events are organized by the community health centers and area pharmacies. The health centers use their network of community outreach educators to inform community representatives about the event and to encourage high levels of participation.

At the fairs, visitors are introduced to the health center and pharmacy staff, given information and operating hours for the facility, and taken on a tour of the health center. Visitors are encouraged to walk around, ask questions, and collect health information from information tables. Additionally, visitors have the opportunity to watch a skit entitled “TB and its impact on patients, their families, and communities.” The script was writ-

<p><b>អ្នកស្រុកអនុវត្តតាមដំណាក់កាល ទាំងប្រាំមួយនេះ ដើម្បីស្របដំណាក់កាលមកពិនិត្យ</b></p>	<ul style="list-style-type: none"> <li>• ផ្តល់អាចរាត់វិញ ចិញ្ចឹមអាចរាត់ចាត់</li> <li>• អង្គុយចុះដើមរាត់វិញ&gt;បិទ</li> <li>• ចូលរោងឡាវិញ&gt; ដើមរាត់វិញចេញមក ក៏បិទវិញ</li> <li>• ចិញ្ចឹមរាត់វិញក៏ចាករោងឡាវិញ</li> <li>• ដំណាក់កាលទីបីចាកវិញចេញមក វិញចាកវិញចេញមក</li> <li>• ចូលវិញរោងឡា</li> <li>• អង្គុយរោងឡាវិញដើមរាត់វិញចេញមក</li> <li>• ដំបូងចូលរោងឡា</li> <li>• ចាកវិញចេញមកចេញមកវិញ</li> </ul>	
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ten by health center and pharmacy staff in the PPM network, and was performed by the staff of each host health center. At the end of the fair, participants can compete in quizzes and receive small tokens for answering questions correctly.

Following the health fairs, the implementing partners monitor and record TB suspect activity closely. In those health centers where the fairs have been conducted, utilization by people with prolonged coughs has increased noticeably from the baseline.

“ I coughed for long time and I got skinny. I couldn't eat and couldn't sleep. People in my community told me that I feel like this because I'm old and I believed them.

Then I started to get hot and had difficulty in breathing. I went to the drug store and she told me to go to the health center to test the saliva. After the tests the doctor told me that I had TB and gave me treatment. The treatment was long and taking the drugs didn't make me feel very good.

But the community worker that came to my house everyday to give me the drugs encouraged me and now I'm so happy that I'm cured and well. Since then I have helped two people in my community to go to the health center for tests. Both of them had TB, one of them was my husband. ”

Aunty Moung Mon,  
Pongro village Treang district , Takeo province

**អ្នកប្រហែលមានជំងឺស្និត ប្រសិនបើអ្នកមានសញ្ញាដូចខាងក្រោម**

- ក្អកប្រើប្រាស់ជាប់ប្រចាំថ្ងៃឡើងទៅ
- ក្អកខ្លាំងឡើងៗ
- ឈឺដើមទ្រូង
- ដក់ដើមទ្រូង
- ប្រពិបាកដក់ដើម (ឈាត់)
- មានអារម្មណ៍អស់កំលាំងជាប់ប្រហូត
- ក្អកខ្លាំង
- មិនឃ្លានចំណី
- ទទួលបានចំណីមិនបាន
- បែកញើស ពិសេសពេលយប់
- ក្អកក្អាយ
- អ្នកបានប្រើប្រាស់ឱសថដើម្បីបញ្ចប់ការប្រយោជន៍សញ្ញាក្នុងរយៈពេលមិនទាន់យូរ
- ពេលខ្លះកំលាំងអស់យូរ

**ព្រីងអ្នកត្រូវធ្វើអ្វី**

- សួរឱសថការី ឬបុគ្គលិកឱសថស្ថាន-រង ដែលអ្នកជួបឱ្យដឹងការណែនាំ
- បុគ្គលិកឱសថស្ថាន-រង នឹងជួយដឹង រោគសញ្ញាបស់អ្នក
- បុគ្គលិកឱសថស្ថាន-រង នឹងផ្តល់ លិខិតបញ្ជូនអ្នកកាន់ទៅមណ្ឌលសុខភាព ឬមន្ទីរពេទ្យបង្អែក ដើម្បីពិនិត្យកំលាំងរោគសញ្ញា
- អ្នកត្រូវអន្តើប្រយោជន៍មណ្ឌលសុខភាព ឬមន្ទីរពេទ្យបង្អែកឱ្យបានឆាប់ គឺជាការប្រសើរ។ ព្រោះជំងឺរង គឺជាជំងឺកាត់សាឃាត ប៉ុន្តែអាចព្យាបាលជា ប្រសិនបើអ្នកទទួលបានការព្យាបាលត្រឹមត្រូវ
- បើមានអ្នកដទៃទៀតក្នុងគ្រួសារអ្នកមានរោគសញ្ញាប្រហាក់ប្រហែលអ្នក សូមនាំទៅជាមួយ ដើម្បីពិនិត្យកំលាំងរោគសញ្ញា

**អ្វីដែលអ្នកមិនត្រូវធ្វើ**

- កុំព្យាយាមព្យាបាលទៅដល់គ្រូពេទ្យកំណែ ព្រោះជំងឺរង អ្នកអាចបំប្លែងជំងឺអ្នកដទៃទៀត
- សូមកុំឱ្យខ្ញុំផ្សំថ្នាំឱ្យអ្នក ព្រោះថ្នាំបំបាត់ក្អកនិង ថ្នាំដទៃទៀតក្រៅពីថ្នាំប្រយោជន៍អាចព្យាបាលរោគសញ្ញាបាន

**ប្រសិនបើអ្នកនៅមានចម្ងល់ពីរោគសញ្ញាណាមួយ ឬមានសំណួរ ទាក់ទងនឹងរោគសញ្ញាបស់អ្នក សូមអញ្ជើញសួរខ្ញុំ ខ្ញុំនៅទីនេះរង់ចាំជួយអ្នកជាដាច់ខាត!**

**ពិបាកសួរឱសថស្ថាន-រងដើម្បីប្រយោជន៍អ្នក**





## Examples of social and community mobilization activities

- Social mobilization activities motivate pharmacy staff to refer people with TB-like symptoms to public DOTS facilities (even though by doing so they would be losing income) and ensure that they give their clients accurate messages about TB and the location and operational times of the DOTS facilities.
- Health center community outreach network and community leaders are encouraged to be vigilant in identifying and following up on referred people with TB-like symptoms who do not reach the referral site for follow-up.
- Meetings are held with community leaders, authorities, and community organizations to inform them about the PPM activities in order to gain their support.
- Regular visits with pharmacy and DOTS staff in the PPM network keep the PPM momentum high on their task priority list and ensure that they continue to have ownership of PPM activities.
- Pharmacy staff and community representatives are invited to national-level meetings and conferences where they participate in forum and plenary discussions. Based on their performance, pharmacy and public sector DOTS staff are invited by CENAT to join the National

TB Annual Workshops where they are presented with a Certificate of Recognition for their contributions to TB control. The selection criteria for the pharmacies includes the number of referrals made and the number of referrals that are TB cases. The selection criteria for the DOTS staff includes the number of referrals recorded and reported as having reached the DOTS facility for evaluation. Every year, approximately 10 to 15 pharmacy staff and 8 to 10 DOTS staff from each PPM site are recognized and receive certificates.

## Monitoring and Evaluation

All public health programs benefit from monitoring and evaluation (M&E) efforts, which are a vital tool for guiding current activities, future programming, and national policy. The PPM pilot is no exception, and the program was designed to incorporate significant M&E, beginning with the initial mapping and rapid assessment of private providers in the pilot areas.

In addition to guiding project implementation, the data the mapping exercise generated regarding the size of private pharmacies and their clientele was a critical baseline against which progress could be measured. The pilot also introduced monitoring checklists and data entry forms to record information about referred clients, as well as tools that measure the number of clients who were referred by pharmacies but who did not report to the referral site.

The most critical instrument of the pilot's M&E efforts was the referral slip. Each slip was made up of four numbered duplicate copies. The original and a copy were kept with the pharmacy, and two copies were given to the client, one of which s/he submitted to the facility to which she or he was referred. The PHDs and ODs were responsible for collecting one of the two copies kept by the pharmacies and matching it with forms from the public referral receiving facilities for national TB case monitoring.

The national recording and reporting form used at the DOTS facility level and the TB register and TB suspect book are key instruments for determining and reporting the number of TB suspects coming to the DOTS facilities from the pharmacies. These data are used to report the contribution of the PPM to TB case detection.

The referrals and data received from the participating pharmacies and DOTS facilities are collected on a monthly basis by the OD teams and sent on to the PHD teams. The data are then entered into the database and the number of referrals is compared with the number of referrals that are reported by the designated referral site. The names of individuals referred who are not recorded by the DOTS facility as having presented at the facility for evaluation are compiled into a list. The data and the list of the "unreported" are then forwarded to PATH for cleaning, analyzing, and reporting. The "unreported" cases are followed up by phone, when a contact number is available, and the status of these referrals is documented and reported separately. Data reports are shared with all implementing partners and the donor, with CENAT and the MHD/PHD using the data for their quarterly and annual reporting. Tool 12 in the Annex is an example of the "unreported" database.

The program team also uses pre- and post-tests with pharmacy staff to monitor differences in knowledge and attitudes by all health services providers over the course of the PPM project.

## Pilot expansion

A little over five years after its initial launch in two ODs in Phnom Penh, the PPM pilot has expanded to the rest of the capital city and into 11 of Cambodia's 24 provinces. Thirty-eight ODs now engage pharmacies in referrals and implement and report on PPM activities. (The number of ODs dropped by one in 2009-2010 as financial support ended for one of the provinces, Kratie, because it is no longer a USAID focus province. However, the PHD and OD teams continue to implement and report on the PPM activities).



For the first four years of implementation, pharmacies were the sole providers in the partnership. In the last two years, the model has evolved to include small numbers of clinics, laboratories, and cabinets. Cabinets are consultation rooms that are operated by medical doctors and are usually open in the evenings and early mornings. *Phet phums* (mobile doctors) who are in the community and provide a variety of health services and the health center community-based outreach educators are both key to referring suspect clients.

## Technology transfer and sustainability

A critical element of the PPM pilot was the design and execution of a strategy to transfer future strategic and implementation responsibilities from external partners to local agencies, with Cambodian bodies assuming control of technical expertise and program coordination. A detailed review of all PPM activities was done to determine which pilot activities were effective and which

activities were less effective and should therefore be considered for discontinuation in future stages. The review also considered which functions should be transitioned to other local partners, such as the Reproductive and Child Health Alliance and the Reproductive Health Association of Cambodia and which should be maintained by the MHD, PHD, ODs, and PAC.

A comprehensive transition and sustainability plan was then drafted. This plan includes budgets for key PPM activities and serves as a road map to guide future PPM partners in the appropriate planning, implementation, and costing of PPM activities. Similar to all PPM tools and materials, the transition plan can be downloaded from [www.path.org](http://www.path.org)





# 4

## RESULTS OF THE PPM PROJECT



The pilot started in two ODs in the municipality of Phnom Penh in mid-2005. By 2010, it had expanded to 11 provinces and 38 ODs—thanks to the support and vision of USAID. As the pilot expanded, the number of pharmacies that signed MOUs with the MHD and PHDs increased. The majority of the pharmacies are registered, while the rest are undergoing registration.

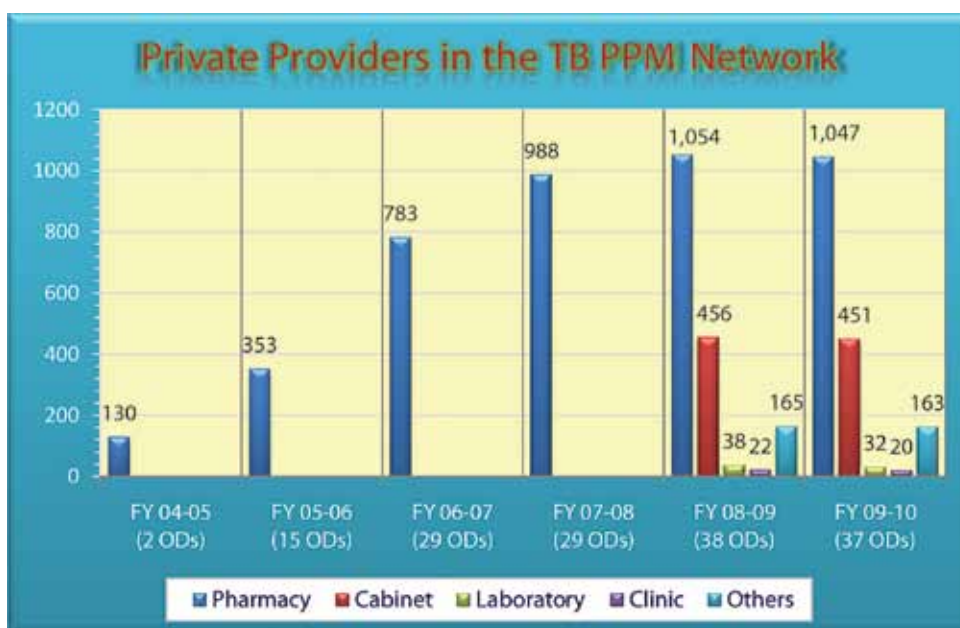
The national PPM strategy calls for the involvement of all private-sector providers in the referral of people with TB-like symptoms to DOTS facilities for evaluation and diagnosis. Over the last two years, CENAT, PATH, and PAC have worked closely with the MOH, the Cambodia Medical Council (CMC), and the Phnom Penh Medical Board (PPMB)—both professional associations that oversee medical doctors—to develop and implement strategies that encourage their participation in the PPM. Advocacy efforts to increase awareness of TB and encourage medical doctors in cabinets and clinics to commit to PPM efforts have proven to be a difficult task for the partners. As a result, the number of private doctors and medical facilities involved in PPM is still very small (503) compared to the number of participating pharmacies (1,047), as illustrated in Figure 6.

The pilot helped build the capacity of both private and public providers to recognize, refer, and diagnose people with TB-like symptoms using a patient-centered approach. These efforts played a major role in steady increases in case detection in the pilot areas. Figure 7 shows the increase in number of referrals since the start of the PPM project, both as a result of more intensive identification of people with symptoms and expansion of the number of participating ODs. Referrals of people with TB-like symptoms from the pharmacies are consistent with the expansion of the program, which testifies to the pharmacy’s commitment to PPM and, most important, to the well-being of their communities.

In 2006-2007, the PPM experienced a decline in the referrals from the pharmacies. Pharmacy staff gave three reasons for this decline:

1. At the start of the project they were eager to refer their clients as this was an expression of their willingness to collaborate with the MHD, PHD, and ODs and show their commitment to public health.
2. At the same time, the MHD and PHDs set referral targets and pharmacy staff were informed and expected to meet these targets; if they didn’t

Figure 6: Private providers in the Cambodia TB PPM network.



reach the targets they were made to feel that they were not contributing enough and felt they were competing with other pharmacies who were reaching the targets.

3. Because TB disease was a new area for the pharmacy staff, they were not able to make a correct assessment at the start of the project and this resulted in referring many more clients than actually needed to be referred. Once they became familiar with TB symptoms and got feedback from supportive supervision, their referrals were limited to those with compelling symptoms. So although the overall number of referrals declined, the proportion of TB cases diagnosed as a result of those evaluated increased and continues to maintain a level far above the expected average as discussed below.

Once identified, these critical issues were successfully addressed through:

1. Additional training for providers on TB symptoms.
2. Development and implementation of strategies that strengthened the collaboration between the public and private sector.
3. Development and implementation of communication approaches that are based on encouragement and motivation rather than on blame and mistrust.

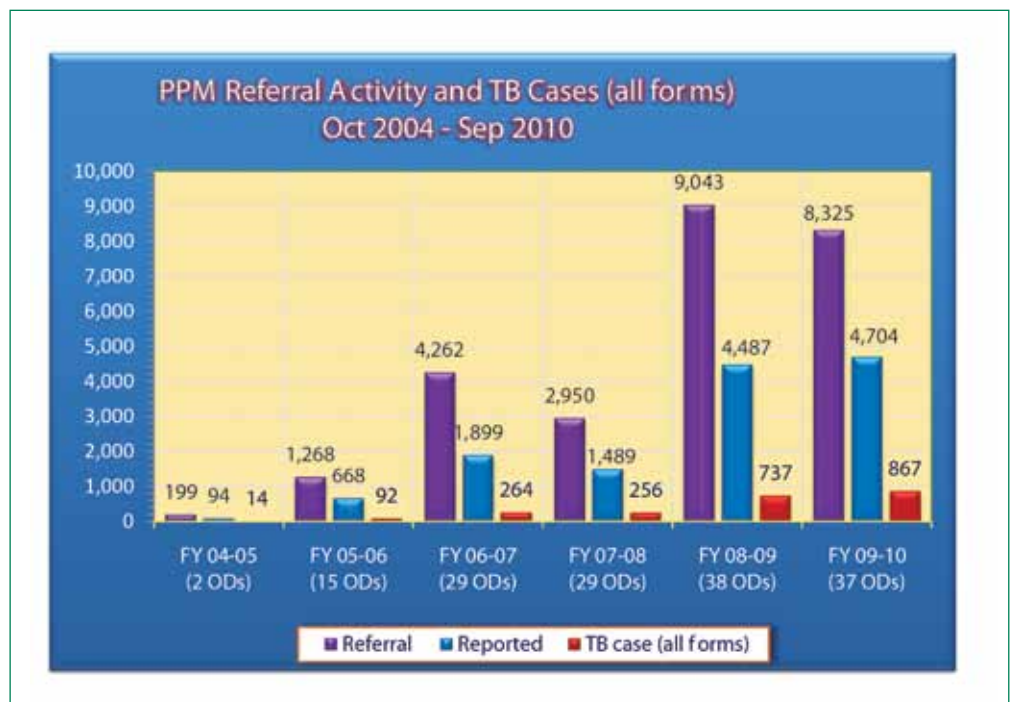
As a result of the PPM efforts, mutual trust and respect between the public and private providers is now well-established in many of the PPM sites. Collaboration and working relationships between the two sectors have improved over the years and continue to be strengthened in all PPM sites. Moreover,

the capacity of the pharmacy staff to correctly assess for TB and make appropriate referrals has improved significantly.

For example, although the number of overall referrals decreased slightly in the last year of the project, the proportion of cases detected out of those who were evaluated reached approximately 18 percent--a very high yield, well above the average 10 percent expected from evaluation of symptomatic individuals. These results argue in favor of continuing to expand the PPM work because of its ability to find people with a high likelihood of having undiagnosed TB.

Figure 7 also reveals the discrepancy in the reporting of the numbers of people who were referred from the numbers that were reported as having reached the DOTS facility. This was becoming a chronic problem and two years into implementation, PATH decided that it would be useful to look into the possible reasons for this apparently large number of TB suspects who did not follow up their referral. It was hypothesised that the referred TB suspects may have decided to go to another provider outside the DOTS coverage area, may have lost the referral slip, may not have presented the referral slip to the DOTS provider, or

Figure 7: Increases in PPM referral activity and TB cases.



may have self-medicated from another pharmacy. Moreover, it was believed that public providers of DOTS facilities may not be fully aware of the TB PPM strategy and the requirements to document referrals or may have improperly recorded and reported information from the individual referral slips.

In late 2007, an assessment was conducted in the four ODs in the municipality of Phnom Penh to determine the reasons for this follow-up loss. The team identified 438 unaccounted-for TB suspects (220 males and 218 females) who made their first visit with TB symptoms to a PPM network pharmacy between January and September 2007. Of these, only 187 people (96 males and 91 females) had adequate addresses and phone numbers and could be contacted for an interview.

The assessment revealed that the problem was one of inadequate recording and reporting, not a failure of follow-up on the part of patients. Of the 187 unaccounted-for TB suspects investigated, 120 did attend the recommended facility for services, but were not recorded as having done so, even though most clients brought their referral slip with

them and gave it to the health staff. A further 56 respondents sought services elsewhere, most at a public-sector facility providing DOTS services. Only 11 did not seek any services at all.

This new understanding resulted in the development and implementation of such strategies as better training of the public DOTS staff, organizing exchange visits where the PHD and OD teams from a low-performing PPM site visits and learns from a well-performing site, and developing a follow-up system to reach the referrals that are not recorded and reported at the DOTS facility.

Figure 8 shows the numbers of the unreported referrals whom the team was able to reach between October 2008 and September 2010 and who provided information on their referral status. The majority reported that they had followed up the referral and gone to the public health system as directed. This information was consistent with the findings of the assessment in 2007. During these two years of implementing the follow-up system, the PPM was able to capture an additional 215 TB cases.

Figure 8: Follow-up on unreported referrals from October 2008 to September 2010.

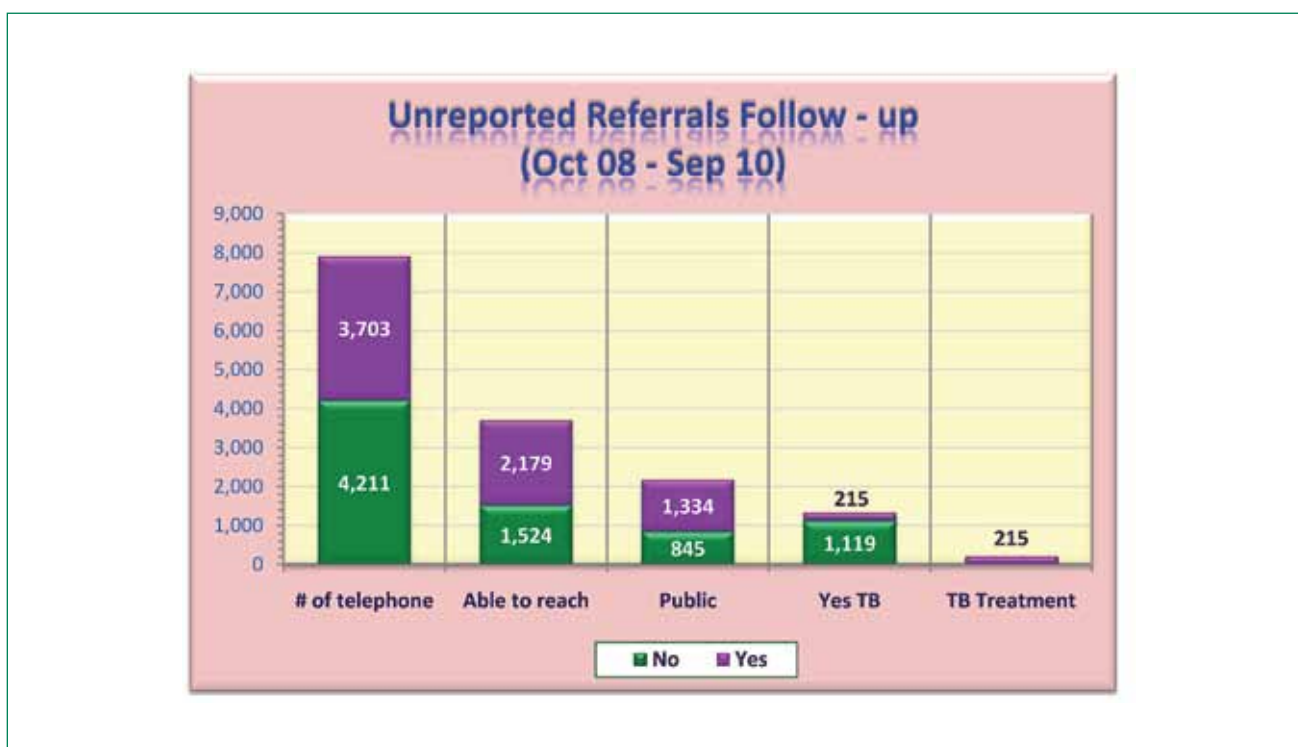
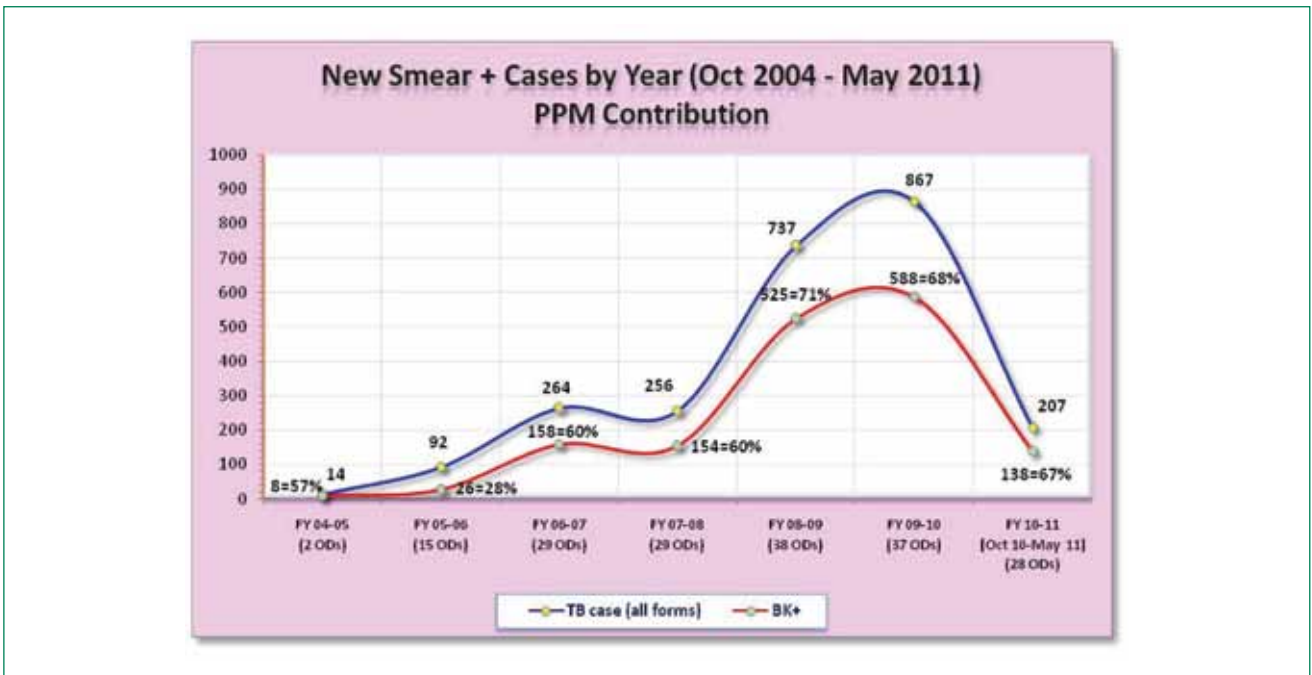


Figure 9: Number of sputum smear-positive cases compared to total number of TB cases.



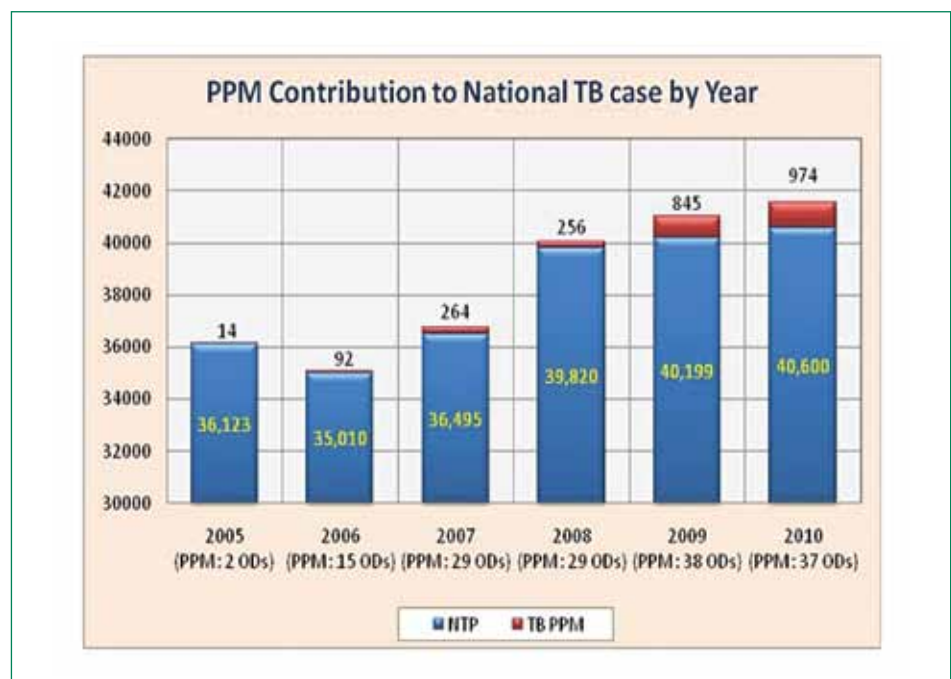
In addition, the proportion of new smear-positive cases detected out of the overall number of cases indicates the ability of the PPM process to find people at high risk of transmitting TB to others in the community. Out of the 2,230 TB cases identified since the start of the project, 1,459 (65%) of them were sputum smear positive (see Figure 9).

In contrast, the overall national data for 2009 show that only approximately 46 percent of new cases detected are sputum smear-positive.

Figure 10 shows the overall contribution of the PPM project to TB case notification in Cambodia. The totals reported in the Figure reflect all TB cases, including retreatment cases. In general, the PPM project has contributed an additional 2 percent of cases per year, and a higher percentage of smear-positive cases to

the national total. It is clear from the data above that pharmacies have the potential to contribute increasingly to detection of undiagnosed cases of TB with the potential to decrease the time that patients remain infectious, through earlier diagnosis, and to provide a high yield of cases among referrals.

Figure 10. PPM contribution to case notification









# 5

## LESSONS LEARNED

- ❖ Geographic application
- ❖ Partnerships
- ❖ Supportive supervision
- ❖ Regular meetings
- ❖ Importance of advocacy and communication
- ❖ Flexibility and innovation
- ❖ Incentives/cenves

The Cambodia TB PPM program has largely achieved its goals by focusing on three principles (1) leadership from NTP at all levels, (2) commitment from all partners, and (3) task division. Specifically, the program has been able to increase awareness and gain support for PPM from MOH officials and key stakeholders. It has succeeded in highlighting and bringing the attention of key stakeholders and donors to the important role that pharmacy staff can play in TB control. Most importantly, the PPM has supported the national TB control program in finding and successfully treating TB cases that otherwise might have been lost from the system. It has also created mechanisms for future collaboration and partnerships and has designed and implemented innovative approaches for capacity-building for various target audiences. PPM structure has also been used successfully to integrate and address other health issues such as diarrheal disease and acute respiratory infections in children under five, avian influenza, malaria, and reproductive health.

*“ We started PPM implementation in Kampong Cham province in 2006. Since then we have used the PPM structure to integrate child health, AI, and malaria. Private providers are willing to work with us to improve the health status in our communities; we sized this opportunity, other PPM sites should do the same. ”*

**Prof. Chheang Sena,  
Deputy Director of  
Kampong Cham PHD**

The process of implementation also has revealed instances where modifications in the program design are required for both efficiency and better outcomes. These lessons will help guide efforts to expand the program in Cambodia as well as initiate similar programs in other settings. Some of the key thematic areas that merit consideration are highlighted below.

## Geographic application

The pilot’s expansion out of Phnom Penh and into some of the country’s rural provinces taught the implementers lessons about the usefulness of PPM in less-populated geographic settings. The process of applying the solution to the rural areas revealed several important difficulties, including the fact that transport to the public health facilities is a major obstacle for many rural Cambodians, for whom traveling to the centers often means a personally difficult expenditure of time and money. This difficulty could well be a contributing factor in the high no-show rate of referred patients in some PPM sites.

The cost of implementing PPM in thinly populated areas is also problematic, as more funds and manpower are needed to generate a relatively small number of new cases. The efficiency of the program’s partners is also eroded as activities move further away from the major population centers.

It is probable that CENAT could achieve better results and cost-effectiveness by limiting PPM application to provincial and to large district towns, near markets and on the border areas, as well as any other setting that offers patients easy access to both private and public providers. In the rural and less densely populated areas, where these critical conditions are nonexistent, it may be a better course of action to turn TB detection and treatment responsibility over to community DOTS programs.

## Partnerships

Partnerships are commonly defined as voluntary and collaborative relationships between various parties, both state and non-state, in which all participants agree to work together to achieve a common purpose or undertake a specific task and to share risks, responsibilities, resources, competencies, and benefits<sup>7</sup>. The basic concept of partnerships is simple and straightforward—to

<sup>7</sup> Report of the UN Secretary-General, August 2003

identify common ground between groups, organizations, and institutions, and to combine their skills and expertise to engage in activities of mutual benefit. Partnerships can also make efforts more effective by combining resources and competencies in innovative ways. The PPM success is, so far, attributable to the partnerships CENAT put in place to lead the initiative. It is, therefore, very important that CENAT and donors continue to consider these very basic partnership fundamentals as the PPM transitions and expands in the future.

## Supportive supervision

The implementation of the PPM program has revealed the need for conscientious monitoring of all players and consistent feedback to ensure that they maintain a high commitment to their efforts to achieve the PPM goals.

For instance, it was observed that pharmacies that did not receive regular visits by the PHD and OD PPM teams sometimes forgot the program's importance, stopped referring symptomatic clients, and reverted to old practices of selling cough syrups and various antibiotics. Pharmacies in ODs with low performance showed a pattern of numerous months between visits by PHD or OD pharmacy supervisors and a lack of attention to the collection of referral slips. Conversely, participants from districts with high performance spoke of very frequent dialogues between the private and public partners, regular visits from the OD supervisors, and of receiving feedback on the status of referrals made. Knowing that their efforts were contributing to finding more TB cases, they said, was an incentive that encouraged them to continue to participate.

The decentralization of PPM activities from the PHD to OD PPM teams has also been slow to occur in some provinces, resulting in lower motivation by OD TB staff. Because they do not have the decision-making authority, the OD staff feel less ownership and commitment toward the project.

Human resources, staff workload, and capacity play a key role in the success or failure of a program and the TB PPM is no exception. Regardless of the interest and willingness of the PHD and OD teams to embrace and implement yet another component of the national strategy, the teams are overextended and stressed. The PPM relies entirely on data that shows that more TB cases are being identified and treated; thus supportive supervision and collection of referral slips is extremely important. However, the PHD and OD PPM teams are not able to manage the task of supervising the private sector of the PPM, which is spread out over a large area. Moreover, coordination and collaboration between the private and public sector is very difficult, if not impossible, to maintain, without the involvement of a third party. The position of the seconded provincial coordinator has been critical to the success and expansion of the PPM as it provides the technical support the teams' need, especially with training, data collection, and reporting. It also acts as a mediator and coordinator, bringing the two sectors together and keeping communication lines open and activities moving forward.

As CENAT and its partners continue to expand the PPM, funding for this support position must be identified.

## Regular meetings

The meetings between the key players of the PPM program are a critical factor in the program's success and serve several vital functions. They keep the participants—especially those from the pharmacies—engaged and enthusiastic about their roles in stopping the spread of TB. One way this effect has been achieved is by providing information on the patients the pharmacies have referred, as it is a source of considerable satisfaction to learn that a referred suspect has tested positive for TB and is now receiving treatment.



Another role of the forums is to serve as a place where private- and public-sector partners can speak with each other. This is especially important as, without these meetings, these groups would have limited opportunities to engage in structured dialogue. These conversations have helped to initiate highly useful changes in the program structure, such as a provision that patients bearing referral slips are given priority treatment at health centers with TB services, posting of signage at DOTS facilities and hospitals to guide referred clients to TB services, and posting of signage at CENAT informing clients that TB services and treatment are free and providing a phone number to report problems.

A final useful result of this open communication is that pharmacy staff have learned the best and worst times for their clients to go to DOTS facilities for evaluation. For example, during the weekend or late afternoons there are fewer or no staff to receive them, and, in some areas, TB staff is present at the DOTS facility only three days per week.

## Importance of advocacy and communication

Part of the program's success is attributable to its advocacy, communications, and social mobilization (ACSM) component, which has achieved notable, if less quantifiable, results. ACSM included such activities and outputs as training health center staff in how to better interact with people who have TB-like symptoms, health fairs to increase awareness of services provided in communities, radio and TV spots on TB/HIV, advocacy and social mobilization activities, and the production of communications-related written literature and other information materials for various target audiences. The program helped create an overall environment that encourages people with TB-like symptoms to go for testing. This is a critical support in a country where stigma related to TB remains quite high.

Anecdotal evidence also suggests that by disseminating the news that TB is entirely curable and that treatment is free, many people with TB-like symptoms have been successfully encouraged to present themselves at public DOTS facilities, often skipping the intermediate step of going to a pharmacy.

## Flexibility and innovation

As the program matures in the areas where it has been operational for several years, maintaining—and even improving—progress may be helped by modifying the operational approach. For instance, to date the program has elected not to cooperate with Cambodia's *phet phums* (mobile practitioners), as the MOH does not recognize their role in the public health arena. However, the WHO defines PPM as involving all health care providers, from the public and private sector as well as formal and *informal*. Furthermore, the *phet phums* remain a prominent factor in the Cambodian health system and, in the past, have correctly referred many

*“PPM in Cambodia works because it is based on merit-making not on momentary incentives. PPM has not only contributed to TB control and case detection. It has shaped a path for health reforms in the private sector and has formed a forum for advocacy to ban illegal and counterfeit drugs. In the last few years we have developed policies and operational guidelines for private sector pharmacies and the MOH has established inspector teams who regularly visit pharmacies to provide technical support and ensure that pharmacies adhere to the policies. I'm currently working on the Ethical and Professional guidelines for pharmacy staff. ”*

**H.E. Ph Yim Yann,**  
Advisor to MOH  
and former President of PAC

people with TB-like symptoms for treatment at public health facilities. These facts suggest that further cooperation may generate positive results. The involvement of these informal providers seems very promising, particularly with an effective supervision system in place. However it is not known to what extent *phet Phums* influence the health seeking behaviour of communities for other health issues which might increase the delay in diagnosis and receiving appropriate treatment.

Another novel approach that could be useful is finding people with TB-like symptoms who use intermediaries to obtain medication. Pharmacy staff have reported that some Cambodians—especially those who consider a diagnosis of TB to be either an unendurable social stigma or an effective death sentence—send their children or family members to the pharmacy to get medication to relieve their symptoms. A program that instructs pharmacy staff to report these intermediaries to their OD counterparts for follow-up visits could help unearth new TB cases and lessen the danger of infection in communities.

## Incentives

Recently, it has been suggested that a way to maintain pharmacy referral performance and increase the participation of the public staff at DOTS facilities is to offer a cash incentive for each suspect referred and reported back. However, experience has shown that pharmacies in Cambodia participate and support public health programs for reasons of merit-offering, professional development, and social status. While in other countries well-designed incentives and enablers can help motivate care providers to participate in TB care, in Cambodia there is no evidence to support the idea that pharmacies may be losing motivation without incentives. In 2009, CENAT introduced a financial incentive pilot for pharmacies and DOTS providers in some of the PPM sites. While the outcome of this intervention has yet to be evaluated, it is of great concern.

This policy change, which was first suggested by participants during the C-DOTS/PPM evaluation in 2008 would fundamentally alter the voluntary, “merit-making” nature of the program and could threaten its sustainability.

## Government support

Evidence from program implementation suggests that there is a strong, positive correlation between program success and a high level of support by high-ranking members of MOH, provincial, and municipal governments. With local governments able to play a significant role in shaping the behavior of private-sector health providers operating within their jurisdictions, it makes sense that establishing a positive relationship and enlisting the assistance of heads of local government is a sound move. Program teams should consider establishing these relationships early in the PPM process.

*“The National TB Program is part of the Royal Government of Cambodia’s Health Strategies and part of our public health priority areas. The Royal Government of Cambodia gives priority objectives to financial and spiritual supports, to ensure that the TB control program is successful and meets its objectives. Now we have a new task; this is to work together to ensure that there is no TB that is resistant to drugs. For this we must continue to implement the national PPM strategy and involve the pharmacy staff, in the efforts to finding more TB cases, we are very appreciative of their contributions so far.”*

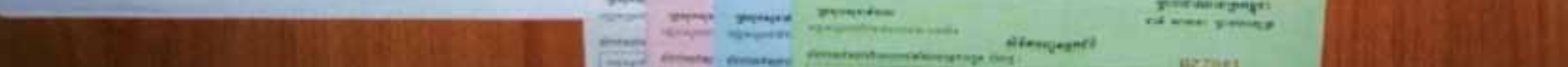
**H.E Dr. Mam Bunheng,  
Minister of Health, Cambodia**



1. ព្រឹត្តិបត្រប្រចាំខែ ឬ ប្រចាំត្រីមាស ឬ ប្រចាំឆ្នាំ ដែលបានបញ្ជាក់ក្នុងតារាងខាងក្រោម ត្រូវតែមានលក្ខណៈ ប្រកួតប្រជែង និង មានគុណភាពខ្ពស់ ដើម្បីធានាបាននូវគុណភាពនៃការងារ។  
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Item No.	Contract description of work for TB partners	Quantity (unit) and unit price	Contract value and total amount	Unit Price	Total
1	1. Technical assistance of TB partners	1 unit	1,000,000	1,000,000	1,000,000
2	2. Technical assistance of TB partners	1 unit	1,000,000	1,000,000	1,000,000
3	3. Technical assistance of TB partners	1 unit	1,000,000	1,000,000	1,000,000
4	4. Technical assistance of TB partners	1 unit	1,000,000	1,000,000	1,000,000
5	5. Technical assistance of TB partners	1 unit	1,000,000	1,000,000	1,000,000
6	6. Technical assistance of TB partners	1 unit	1,000,000	1,000,000	1,000,000
7	7. Technical assistance of TB partners	1 unit	1,000,000	1,000,000	1,000,000
8	8. Technical assistance of TB partners	1 unit	1,000,000	1,000,000	1,000,000
9	9. Technical assistance of TB partners	1 unit	1,000,000	1,000,000	1,000,000
10	10. Technical assistance of TB partners	1 unit	1,000,000	1,000,000	1,000,000
Total			10,000,000		10,000,000



# 6 PPM PRACTICAL TOOLS

- ❖ TB PPM Partner Matrix
- ❖ Terms of Reference
- ❖ Memorandum of Understanding
- ❖ Partnership Agreement between MOH and technical partner
- ❖ PPM Referral Slip
- ❖ Private Pharmacy Participation Form
- ❖ TB PPM Database
- ❖ Form for Unreported TB Client Follow Up
- ❖ Annual PPM Work Plan Sample
- ❖ Training Agenda
- ❖ Supportive Supervision Checklist for Private Providers
- ❖ Action Plan Matrix
- ❖ Training Certificate



## Tool 1: TB PPM Partner Matrix

	Task	NTP	PATH	PAC	PHD/MHD/OD	Public Providers	Private Providers
<i>Clinical Tasks</i>	Identify TB symptoms						
	Collect sputum samples						
	Refer TB suspects						
	Notify/Record cases						
	Supervise treatment						
	Smear microscopy						
	Diagnose TB						
	Prescribe treatment						
	Inform clients about TB						
<i>Public health tasks</i>	Strategy development						
	Identify supportive entities						
	Tool, IEC development						
	Follow up on defaulters						
	Training of providers						
	Supportive supervision						
	Lab quality assurance						
	M&E						
	Supply management						
	Stewardship, financing, regulation						
	Advocacy						

## Tool 2: Terms of Reference between Technical Partner and Implementing Partner

### Pharmacists Association of Cambodia Training of Pharmacy Staff on the Management of Unplanned Pregnancy

#### Scope of Work For PAC Program Manager

Since 1996 the Pharmacists Association of Cambodia (PAC) has been one of PATH's key partners in mobilizing and building the capacity of pharmacy staff and in creating appropriate linkages between the private and public health sectors. Currently, PAC and PATH are collaborating to mobilize the private sector pharmacy staff in Phnom Penh to provide appropriate information and public sector referrals related to unplanned pregnancy. This effort supports the National Reproductive Health Program (NHRP) by increasing women's awareness and access to safe abortion services and it leverages implementation of the Reduction of Maternal Mortality Project (RMMP).

The PAC program manager will work and report directly to the PATH Program Director and will be responsible for the following tasks:

- Review the scope of work and develop work plans and budgets for project activities, including training, workshops, meetings;
- Select and assign a team of coordinators to work with the PATH team;
- Provide overall technical support and oversee the activities of PAC coordinators;
- Identify additional support staff as needed;
- Coordinate and network with the NRHP and the RMMP to identify appropriate collaborations and linkages;
- Organize and facilitate meetings; and
- Provide regular, narrative reports to PATH.

#### Payment:

The Program Manager will receive a flat rate per working day upon submission of monthly activities report. In addition, the Program Manager will receive stipend for travel and communication. If additional travel and communication budgets are needed then the above rate will be adjusted accordingly. Activity expenses will be paid for directly by PATH.

#### Time frame:

The scope of work will be effective from January 1, 2009 through December 31, 2009.

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Program Director, PATH

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Program Manager  
PAC President

## Tool 3: Memorandum of Understanding between MOH and Pharmacies

### Kingdom of Cambodia “Nation, Religion, King”

#### Ministry of Health Provincial Health Department

*Memorandum of Understanding Between [private sector provider] and [Province] Provincial Health Department, Ministry of Health, Cambodia*

Director: .....

Pharmacy/depot/cabinet:.....

Address:.....

Phone:.....

This Memorandum of Understanding (MOU) has been prepared with the objective to serve the public through support of public sector activities to increase case detection and treatment of tuberculosis (TB). The private sector providers and the Provincial Health Department (PHD) herein agree to integrate TB private-private mix (PPM) of directly observed therapy, short course (DOTS) for TB control activities in [province] Province. Both parties will agree to cooperate with each other as follows:

*Private provider representative agrees to:*

- Participate in TB PPM DOTS activities in [province] Province;
- Collaborate with PHD, National Tuberculosis Program (NTP), and operational district (OD) teams and related organizations for the duration of this agreement;
- Participate in the trainings and workshops related to TB, PPM, and referrals;
- Provide accurate and correct information about TB to clients presenting with TB-like symptoms by following the national TB guidelines;
- Refer all clients with TB-like symptoms to previously identified public DOTS services for follow-up and evaluation;
- Fill in the referral slip and provide clients with correct instructions on its use;



- Keep the referral records and provide information on referral activities to the PHD/OD teams as requested; and
- Remain open to monitoring and regular supervision from the PHD and OD teams.

*[Province] Provincial Health Department agrees to:*

- Conduct regular assessments of private providers, with support from partner organizations;
- Provide general guidance and direction to the design and strategy of PPM activities;
- Cooperate with NTP, OD teams, and other partner organizations to organize and facilitate training workshops for private health providers in the TB PPM network;
- Provide technical support and instructional materials related to the TB PPM activities;
- Develop guidelines and reporting systems for clients presenting to private providers with TB-like symptoms;
- Strengthen and improve public DOTS services in accordance with national guidelines for diagnosis and treatment; and
- Design, implement, and monitor a system that acknowledges private provider contributions to TB control and fosters sustained engagement.

This MOU will be effective on the date of signing and will be valid for a period of one year.

The undersigned agree to the terms of this MOU.

\_\_\_\_\_  
**PHD Director**

\_\_\_\_\_  
**Private Health Provider**

\_\_\_\_\_  
**Date:**

\_\_\_\_\_  
**Date:**

## Tool 4: Partnership Agreement between MOH and Technical Partner

### Partnership Agreement between the Provincial Health Department (PHD) in Kandal Province and Program for Appropriate Technology in Health (PATH) for the Expansion of TB PPM

#### *Fiscal Year October 2008-September 2009 Background:*

Since January 2005 with funds from the United States Agency for International Development (USAID) PATH has collaborated with the National Tuberculosis Program (NTP) the Provincial Health Departments in six provinces namely: Phnom Penh; kandal; kampong Cham; kampong Speu; Takeo; and Sihanouk Ville the Municipal Health Department (MHD) and the Pharmacists Association of Cambodia (PAC) to develop, pilot and integrate into the overall TB control program activities a public/private partnership model for TB DOTS. The overall aim for engaging the private providers, especially the pharmacy staff, is to support the Tuberculosis program to find and refer to DOTS services people suspected of having TB. The ultimate goal is to contribute to increase detection rates, reduce diagnostic delays, and reduce additional spread of infection in the communities.

Since the PPM activities started a number of positive strides have been made. The PPM strategy is currently implemented in eleven provinces; the public and private sectors' working relationships have improved; linkages between the private and public sector are being strengthened; private sector providers are willing and motivated to refer TB suspects to DOTS services; and most importantly over the last two years between 25%-32% of TB suspects referred by private providers were found to have TB disease.

During the expansion and implementation of the PPM activities a number of challenges have been documented one of which remains the inappropriate recording and reporting of the TB suspects arriving at DOTS services referred by the private providers. In all eleven (11) PPM sites half of the referred TB suspect clients are being reported as having followed-up the referral. This ongoing challenge is creating uncertainty among the donors and the implementers as to whether engaging the private providers in case finding is actually beneficial to the TB program goals.

To respond to this challenge over the next year PATH will work with the NTP, MHD and all PHD and OD partners involved to develop a plan aimed to strengthen the recording and reporting skills and monitoring systems in order to improve supportive supervision, and recording and reporting activities.

*The Provincial Health Department (PHD) has integrated the PPM strategy into their TB control activities. This is a partnership agreement between the PHD and PATH to support this integration.*

*The PHD team will lead the implementation of the PPM strategy and will be responsible for the following:*

- Assign a focal team to oversee, implement; monitor and report on the PPM initiative. The team consists of one manager, one TB staff and one pharmacy staff. The manager shall have oversight and provide technical support to the PPM team when needed
- Adapt and implement the national PPM strategy involving private sector providers in TB control
- Lead the development of annual PPM work plans and budgets and include the PPM plans into the provincial AOP
- Oversee the PPM activities at OD level and provide support to the OD teams to ensure appropriate implementation; monitoring and recording of PPM activities
- In coordination with the partners develop strategies to improve referral tracking systems in order to improve recording and reporting of referred TB suspects
- Lead monthly or bi-monthly supportive supervision and referral tracking activities and provide technical support to private sector staff as needed
- Develop implement and monitor strategies to improve performance and recording and reporting of PPM activities in the public sector
- Coordinate and work closely with the OD PPM teams and PATH to ensure appropriate and timely implementation and reporting of the work plan
- Contribute PPM data to the national level to be included in quarterly; semi-annual and annual reports
- The PPM manager shall schedule monthly meetings with the PHD PPM team and the PATH Provincial Coordinator (PC) to go over progress of PPM activities, identify constraints and develop and implement action plans
- Organize and accompany PATH staff and others as needed to the field
- Organize and facilitate high level meetings to increase awareness and support for TB
- Participate in meetings, workshops, and various forums

*PATH is the Technical Assistance Partner. PATHs' key responsibility is to support the PHD and OD team to increase TB case detection by putting in place systems for a successful PPM model and build capacity for public and private providers. Specifically PATH will:*

- Assign a PATH provincial coordinator to the PHD
- Support the PHD and OD teams to develop; implement; monitor; and report on the public-private partnership strategy



- Support the PHD and OD teams with the development of annual; quarterly; and monthly work plans and budgets
- Provide technical and financial support to the work plans developed
- Support the PHD and OD teams with referral tracking, data entry, and analysis
- Conduct field visits, identify constrains in the field and support the PHD and OD teams to develop strategies to address these
- Build capacity for PHD and OD teams in training; facilitating; monitoring; report writing; and use of software programs such as excel and SPSS
- Document progress of PPM activities and ensure all updated files are available in the PHD and ODs
- Participate in various meetings and forums such as partner meetings and the/bi-monthly provincial technical working group for health ProTWGH to share information on PPM and explore opportunities for partner collaboration and synergies
- Develop training curricula as well as client and provider IEC and ensure that all partners have copies
- Support the PHD and OD teams with the reporting of PPM activities
- Support the PHD and ODs to develop and implement the World TB Day activities and other advocacy activities as needed

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**PPM Manager**  
**Provincial Health Department**

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**TB Program Director PATH**

## Tool 5: PPM Referral Slip

# Kingdom of Cambodia "Nation, Religion, King"



**Ministry of Health  
National Center for Tuberculosis and Leprosy Control**

### Referral Slip

No .....

*For private providers making referrals for clients with TB-like symptoms*

**PLEASE FILL IN ALL INFORMATION**

Patient Name: ..... Age:..... Sex: Male  Female

Address of Patient: House #..... Street:..... Group:..... Village:.....

Commune..... District:..... Tel:.....

Date of referral:...../...../200.....

Referred from (Place Name) : ..... Code Number:.....

Hospital/Clinic  Pharmacy/Depot  Lab  Factory/Enterprise

To (Place name) :..... Public Service  Private Service

Symptoms  Cough over 21 days  Chest pain  Fever  Cough with blood

Others: .....

For: Smear exam

**Please fill in the below information in the case that your client has received these services:**

Use other drug besides TB drug: Yes  No  (Drug Name..... number of days used.....)

X-Ray: Yes  No  (Please tell you client takes it along)

Smear exam: Yes  No  (Please tell your client take the result of smear exam along)

If your clients have other documents please tell them to take it with them.

Please tell your client that he/she has symptoms that might be TB, so he/she needs to go to health center or referral hospital for proper diagnosis (check smear). Please give this referral slip (Blue and Pink) to your client and ask your client to bring it along and give it to the health center or referral hospital staff.

**For public provider to fill in:**

Date of patient visit: ...../...../200.....

Smear result :	Lam 1	Lam 2	Lam 3
Smear exam 1			
Smear exam 2			

X-Ray No  Yes

Active TB  TB suspect  TB scar  Other..... Clarify.....

**Diagnosis:** BK+  BK-  EP  No TB

Case without TB : Refer back to Private service  Do not refer back to private service

Reasons:.....

Name of health facility:..... Signature and Name:.....

- **Health service:** Public or private health service recognized by Ministry of Health in TB diagnosis.
- Note:** This sample is used for public and private mix to implement of DOTS strategy.

## Tool 6: TB PPM Database

**TB PPM DOTS**

Referrals, received and results

Province/Site (ខេត្ត) :

OD (ស្រុក/ប្រតិបត្តិ) :

Month (ខែ) :

Code (លេខកូដខេត្ត) :

Code (លេខកូដស្រុក/ប្រតិបត្តិ) :

No	Name TB Suspect ឈ្មោះអ្នកជំងឺសង្ស័យ	Age អាយុ	Sex ភេទ	Pharmacy/Cab/Dep.... (Referral)					HC/RH/CENAT .... (Received)				Checked					Note ផ្សេងៗ
				Name ឈ្មោះកន្លែងផ្តល់	Code លេខកូដ	Type ប្រភេទ	Date ថ្ងៃ-ខែ-ឆ្នាំ	To HC/RH លេខកូដ សេវារដ្ឋ	Name ឈ្មោះកន្លែងផ្តល់	Code លេខកូដ	Type ប្រភេទ	Date ថ្ងៃ-ខែ-ឆ្នាំ	Smear ពិនិត្យ កំហក	X-Ray ឯកភាព រស្មីអ៊ីច	Result លទ្ធផល	Treat ព្យាបាល	Refer Back បញ្ជូន ត្រឡប់	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(14)	(15)	(16)	(17)	(18)	(19)	(20)



## Tool 7: Private Pharmacy Participation Form

### Private Provider Assessment to Participate In TB PPM DOTS



Name:.....

Title: Dr..... Pharmacists:..... Pharmacy staff:..... Other:.....

Name of Pharmacy/Cabinet/Clinic:.....

Address: .....

Village: .....

Commune: .....

District: .....

Phone number: .....

Private:..... Both (MoH Staff and private provider):.....

.....

Willing to join TB-PPM activities with PHD Yes:..... No:.....

## Tool 8: Annual Work Plan Sample

### Objective 1: Continue implementation of PPM activities in project sites.

Activities	Indicators	Targets	Timeline			
			Q1	Q2	Q3	Q4
1.1 Quarterly meetings with PHD, OD, and private sector project participants.	# of meetings conducted	40 meetings held	X	X	X	X
1.2 Monitoring and reporting of PPM referral activities	% of referrals being evaluated at public DOTS facility	> 60% of referrals recorded as evaluated by Q4 in all ODs	X	X	X	X
1.3 Ongoing training of providers in the PPM network.	# of new providers trained	(see targets in previous table)	X	X	X	X
1.4 Supply of forms, tools, and provider and client IEC materials.	% of ODs with sufficient PPM materials to perform tasks without interruption	100% of ODs have sufficient materials	X	X	X	X
1.5 Continue ACSM technical assistance to create political support for PPM, engage community in TB control, and improve local TB control results.	# of ACSM action plans developed and implemented in project ODs	15 ODs with ACSM action plans that are being implemented	X	X	X	X

### Objective 2: Improve performance of PPM referral, recording & reporting, and monitoring & evaluation systems based on the C-DOTS and PPM evaluation report, project experience, and PATH's study of referred suspects who were lost to follow-up.

Activities	Indicators	Targets	Timeline			
			Q1	Q2	Q3	Q4
2.1 Strengthen supportive supervision to maintain project quality.	% of supervisors using the monitoring checklist to track PPM activities % of private facilities engaged in PPM project that receive feedback on referrals on at least a bimonthly basis	75% of supervisors regularly use monitoring checklist 85% of private facilities receive feedback on a bimonthly basis				
2.2 Improve data collection, quality, and management.	% of referral forms completed correctly % of ODs and PHDs using the referral database to upload data to CENAT Use of data by CENAT and TWG to track PPM performance and make adjustments	>85% of referral forms completed correctly >90% of ODs and PHDs using referral database correctly Evidence that adjustments are being considered based on data analysis				
2.3 Reduce referrals lost to follow-up by developing and introducing improvements to elements of the referral system.	% of referrals lost to follow up	<40% of referrals are lost to follow-up by Q4	X	X	X	X

**Objective 3. Successfully transition PPM activities to CENAT, partners, and local staff.**

Activities	Indicators	Targets	Timeline			
			Q1	Q2	Q3	Q4
3.1 Conduct site-specific PPM assessments of all project sites.	% of project sites with site-specific assessments completed	100% of project sites have assessments	X	X		
3.2 Map PPM partner geographic coverage and scope.	Partner mapping available	All partners identified, geographic coverage noted, and scope of work summarized	X	X		
3.3 Engage additional professional organizations in TB control.	Professional organizations joining PPM efforts	CMA and CMC sign MOUs with MOH to support PPM and ISTC	X	X		
3.4 Develop a transition plan in collaboration with CENAT, local partners, and USAID.	Transition plan available and implemented	Transition plan completed by Q2 and transition completed by Q4	X	X	X	X
3.5 Produce a final PPM toolkit with all materials necessary for expansion of the project.	Toolkit available	Toolkit produced containing high-quality materials in English and Khmer	X	X		
3.6 Introduce the PPM Toolkit to all local partners.	# partners trained to use Toolkit	120 partners trained and able to use Toolkit		X	X	X

**Objective 4. Contribute to development of a sustainability plan in collaboration with CENAT, do nors, and partners engaged in supporting PPM activities.**

Activities	Indicators	Targets	Timeline			
			Q1	Q2	Q3	Q4
4.1 Actively support coordination between all PPM partners through the PPM Technical Working Group.	# TWG meetings held TWG engages actively in PPM sustainability planning	At least 4 meetings held Sustainability plan produced with significant TWG input	X	X	X	X
4.2 Ensure that PPM activities remain an integral part of CENAT and local TB planning processes.	National PPM Strategy available PPM activities included in Annual Operational Plans PPM activities are included in funding requests	PPM strategy finalized and adopted National and provincial Annual Operational Plans and budgets include PPM activities Funding requests to GFATM and other donors include PPM activities	X	X	X	X
4.3 Document and share best practices in PPM.	Best practices document available	PPM Best Practices in Cambodia disseminated to all in-country partners		X	X	X

## Tool 9: Training Agenda

### DAY ONE

#### Component I: Attitude

*Strengthening the Quality of Pharmacies and Depots*

	Opening Ceremony	45 minutes
<b>Session 1</b>	Introductions, Expectations and Pre-test	1 hour 30 minutes
<b>Session 2</b>	The Role of Pharmacy and Depot Staff in Improving People's Health	2 hours 15 minutes
<b>Session 3</b>	Challenges of Pharmacies and Depots in Fulfilling Their Roles	1 hour 30 minutes
<b>Total time without breaks</b>		<b>6 hours</b>

### DAY TWO

#### Component II: TB Technical Information

*Public and Private Sector Partnerships in Implementation of DOTS*

<b>Session 1</b>	TB Background Information	1 hour 30 minutes
<b>Session 2</b>	TB Diagnosis, Transmission and Prevention, and the Relationship between TB and HIV	3 hours
<b>Session 3</b>	The Referral Process	1 hour 15 minutes
<b>Total time without breaks</b>		<b>5 hours 45 minutes</b>

### DAY THREE

#### Component III: Communication

*Applying Communication Skills to Improve Client Health*

<b>Session 1</b>	Effective Communication Skills	3 hours
<b>Session 2</b>	Communicating with Clients	1 hour 45 minutes
<b>Session 3</b>	Closing ceremony and presentation of certificates	45 minutes
<b>Total time without breaks</b>		<b>5 hours 30 minutes</b>



## Tool 10: Supportive Supervision Checklist for Private Providers

### Technical knowledge on TB

*Do private providers know:*

At least three TB symptoms?

Yes  No

TB is curable?

Yes  No

TB is a communicable disease?

Yes  No

TB is transmitted by coughing, sneezing, and/or spitting?

Yes  No

TB can be prevented by covering the mouth and nose when you cough and by curing TB patients?

Yes  No

Duration of TB treatment?

Yes  No

TB treatment is free?

Yes  No

How TB is diagnosed?

Yes  No

Causes of resistant TB?

Yes  No

### Knowledge of DOTS services

*Do private providers know:*

Location of health canters and referral hospital services?

Yes  No

Location where people are referred if presenting with TB-like symptoms?

Yes  No

How to correctly use of referral slip?

Yes  No

To place white and green slips are in the book?

Yes  No

How to fill the slip out completely?

Yes  No

### IEC and client materials

Are TB job-aids present?

Yes  No

Are TB posters displayed?

Yes  No

Are TB booklets available?

Yes  No

### Technical support needed

*If technical support is needed please indicate which area:*

- TB: Yes  No
- Availability of DOTS services in the area:  
Yes  No
- Filling the referral slip:  
Yes  No
- Giving the correct referral slip to the client:  
Yes  No

### Facility Information

*Type of facility (pharmacy, cabinet, lab):*

Name and address of facility:.....

Province: .....

Name of provider: .....

Number of people participating:

Contact number:.....

Date of visit:.....

Duration of visit:.....

Name of supervisor: .....

Next appointment: .....

**Supportive supervision action follow-up plan**

Description of the problem	Opening Ceremony	Action	Who/Level	Time frame /Status updates

## Tool 11: Action Plan Matrix (PPM Meetings)

### Supportive supervision action follow-up plan

Description of the problem	Causes of the Problem	Action	Who/Level	Time frame /Status updates
Patient did not come on the appointment date	- Clients do not believe they got TB - No meant of transportation	Try to explain more and do not use the word TB, instead use lung diseases or cough disease Provide transportation fee Expand TB network establish private sectors to increase case detection rate and DOTs service – but think about quality of services	Public and private, NGO, public, and partner	From today on
Clients do not know HC has TB services	Do not have knowledge	- Both private and public increase health education - More education materials - Drawing picture for who cannot read	Together NGO and NTP	The faster the better
Clients difficulty to meet health staff	Health staff do not welcome	Health staff need to take care of clients Private sector help to explain the client to understand about health staff	Participated by private and public	From now on
Client do not have time and mean of transportation	Poor and busy with occupation	- Provide transportation fee - Expand TB network establish private sectors to increase case detection rate and DOTs service – but think about quality of services	NGO, government and partners	? ?
Patients arrive public sector, CENAT, outside motor taxi convince/take them to private clinics	- Patients limited of public TB information - Patients believe on motor taxi drivers	Regulate on motor taxi in front of CENAT Private sector help to convey information about motor taxi to their clients – tell them do not believe on motor taxi – Together help to spread about motor taxi information in front of CENAT – tell them do not believe	Private and public	From now on
Doing X-Ray need to pay 15000Riels	Patient do not have enough documents while they are going to X-Ray (referral slip) and process following the steps	- HC staff need to help organizing completed documents to proof and not to pay for X-Ray - The better way is referring to HC	HC and private	

# Tool12: Form for Unreported TB Client Follow-up

Month											
No	Name of referred client	Sex (M/F)	Phone	Age	Able to Reach (Y/N)	Date of Call	Summary of discussion	Went to DOTS (Y/N)	Type of referral facility (public/private)	TB? (Y/N)	Comments



# Training Certificate







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Page 19: PATH

Page 20: PATH; PAC

Page 22: PATH; PAC

Page 24: PATH

Page 25: PATH

Page 26: PATH

Page 28: PATH

Page 29: PATH; PAC

Page 35: PATH

Page 41: PATH

Back cover: PATH



