

NORTON
GRADUATE SCHOOL



KINGDOM OF CAMBODIA
NATION RELIGION KING

**EVALUATION OF THE REVOLVING DRUG FUND PROJECT
OF PATIENT INFORMATION CENTRE**



**A Research Report in Partial Fulfillment of
The Requirements for the Degree
Master of Business Administration**

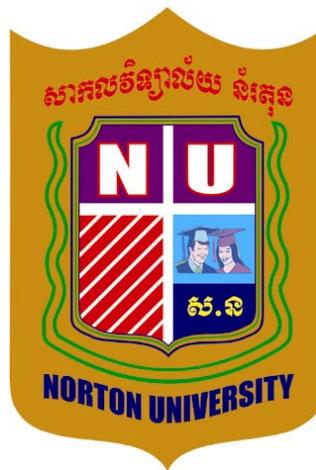
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August 2010**

EVALUATION OF THE REVOLVING DRUG FUND PROJECT OF PATIENT INFORMATION CENTRE

A Research Report

Presented to

**The Faculty of the Graduate School
Norton University
Phnom Penh, Cambodia**



**In partial fulfillment of
The requirements for the Degree
Master of Business Administration**

By

**SUY VANNAK
August 2010**

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Master of Business Administration

Approved by the Committee with a grade of **passed**

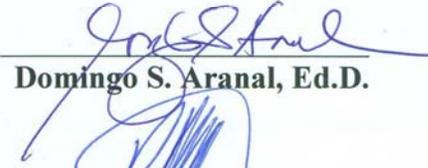
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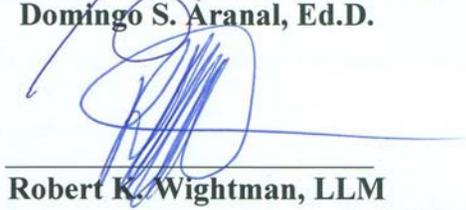
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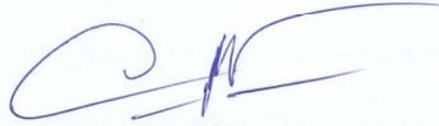
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ABSTRACT

The research report focuses on evaluating the revolving drug fund management system of MoPoTsyo in terms of its organizational structure, drug supply system, and financial system. Further, it attempts to describe the members' demographic profiles of MoPoTsyo in order to set the price that is affordable to as many patients as possible but allows the MoPoTsyo to recover its costs. The purpose of this research study is to improve current management system of revolving drug fund in order to set targets and can convince investors to finance the growth and to negotiate better with the suppliers and to plan better for the system to become financially sustainable. Moreover, the measurement of the current management system of revolving drug fund's performance can be determined throughout the evaluating of organizational structure, drug supply system, financial system and the members' demographic profiles of MoPoTsyo. The study revealed that the Revolving Drug Fund (RDF) project of MoPoTsyo has achieved such as:

- a. The RDF structure which attributed to its small and flexible structure, it combines social objectives with private style management;*
- b. People living with diabetes can access to the most affordable GMP-quality medicines;*
- c. People living with diabetes can access to cost effective for their medical consultation;*

These achievements could be successfully replicated in other Operational District in Cambodia with the similar contexts in Ang Roka Operational District in Takeo province.

However, the Revolving Drug Fund (RDF) project of the NGO MoPoTsyo has not yet fulfilled their financially sustainable. Based on the research study during the first half of 2010 of the Revolving Drug Fund (RDF) project of MoPoTsyo in Operational District Ang Roka, Takeo Province, and the figure show that, the cost recovery from drug sales has only 22% of the whole organization to be sustain.

ACKNOWLEDGEMENTS

This research report was accomplished with a precious support from many individuals. Hence, I would like to express and extend my deepest gratitude to all those respectful and helpful persons:

- To my family: my parents, my wife Cheath Khemrany, my son Monint, my daughter Monineath, who have provided me the most necessary support, and their encouragement for the completion of my MBA degree;
- To Norton University: Dr. Domingo S. Aranal, my course facilitator and Officer-in-Charge of the Graduate School who played a very crucial role in the completion of this report. Without his assistance, this report would have not been achieved. He is a very dynamic, punctual, and responsible professor, advisor and has spent a valuable personal time in providing me the consultation, guidance, and comments, thus making this report worth academically; Moreover, I wish to thank all lecturers of Norton University who have always kept providing me an important idea, knowledge, and experience during the entire course of my study; and
- To MoPoTsyo-Patient Information Centre: Mr. Maurits van Pelt, director of MoPoTsyo who provided me the opportunity to conduct the research for the completion of my academic requirements. Furthermore, I wish to thank to Pouv Sothearin, Mao Ngeav, Soeung Sochitra, Dr Em Savoeun, Dr Sok Bunna, Cheath Soritya, Leang Vannary, Bun Socheath, Thon Sothean, Thorng Sovanra, Keut Bunchhean, Kem Boreth from the MoPoTsyo office staff for their helpfulness and supported me with information and material that I needs for my study. Lastly, I want to thank to the peer educators of MoPoTsyo for facilitating the contact to the diabetics and for helping me facilitated during the interview days.

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ACRONYMS & ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
DM	Diabetes Mellitus
DPPM	District Peer Program Manager
FBG	Fasting Blood Glucose
GMP	Good Manufacturing Practice
HEF	Health Equity Fund
HBP	High Blood Pressure
HIV	Human Immunodeficiency Virus
HQ	Head-Quarter
IDA	International Dispensary Association (Netherlands)
MBA	Master of Business Administration
MD	Medical Doctor
MoH	Ministry of Health
MoPoTsyo	Patient Information Centre
MSH	Management Sciences for Health
NCD	Non-communicable Disease
NGO	Non-governmental Organization
OD	Operational District
OTC	Over the Counter
PA	Provincial Administrator
PEN	Peer Educator Network
PPBG	Postprandial Blood Glucose
PPPM	Provincial Peer Program Manager
PWD	People with Diabetes
RDF	Revolving Drug Fund
TB	Tuberculosis
USD	United State of America Dollar
WHO	World Health Organization

CHAPTER I

INTRODUCTION

1.1. Background of the study:

Cambodia has a population of 13.4 million, 80% living in rural areas. With a gross national income estimated at US\$540 per capita for 2007, the country faces severe problems in coping with both communicable and non-communicable diseases. As King, H., Lim, K., Serey, S., Touch, K., Roglic, G., and Pinget, M. (2005) revealed in their study over 255,000 people in Cambodia are suffering from diabetes. About a half of the diabetics also suffer from hypertension and many people have dyslipidemia's putting these people at high risk for developing Non Communicable Diseases.

Many Cambodians do not get diagnosed until their bodies have suffered a lot of damage, so much too late. In addition, many Cambodians do not have access to good information on how to live properly with the disease, to manage it and to control it optimally at low cost. The information shortage is greater for Cambodians who are illiterate and poor. As Maurits van Pelt (2009) revealed in the article of Improving Access to Education and Care in Cambodia published in *Diabetes Voice*, 90% of people with diabetes get no care. The professionals to give all of them the care do not exist, and the money to pay the services is not available in the society.

The Patient Information Centre is oftentimes referred to as “MoPoTsyo”, which is its Khmer term equivalent. Hence, from this point onward, this term shall be used to refer to the Patient Information Centre. The primary goal of MoPoTsyo is to make reliable and useful information about chronic NCD accessible to all Cambodians who want to learn about their disease. So, they can self manage and keep their cost as low as possible. It carries out this objective by:

First, by identifying a volunteer Diabetic Peer Educator in the communities it serves;

Second, by training all those who have been identified as volunteer Diabetic Peer Educator in each of these communities for a period of one month, after which they are subjected to an exam to determine whether they qualify to perform the diabetic examinations. If they qualify, then they receive their diabetic training kit as they return back to their village. They also put the MoPoTsyo board sign in front of their house; they visit the local health authorities in their community to get a formal introduced by the provincial program manager.

Third, by doing the task assigned to them as determined by MoPoTsyo; this include conduct house to house by explaining how people can self-screen their urine for glucose two hours after the meal. If the urine strips changes color, she or he will do a confirmation Blood Glucose tests with the Blood Glucose Meter, either a Fasting Blood Glucose or a Postprandial Blood Glucose to determine if they are diabetic or not.

Peer Educators give counseling to people with diabetes. They invite them to join the group sessions at the home of Peer Educator to learn the 6 lessons that the Peer Educators routinely give (Biology, Diabetes, Balance, food, Drugs and Self-Testing) and they get the self-recording book and lifestyle advice on food, physical activity, and learn how to keep track of urine glucose including a 24 hour glucose test.

They formally assess the patient by filling out quite an extensive form which they send to their manager and which is entered into the MoPoTsyo's database.

In the weeks that follow, the Peer Educator meets the new patient, reports monthly on progress. If the urine glucose does not disappear, if Blood Glucose remains too high after some time despite the lifestyle changes, the Peer Educator make an appointment with the doctor at the local hospital to get a prescription.

In exchange for their tasks, the Peer Educators get their costs reimbursed; mainly transport costs, and some incentives.

The purposes of establishing this group are (1) to find other residents in the community who have diabetes and with hypertension, and (2) to help them cope better with their disease.

Moreover, pharmaceuticals are essential for preventive and therapeutic health services. In Cambodia, most of the public service medicines are procured centrally and distributed in kind of public health facilities. Frequent shortages in central supply are addressed through local purchases by health authorities using user fee revenue. Although medicines represent a large portion of government budget, they remain inadequately funded. The procurement system bears perverse incentives leading to higher prices. Stock outs occur frequently. As a result, patients are often asked to purchase medicines themselves. Without a functioning social health protection system, this leads to low quality treatment, high and sometimes catastrophic out-of-pocket expenditures, poor health outcomes and devastating effect on household poverty.

The current health service model has not been designed to deliver chronic care for chronic patients. There is no related medicine supply for chronic patients. While patients with HIV-AIDS and TB benefit from vertical programs, including drug procurement and distribution systems, which is managed and funded outside the central supply system, according to the figures compiled by Maurits van Pelt (2009) in the article *Link to Affluence Hides Extent of Diabetes Problem* published in the *Cambodia Daily*, March 26, 2009, 60% of health sector donations to Cambodia go to communicable disease, with HIV/AIDS topping the list. Only 1% is devoted to non-communicable diseases; thus patients with other chronic conditions are excluded from adequate care. In this context, the situation of patients living with NCD and chronic conditions such as diabetes and hypertension is much worse as there is no Continuum

of Care, no central supply, nor vertical program for them. The burden of out-of-pocket for medicines therefore has a lifetime implication for this vulnerable group and their households. In addition, even if public procurement and supply of medicines were functioning for them, the costs of supply for this large group of chronic NCD patients dwarfs the needs of the underfunded acute care patients, and therefore would indeed be well outside the range of what can realistically be expected to be supported. Given that the essential drug supply system does not even work well for acute care patients and that supply for chronic patients is much more challenging and costly, the solution for chronic patients and that supply for chronic patients with NCD cannot be simply “more of the same”. In other words, there has to be room for innovation in this emerging area of public health especially with regard to innovative financing mechanisms. Currently, essential medications for diabetes and hypertension are not available for outpatients in public health center and hospital. Patients diagnosed with diabetes or hypertension in Cambodia need to be either hospitalized or purchase medicines in private settings. In such conditions, most patients do without western medicines for their chronic disease. Irregular purchase from drug sellers and OTC diabetes and hypertensive medications is commonplace and does not allow integration of health education, testing and routine care with delivery of prescription drugs.

As part of an innovative approach to care of patients with diabetes and high blood pressure, the MoPoTsyo patient information centre has implemented a community based Peer Educator Network intervention that, besides the organization of community self-screening, peer educator on how to cope with diabetes, diabetes education, lab-tests, referral for specialized medical care, also manages a Revolving Drug Fund (RDF). The network has only 2 sources of revenue which are the pillars of financial sustainability for continuum-of-care: firstly, the RDF and secondly, the Laboratory Services for its members. Both the RDF and the

laboratory services are delivered in close collaboration with the public health authorities. The medical consultations and referral care take place within the public services. MoPoTsyo's community approach and laboratory and medicines components are therefore entirely integrated with the available district health services.

The objective of the current work is to document access to diabetes and hypertensive essential medicines within this community based peer educator program in Cambodia and review its integration into the operational district health services. The work may recommend further district integration without jeopardizing access to care and financial sustainability of the continuum of care.

By end of June 2010, MoPoTsyo has almost two years experience with 12 private pharmacies (2 in Phnom Penh, 6 in Takeo province and 4 in Banteay Meanchey) who have been selling the prescribed the medicines to 1,581 of MoPoTsyo's diabetic members (among whom 5% on insulin). The 12 contracted pharmacies bought the medicines from MoPoTsyo's Revolving Drug Fund.

1.2. Statement of the problem

This study attempts to evaluate the Revolving Drug Fund Project of MoPoTsyo. Specifically, it seeks to answer the following questions:

1. How does MoPoTsyo manage its Revolving Drug Fund in terms of:
 1. a. organizational structure
 1. b. drug supply system
 1. c. financial system
2. What are the members' demographic profiles of MoPoTsyo?

1.3. Objectives of the study

1. To assess the current Revolving Drug Fund management system of MoPoTsyo in terms of:
 1. a. organizational structure
 1. b. drug supply system
 1. c. financial system
2. To describe the members' demographic profiles of MoPoTsyo

1.4. Signification of the study

The research report will improve current management system of Revolving Drug Fund. With this information the organization can set targets and can convince investors to finance their growth and can negotiate better with their suppliers and they can plan better for their system financially sustainable.

1.5. Scope and delimitation of the study

The study focused on the evaluation of the Revolving Drug Fund of the MoPoTsyo. To limit its scope, the study has particularly concentrated on determining the organizational structure, drug supply system and financial system of the Revolving Drug Fund management of MoPoTsyo. Moreover, it further investigated into described the members' demographic profiles of MoPoTsyo. However, it is important to note that this study does not intend to make an in-depth evaluation of the situation of each the MoPoTsyo' s RDF, but rather it only provides a general or total view of these RDF management. In addition, the evaluation has only focused on data and figure came from originally from a consolidation report of all MoPoTsyo NGO's from the half of 2008 to the half of 2010.

1.6. Research methodology

This study has made use of basically primary data and secondary data which were gathered from:

Primary data: The study was conducted by interviewing the key concerned personnel Mr. Maurits van Pelt, director of MoPoTsyo and interviewing with people with diabetes enrolled with MoPotsyo.

Secondary data: The study was conducted based on real expenditures and based on consumption data through patient invoices since mid 2008 when the MoPoTsyo started its Revolving Drug Fund project.

CHAPTER II

REVIEW OF RELATED LITERATURE AND DISCUSSION

This chapter is divided into two parts. First is the review of related literature and second is the discussion on the research questions raised in chapter I.

2.1. Review of related literature

2.1.1. Background of MoPoTsyo (Source: *Articles of Association of MoPoTsyo 2005, page 1*)

The **MoPoTsyo** is a Cambodia nongovernmental organization (NGO) established in 2004 by five Cambodians and one Dutch to provide an institutional and practical response to the information needs for people with chronic disease in Cambodia.

Most Cambodians with diabetes or high blood pressure are undiagnosed. Those who have been diagnosed with diabetes or hypertension do not have access to good information that would help them keep their disease under control. Without patient involvement and understanding of the disease, treatment adherence is more likely to fail. **MoPoTsyo** helps Cambodians with diabetes and high blood pressure to get them-selves organized.

The vision of MoPoTsyo

The MoPoTsyo's vision is a society in which people with chronic disease are actively involved in managing their own disease. This can be realized by training *passive patients to become active people* able to manage their disease and share their knowledge and skills with others.

The mission of MoPoTsyo

The MoPoTsyo's mission is to improve access to reliable information for Cambodian diabetics and associated disorders, especially those who are poor. MoPoTsyo wants to make living with diabetes and other chronic diseases more affordable and feasible for Cambodian's poor.

2.1.2. Project Activities (Source: Annual report of MoPoTsyo 2009, page 9, 10)

- **Setting up patient information centers in poor communities:** A meeting point, usually the home of a person with diabetes, where other people living with diabetes (and related diseases) can get good information about their disease and meet fellow patients. There people can exchange their experiences, support each other and find out about good health service providers.
- **Design of a diabetes patient information kit:** The diabetes patient information kit provides training materials developed from foreign source materials and adapted to Cambodian habits and customs. The training kit is used by peer educators during individual and group sessions in patient information centers inside poor communities.
- **Organizing of community based self screening for diabetes:** The peer educators organize detection “self-screening” of diabetes in order to create a community of patients. The techniques used are self-administered urine strips after lunch, which is followed by a confirmation Fasting Blood Glucose test with a hand-held glucometer measuring capillary blood, using 126mg/dl or, in case of PPBG, the limit of 180mg/dl for all the adults who report that their urine indicated presence of glucose. After finding someone meeting the criteria for DM, they assess any patient that they detect (screen in), counsel them and, if necessary, advise them to see a doctor. People with Pre Diabetes (>100mg/dl at FBG) *should ideally* receive counseling. Please note: screening is not done in order to be able to screen out participating adults. The screening is done to increase people’s awareness of this risk factor, demystify the diagnosis and give people an opportunity to learn how to remain healthy or regain their health. People whose urine does not show presence of glucose are told that it is recommended to test again in a year or so. Done this way, it is a cheap but imperfect

method in order to create a community of diabetes patients. To do accurate screening, MoPoTsyo would have to make much more costs and MoPoTsyo would not be able to teach people how to *self-screen*. So perfect screening would make MoPoTsyo's activity less cost effective especially in the long term. The self-screening can easily be repeated which is necessary for early detection of diabetes among a population who is not used to attend the public services. It greatly enhances the general awareness of diabetes and it helps to demystify the disease among the general population lowering the barriers to earlier diagnosis, problems which the formal system has not been able to address by itself.

- **Organizing of community based self screening for high blood pressure:** After one suitable diabetes patient with high blood pressure has been trained and appears to be self-managing well, the peer educator starts a screening intervention at the village level where this person lives. The HBP screening is done with automatic blood pressure meters. It is the peer educators based at the grass roots who talk with the households, group leaders, village leaders and others to organize the hypertension self-screening village by village. In every village, the peer educator creates a group of high blood pressure people around the trained diabetic with high blood pressure. Through that trained patient, the information is then conveyed to the other members of the high blood pressure group, who do *not have diabetes*. Diabetes has become the entry point to create informed communities of high blood pressure people at the village level. MoPoTsyo use a co-morbidity of diabetes as an opportunity to hook onto it an intervention of which other chronic patients will be able to benefit. HBP could be just the first of the other problems (MoPoTsyo think of dyslipidemia's, heart problems etc.) in the future.

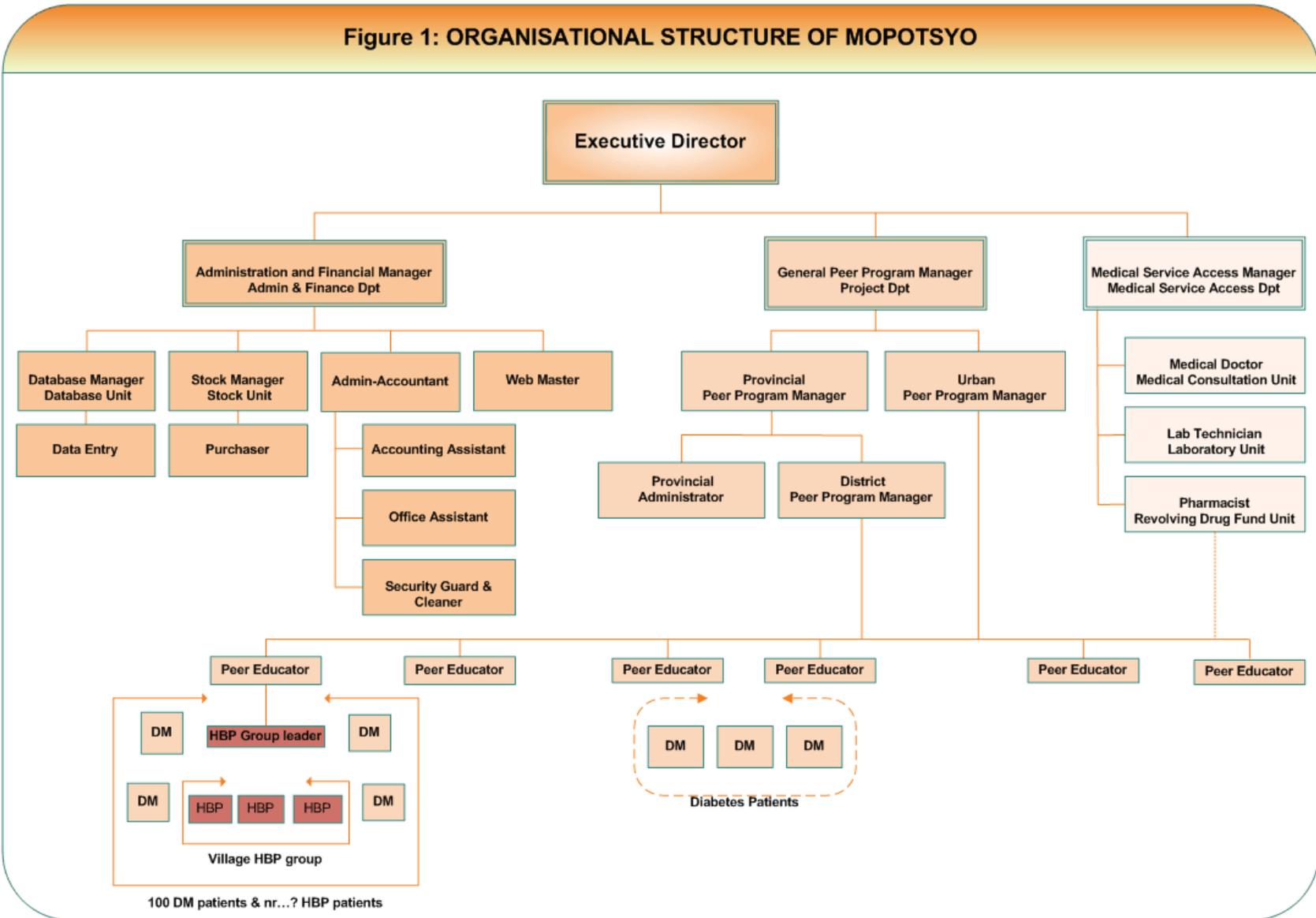
- **Coaching diabetes and hypertension people how to deal with the health system:** MoPoTsyo trains peer educators to protect the vulnerable diabetes patients against taking unnecessary loans to pay for health care costs. Unprotected patients often lose their assets, paying too much money for very low quality care. Informed patients do not just save money, but they are healthier, more confident and better equipped to voice their concerns to improve their situation. From passive victims, many diabetics have become responsible actors.
- **Provision of Equity fund:** If an individual has a problem related to accessing care or they cannot afford the usual care, then MoPoTsyo patient information centre tries to help the person overcome the problem. The main barriers that patients encounter are related to user fees, transport costs and costs of pharmaceuticals. As long as people suffer from very high blood sugar and hypertension, they are too sick to work and earn income. MoPoTsyo patient information centre has helped many patients to become "productive again" and earn their own income or stop being a drain on the household income. Few have remained financially dependent on MoPoTsyo patient information centre.
- **Primary Prevention:** In rural areas MoPoTsyo are able to recruit school teachers as peer educators. Once they are "ready" with their diabetes patient community in their health center coverage area, they can also be mobilized to form a team of diabetic school teachers who visit schools in order to improve health determinant awareness among their colleagues. A pilot took off in 2008 and continued in 2009 with interesting results. The action aims to turn teachers into better role models for the school children and develop together with them appropriate action to improve health behavior of the school children in a healthier environment in the long term.

- **Management of a Revolving Drug Fund for its members:** MoPoTsyo purchases and imports GMP-certified essential generic prescription medicines from reliable international suppliers (Europe) to re-stock its Revolving Drug Fund to make sure that all MoPoTsyo members with diabetes and high blood pressure always have access to affordable good quality prescription medicines at distribution points close to their home. These medicines are dispensed to MoPoTsyo's members via contracted licensed pharmacies for a price that does only recover the costs of MoPoTsyo operations and activities without making any profits for MoPoTsyo or any of MoPoTsyo's board members or staff.

2.1.3. Organizational Structure *(Source: Annual report of MoPoTsyo 2009, page 40)*

This chart shows that MoPoTsyo have put a Peer Program Manager at the head of each of the networks, with a General Peer Program Manager overseeing each salaried PPPM, UPPM, DPPM and PA as they lead their network of peer educators in an area (**Figure 1**).

Figure 1: ORGANISATIONAL STRUCTURE OF MOPOTSYO



A part of the administration and finance will be decentralized to each of the networks over time to ensure that MoPoTsyo Headquarters does not become a micro manager. This decentralization process started in 2008 by training of local people in the networks to take on administrative tasks.

Historically, MoPoTsyo is an “information” provider, not a health service delivery organization like a diabetes clinic. MoPoTsyo has not yet adapted their organizational structure to the fact that they are increasingly being forced to help organize health services that are lacking and to deliver certain health services themselves. In order for them to be able to continue to advise large numbers of members on what is best for them, MoPoTsyo is moving into territory for which they are not well equipped, but nor is anyone else. In the coming years MoPoTsyo will have to develop their own capacity to deal with this challenge and not take on responsibilities and tasks where they can decentralize these to their local partners without that this compromises access to medical services for their members.

2.2. Discussion

Research Question1: How does MoPoTsyo manage its Revolving Drug Fund in terms of:

1.a: RDF’s Organizational Structure

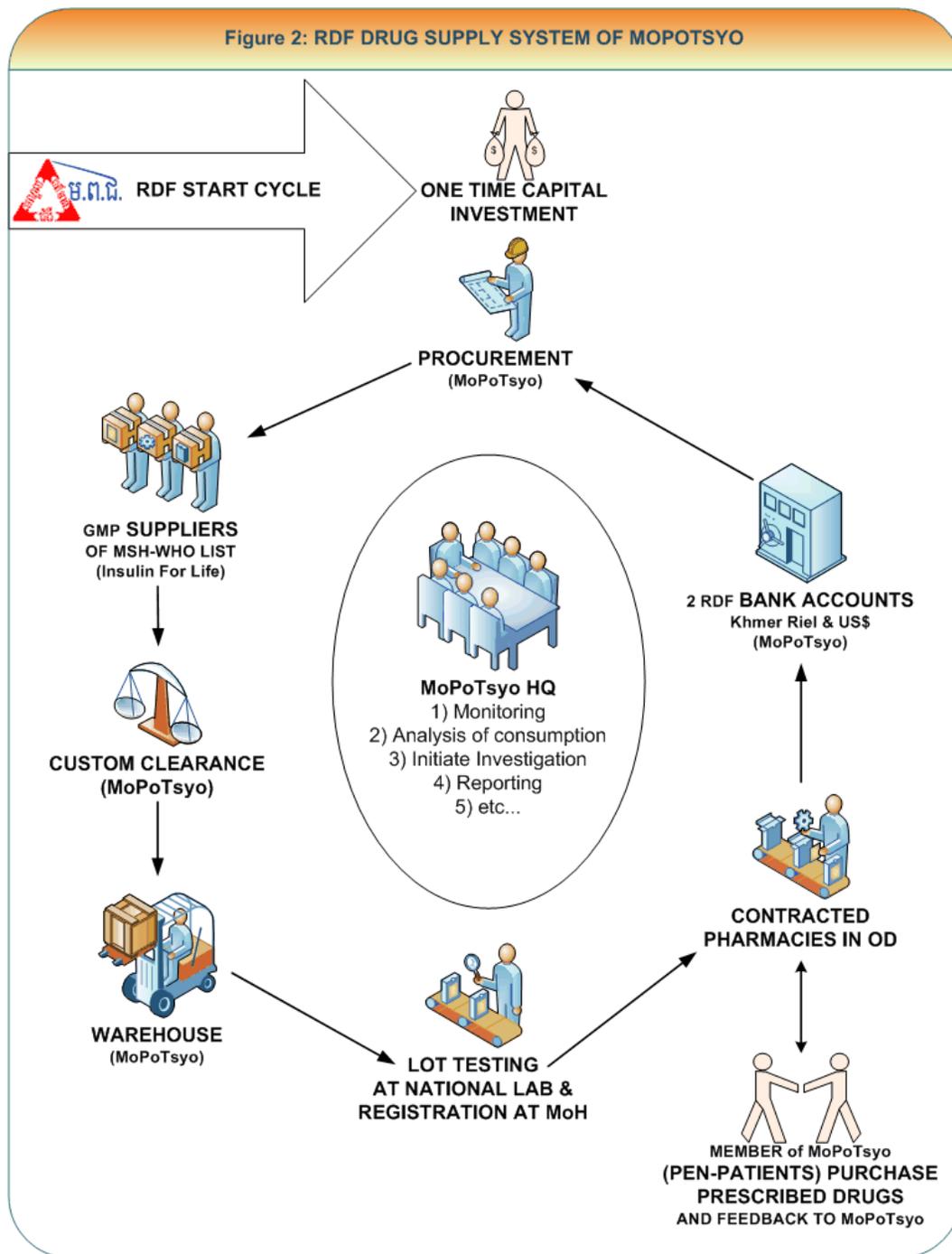
The Revolving Drug Fund (RDF) is managed as one of the units within MoPoTsyo Patient Information Centre’s Department of Medical Services Access, which reports directly to the Executive Director. The RDF unit is in charge of implementing MoPoTsyo’s RDF procurement policy which lays down the basic rules and procurement processes for national and international procurement. The RDF unit is in charge of customs clearance, record keeping, management, reporting, testing, stocking and distributing of the medicines & consumables to the allowable clients. The RDF’s allowable clients are only the contracted pharmacies, MoPoTsyo’s laboratory and the Peer Educators (**Figure 1**).

The RDF unit Head is in charge of analysis of the inflow and outflow and requests all the information that is needed for this from other units inside the NGO so that stock levels remain adequate and no interruption occurs. Wherever, information is lacking or late the RDF Unit reports to the Executive Director. The unit is headed by a Pharmacist, who is accountable to the Head of the Department of Medical Services Access. The RDF unit works in close collaboration with other units and departments inside MoPoTsyo as follows:

- a. With the Department for Financial Administration, the Stock Unit for ensuring the flow of drugs and related material, from the point of entry into the contracted pharmacy, through intermediate storage at RDF warehouse to the point of delivery, in the most efficient and well-controlled.
- b. With the Department for Financial Administration, the Database Unit for ensuring proper records of the data collection for analyzing the consumption the use of drug.
- c. With Department for Peer Programs to ensure for helping increase the membership and helping organize consultation, make appointment with accredited Doctor, help to organize consultation at the local hospital, and help supervise Revolving Drug Fund.
- d. Within the Department for Medical Service Access, the unit of Medical Consultations for ensuring access to the most affordable GMP-quality prescription medicines for MoPoTsyo's members inside their operational district with adequate information for the patient with diabetes and hype blood pressure.
- e. Within the Department for Medical Service Access, the laboratory unit to ensure adequate supply of laboratory materials.

1.b: RDF drug supply system

The RDF drug supply system is the straightest forward. It runs from the manufacturer to the patient and passes through the stages of: Procurement, Distribution, Delivery and Uses of Drugs (Figure 2).



MoPoTsyo's Revolving Drug Fund (RDF) was set up during 2008 and needs investment to expand. It contains only essential items of generic medicines and consumables such as urine strips and syringes/needles (**Table 1**).

NR	ITEMS	DOSAGE	UNIT	FORM
01	Insulin NPH	3 ml	1	Vial
02	Insulin Lantus	3ml	1	Vial
03	Insulin Actrapid	3 ml	1	Vial
04	Insulin Mix 30/70	3ml	1	Vial
05	Syringes Injection	50cc	1	pcs
06	Glibenclamide	5mg	1,000	tabs
07	Metformine	500mg	500	tabs
08	Glipizide	5mg	500	tabs
09	Hydrochlorothiazide	25mg	1,000	tabs
10	Furosemide	40mg	1,000	tabs
11	Atenolol	50mg	1,000	tabs
12	Propranolol	40mg	250	tabs
13	Aspirin	300mg	1,000	tabs
14	Captopril	25mg	500	tabs
15	Enalapril	10mg	100	tabs
16	Amlodipine	10mg	1,000	tabs
17	Amitriptylline	25mg	1,000	tabs
18	Nicotinamide	500mg	30	tabs
19	Gemfibrozil	300mg	100	tabs
20	Simvastatin	20mg	100	tabs
21	Losartan	50mg	100	tabs
22	Fenofibrate	200mg	28	tabs
23	Thiamine	250mg	100	tabs
24	Multivitamins		1,000	tabs

The medicines on the RDF list had been proposed by specialists and selected by MoPoTsyo as a result of discussions with other not-for-profit technical agencies in Cambodia with large expertise in treatment of DM and HBP and its associated disorders, including Diabetologists, but also with the Medical Doctors hired by MoPoTsyo to treat its members: 2

diuretics, 2 beta-blockers, 2 ACE inhibitors, a Calcium channel blocker, losartan, a statin, gemfibrozil, fenofibrate, aspirin and another analgesic Amitriptyline, 2 sulfonylureas, a biguanide, 3 types of vitamin, and 4 types of injectable insulin in 3ml pens, vials or 10 ml vials. Over time MoPoTsyo aims to remove 3 drugs from its list reducing it from 24 items to 22 items in agreement with medical doctors. This will require careful planning and management of transition, not just for the RDF but also for its current members who need their prescriptions changed in the 8 operational districts with 12 pharmacies (**Table 2**).

Table 2: MoPoTsyo's Contracted Pharmacies

NR	PHARMACIES' NAME	CONTACT NAME	ITEMs	PROVINCE	ADDRESS
1	Ros Sopheavatey	Mrs. Kong Kanha	- medicine - insulin - syringe injection	Phnom Penh	Anlong Kangan market, Phum Sen Sok, Sangket Khmuonh, Khan Sen Sok, Tel: 012 851 815
2	Ang Roka	Mrs. Men Samay		Takeo	#33, Phum Romduol, Tropang Thom North Commune, Tram Kak District, Tel: 092 945 814
3	Niroth	Mrs Nuth Chandina		Phnom Penh	#617, Street 271, Phum Boeung Chhouk, Sangkat Toek Thla, Khan Sen Sok
4	Rominh	Dr. Vong Sara		Takeo	Phum Chambork Em, Rominh Commune, Koh Andeng District, Tel: 092 653 402
5	Osot Tep	Mr. Sron Tola		Takeo	Phum Lory, Roka Khnung Commune Doun Keo District, Tel: 092 296 823
6	Ang Soeng	Dr. Hout Sokheng		Takeo	Phum Seyha, Cham bork Commune Bati District, Tel: 092 817 306
7	Soriya	Mrs. Phol Thearin		Takeo	Phum Prey Lvea, Prey Lvea Commune Prey Kabas District, Tel: 092 960 606
8	Sok San	Mr. Seng Len		Takeo	National Road Nr 2, Phum Kampong, Preahbath Chorn Chum Commune, Kirivong District, Tel: 016 731 224
9	Thmor Pouk	Dr. Sam Himalai		Banteay Meanchey	Phum Kasin, Thmar Pouk Commune, Thmar Pouk District, Tel: 012 725 395 / 092 953 992
10	Srey Khlong	Mr. Srey Khlong		Banteay Meanchey	Phum Banteay Meanrith, Kork Romeat commune, Thmar Pouk District, Tel: 012 371 221
11	Leng Sophorn	Mr. Leng Sophorn		Banteay Meanchey	Phum Prash Chrey, Banteay Chmar, Thmar Pouk District, Tel: 012 357 392
12	Svay Chek	Mr. Thin Sao Rat		Banteay Meanchey	Phum Roluos, Svay Chek commune, Svay Chek District, Tel: 012 351 819

Before the RDF supply to a new pharmacy starts, MoPoTsyo and the pharmacy sign a contract detailing the arrangements and obligations of the pharmacy (**Appendix 1**). After signing a copy of this contract is systematically provided to the Operational District Director who is in control of the area.

Proper registration at MoH of every lot of the sold GMP standard medicines is ensured, every lot having been tested at MoH National Laboratory for Drug Quality Control, before they are sold for transparent, fixed and published prices. The prices per tablet vary, the cheapest at 30 riels and the most expensive, rarely prescribed, currently at 1500 riels (Fenofibrate) and which is to be removed as it is gradually being replaced with cheaper gemfibrozil at 650 riels). The prices are set in such a way that it is not or hardly more profitable for the pharmacy to sell more expensive drugs than cheaper drugs. There are also no perverse incentives for the doctor with regards to prescribing specific medicines over other medicines. All insulin is sold at 11.000 riels per 3 ml which includes 5 pen needles.

The prices are published on the standard invoices (**Appendix 4**) that MoPoTsyo supplies to the contracted pharmacies and which are pre-printed and numbered to control the medicine flow, through supervision by all stakeholders, including the PEs and member patients themselves. Revenue from the pharmacies and laboratory activities is collected monthly by one authorized PE from the area and transferred the same day by bank to MoPoTsyo's 2 special (RDF) central accounts in Phnom Penh (one in Riels and one in USD).

Each contracted pharmacy has been selected by the Director of Operational District, who decides about this based on a proposal by MoPoTsyo. The pharmacy makes on average 15% profit on the medicine he buys from MoPoTsyo, so a much smaller margin than the pharmacy normally receives from selling drugs to patients (**Table 3**).

Table 3: MoPoTsyo's RDF Price List

NR	ITEMS	DOSAGE	UNIT	FORM	Price (Khmer Riel) Sale to Contracted Pharmacy / UNIT	15 % Profit (Khmer Riel) for Contracted Pharmacy / UNIT	Price (Khmer Riel) Sale to Patients / UNIT
01	Insulin NPH	3 ml	1	Vial	8,500.00	1,275.00	9,775.00
02	Insulin Lantus	3ml	1	Vial	8,500.00	1,275.00	9,775.00
03	Insulin Actrapid	3 ml	1	Vial	8,500.00	1,275.00	9,775.00
04	Insulin Mix 30/70	3ml	1	Vial	8,500.00	1,275.00	9,775.00
05	Syringes Injection	50cc	1	pcs	170.00	25.50	195.50
06	Glibenclamide	5mg	1,000	tabs	42.50	6.38	48.88
07	Metformine	500mg	500	tabs	85.00	12.75	97.75
08	Glipizide	5mg	500	tabs	128.00	19.20	147.20
09	Hydrochlorothiazide	25mg	1,000	tabs	42.50	6.38	48.88
10	Furosemide	40mg	1,000	tabs	42.50	6.38	48.88
11	Atenolol	50mg	1,000	tabs	85.00	12.75	97.75
12	Propranolol	40mg	250	tabs	85.00	12.75	97.75
13	Aspirin	300mg	1,000	tabs	42.50	6.38	48.88
14	Captopril	25mg	500	tabs	127.50	19.13	146.63
15	Enalapril	10mg	100	tabs	127.50	19.13	146.63
16	Amlodipine	10mg	1,000	tabs	127.50	19.13	146.63
17	Amitriptylline	25mg	1,000	tabs	85.00	12.75	97.75
18	Nicotinamide	500mg	30	tabs	212.50	31.88	244.38
19	Gemfibrozil	300mg	100	tabs	552.50	82.88	635.38
20	Simvastatin	20mg	100	tabs	220.00	33.00	253.00
21	Losartan	50mg	100	tabs	680.00	102.00	782.00
22	Fenofibrate	200mg	28	tabs	1,275.00	191.25	1,466.25
23	Thiamine	250mg	100	tabs	85.00	12.75	97.75
24	Multivitamins		1,000	tabs	25.50	3.83	29.33

The dispensing tasks related to the RDF provides the pharmacy with substantial extra work because for other medicines sold by the pharmacy over the counter there is no invoice to fill. The advantage for the pharmacy is that they get many new clients from MoPoTsyo but the profit is small. MoPoTsyo chooses pharmacies that are strategically located providing easy access to patients from different corners in the OD. The OD requires the proposed pharmacy to meet the official standards that it applies in the OD. MoPoTsyo will aim for 4 private pharmacies in the OD, but it is not yet sure that all 4 can be selected that meet the official OD public criteria and who are interested to take on this extra workload including all the scrutiny of their performance. In similar OD's some pharmacies have already declined for the honor of being selected. MoPoTsyo's own mark-up on the medicines it procures varies from no margin on the most expensive medicines to 100% on the cheapest medicines.

For its RDF, MoPoTsyo procures most of its medicines from IMRES BV in The Netherlands, one of the companies mentioned in the 2009 edition of *The International Drug Price Indicator Guide* published by MSH (Management Sciences for Health) and WHO, and which contains a spectrum of prices from pharmaceutical suppliers, international development organizations, and government agencies. This *Guide* aims to make price information more widely available in order to improve procurement of medicines of assured quality for the lowest possible price. As MoPoTsyo orders are still relatively small, it cannot yet procure from Mission Pharma in Denmark, which has slightly more competitive prices than IMRES. The other companies including IDA in The Netherlands are in general more expensive than IMRES. To avoid unnecessary and costly custom procedures MoPoTsyo tries to group the orders in as few shipments as possible. MoPoTsyo has been successfully procuring regularly from IMRES BV since 2009 (**Table 4**), and it imports the medicines exempt from importation tax based on its Memorandum of Agreement with the Ministry of Health and the requirements

of the Cambodian Development Council. Small quantities of medicines not available from IMRES are bought locally: fenofibrate, losartan, and lastly nicotinamide which are produced in Cambodia itself provided that the basic ingredients can be obtained. Supply however is irregular and this medicine may also be removed from the RDF list. MoPoTsyo procures its Insulin, paying only small handling charges, and transportation costs, from Insulin For Life in Australia, a not for profit NGO that collects Insulin for free from hospitals and clinics and organizations who do not need this insulin because the patient has died or because these health facilities have insulin overstocks that they must dispose of. Insulin For Life the Netherlands has just been established at the end of 2009 and may have potential to become a similar not for profit provider of insulin for registered members of MoPoTsyo in Cambodia. Insulin For Life has also been providing pen-needles to MoPoTsyo and pens, to facilitate self-injection. For DM patients without pen and needles, MoPoTsyo buys international standard (1 ml =100 unit) syringes, which it in prepared wrappings together with the insulin, as packages, to its members.

Table 4: MoPoTsyo's Suppliers

NR	COMPANY NAME	CONTACT NAME	ITEMs	COUNTRY	ADDRESS
1	Imres	Erwin van Boven	medicine	Netherland	Imres b.v. Larserpoortweg 26 P.O. Box 214 8200 AE Lelystad The Netherland Tel: +31 (0) 320 296969 email: vanboven@imres.nl
2	Acon	Steven Hu	Blood Glucose-meter Test Strip Lancet	China	Acon Biotech (Hangzhou) Co., Ltd. #398 Tianmushan Road, Gudang Industrial Park Hangzhou, China 310012 Tel: +86 571 87963569 email: steven.hu@aconlab.com.cn
3	Sichuan Medicines and Health Products	Robert Luo	Urine Strip	China	Sichuan Medicines and Health Products I/E Corp. No.198, Gulounan St., Chengdu, China 610016 tel: 86 28 86513216 , mobile: 86 13880650900 email: luochong528@gmail.com msn: luochong528@hotmail.com
4	Insulin for Life Australia (IFL)	Ron Raab	Insulin Actrapid Insulin Lantus Insulin Mixtard Insulin NPH Syringe Injection	Australia	Insulin for Life Austraira PO Box 2010 Ballarat MCVIC 3354 Australia email: ronraab@bigpond.net.au www.insulinforlife.org
5	NUTRIVALLEY CO.,LIMITED	Daniel	Blood Pressure-meter	China	Add:1958 Zhong Shan North Road, Shanghai 200063 Tel : 86-21-51082967 email: daniel.jmhu@gmail.com www.nutritionalvalley.net

The required quantities of MoPoTsyo's RDF may be calculated by the basis of the past consumption (actual need). This is because the method based on past consumption is simple and most reliable because of a stable prescribing practice. Drug supplies are generally available and it takes account of the uneven demands make on the actual prescribing practice. Each item is calculated as (Table 5).

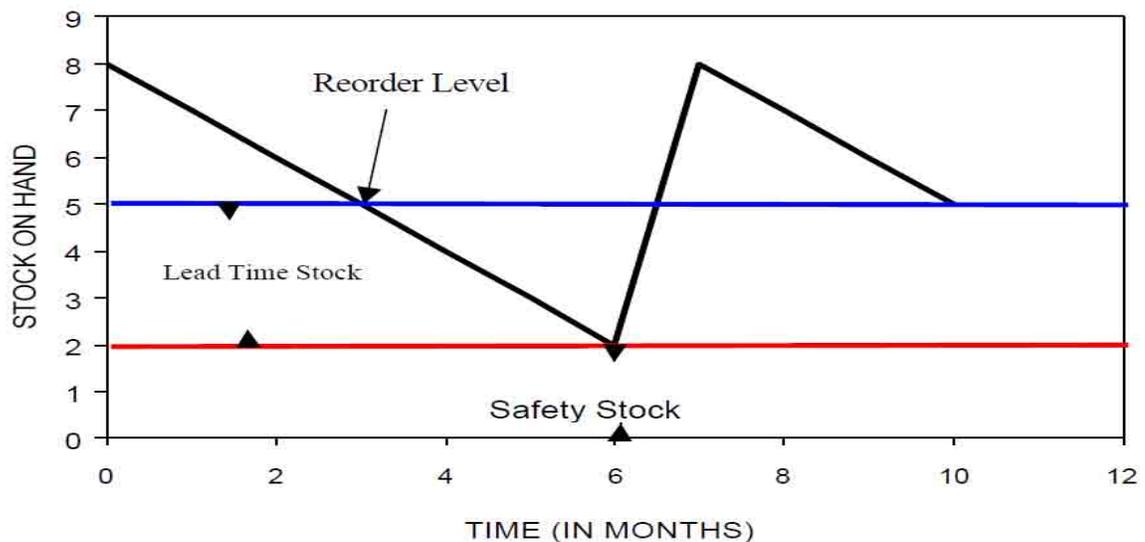
Table 5: MoPoTsyo's RDF Need Assessment Spread Sheet (invoices of 984 DM purchased drug during the first half of 2010)													
NR	ITEMS	DOSAGE	UNIT	FORM	Unit Cost US\$	Average Consumption	Curent Stock	Safety Stock	Stock Issued During Lead time	Reorder Level	Order Quantity for 6 months	Quantity to be ordered	Estimated Cost in US\$
						A	B	2 x A = C	3 x A = D	E = C + D	F = 6 x A	G = (E + F) - B	G x (Unit Cost)
01	Insulin NPH	3 ml	1	Vial	2.0200	106	275	211	317	528	634	887	1,792
02	Insulin Lantus	3ml	1	Vial	2.0200	41	293	81	122	203	244	154	312
03	Insulin Actrapid	3 ml	1	Vial	2.0200	29	77	58	88	146	175	244	493
04	Insulin Max 30/70	3ml	1	Vial	2.0200	34	417	68	102	169	203	-45	-91
05	Syringes Injection	50cc	1	pcs	0.1100	102	3,297	204	306	509	611	-2,177	-239
06	Glibenclamide	5mg	1,000	tabs	0.0101	10,396	4,000	20,793	31,189	51,982	62,378	110,360	1,117
07	Metformine	500mg	500	tabs	0.0202	13,179	8,000	26,358	39,538	65,896	79,075	136,971	2,772
08	Glipizide	5mg	500	tabs	0.0152	107	0	213	320	533	640	1,173	18
09	HCZ	25mg	1,000	tabs	0.0101	2,083	176,000	4,166	6,249	10,414	12,497	-153,089	-1,549
10	Furosemide	40mg	1,000	tabs	0.0101	145	91,000	290	435	725	870	-89,405	-905
11	Atenolol	50mg	1,000	tabs	0.0202	606	186,000	1,212	1,818	3,030	3,636	-179,334	-3,630
12	Propranolol	40mg	250	tabs	0.0202	48	55,000	95	143	238	286	-54,476	-1,103
13	Aspirin	300mg	1,000	tabs	0.0101	311	29,000	621	932	1,553	1,863	-25,585	-259
14	Captopril	25mg	500	tabs	0.0304	1,427	46,000	2,853	4,280	7,133	8,560	-30,307	-920
15	Enalapril	10mg	100	tabs	0.0304	866	18,000	1,732	2,598	4,329	5,195	-8,476	-257
16	Amlodipine	10mg	1,000	tabs	0.0304	532	51,000	1,063	1,595	2,658	3,189	-45,154	-1,371
17	Amitriptyline	25mg	1,000	tabs	0.0202	1,370	61,000	2,740	4,110	6,850	8,220	-45,930	-930
18	Nicotinamide	500mg	30	tabs	0.0507	67	90	133	200	333	400	643	33
19	Gemfibrozil	300mg	100	tabs	0.0133	28	0	55	83	138	165	303	4
20	Simvastatin	20mg	100	tabs	0.0523	30	12,150	60	90	150	180	-11,820	-619
21	Losartan	50mg	100	tabs	0.0170	33	0	67	100	167	200	367	6
22	Fenofibrate	200mg	28	tabs	0.1587	6	0	12	18	29	35	64	10
23	Thiamine	250mg	100	tabs	0.0202	463	0	925	1,388	2,313	2,775	5,088	103
24	Multivitamins		1,000	tabs	0.0061	2,153	41,000	4,307	6,460	10,767	12,920	-17,313	-105
TOTAL ESTIMATED ORDER Value													-5,317

Using a very simple spread sheet computer program:

- A. Average consumption per month: total drug used during the 6 months divided by 6
- B. Current stock of RDF drug available in the warehouse
- C. Safety (buffer stock): this is a two months stock which equal $(2 \times A)$
- D. Lead-time stock: it is the stock used in the interval between submitting an order and receiving the goods. RDF lead-time stock equal 3 months stock $(3 \times A)$.
- E. Recorder level: supply will be ordered when the stock of item reaches the 5 months, **(Figure 3)** anticipated consumption level $(C + D)$.
- F. Order quantity: usually RDF users 6 months stock twice per year $(6 \times A)$
- G. Quantity to be ordered: this is equal to $(E + F - B)$

Using only 6 month ordering assures rapid turnover of drug which minimizes storage and RDF capital requirements. This method proved to be efficient and stock surpluses and deficiencies are largely avoided. But, the analysis of the finding end of **June 2010** has shown that the RDF drugs stock has been surpluses in the MoPoTsyo's warehouse.

Figure 3: RDF Stock Control Model



Source: Gamaleldin Khalafalla Mohamed Ali (2000), *Management of Revolving Drug Fund*

Without essential drugs being available, their usage cannot be achieved. This means not only that appropriate drugs are prescribed, but that they are available when needs at a price people can afford, and accept the quality. Thus, the main objective of prescribing is to encourage the usage of drugs (**Table 6**).

Area	Diabetics Registered with MoPoTsyo	Diabetics had Prescription	Diabetics Purchased Drug
Phnom Penh (5 slum areas)	748	273	232
Takeo (5 ODs)	1,248	1,163	563
Banteay Meanchey (1 OD)	152	145	52
Total 3 networks	2,148	1,581	847

The analysis of the finding end of **June 2010** has shown that there are 73% of people with diabetes have drug prescribed by MoPoTsyo Medical Doctor. But, among of them there are only 53% has purchased from the RDF drugs.

1.c: RDF financial system

Financial Responsible:

After the RDF started in 2008, the MoPoTsyo appointed the Admin and Finance Department to responsible for the keeping of proper records required for financial order. This is in addition to paying and collecting debts and ensuring the financial health of the RDF and coordinating the implementation of the currency Swap.

Financial Statement:

According to the Administration and Financial department of MoPoTsyo directed the RDF to prepare statements of accounts for each year. The accounts are prepared on an accruals basis and must give a true and fair view of the RDF's state of affairs at the year end.

In preparing the accounts the RDF is required to:

1. Observe the accounts order direction issued by the Administration and Financial department of MoPoTsyo, including the relevant account and disclosure requirements and apply suitable accounting policies on a consistent basis.
2. Make judgments and estimates on a reasonable basis
3. Prepare financial statements every month

Financial Records:

The RDF financial records include:

1. Sales quantities and revenues by drug and type of health facilities. This information is used to assess the impact of the drug pricing policies and to more accurately predict future drug requirements.
2. Regular trial balances and income statements provide periodic status reports on drug stocks and financial reserve. Such reports are vital to assure that the revenues are achieving or at least approaching cost recovery objectives that cash flow is sufficient to procure new stock, and the stock is sufficient to fill expected demand.

RDF Bank Account:

The policy of the treasury requires that revenues earned by any arm of the MoPoTsyo must be remitted to the Administration and finance department of MoPoTsyo HQ in Phnom

Penh. According to the currency Swap the RDF has its own separate accounts in both local Khmer riel and foreign US dollars currency at the ACLEDA bank as bellow:

- In Khmer Riel: account number **2900-20-532263-1-7** account name **MoPoTsyo-RDF-KH**
- In USD: account number **2900-20-532258-1-8** account name **MoPoTsyo-RDF-US**

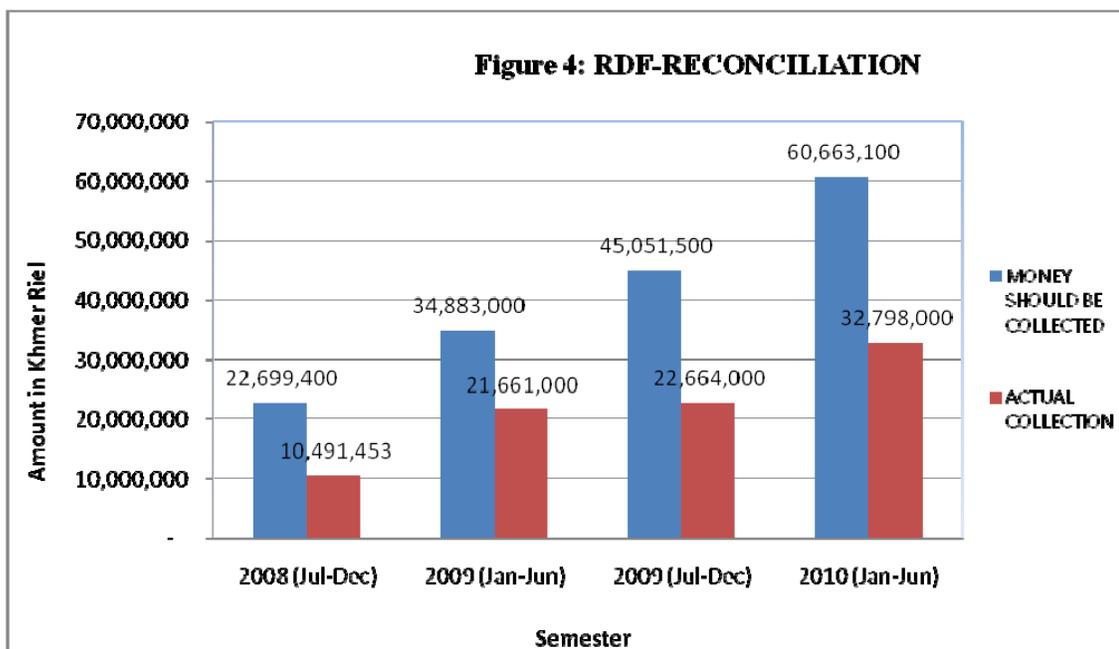
Cash Collection:

The RDF cash collection of drug sales at the contracted pharmacies is based on the answering the question of how much money should have been, and how much money actually was collected. A high collection rate depend a sound drug management system.

In 2008, the RDF stated, for the first time, MoPoTsyo authorizes revenue collector “Peer Educator” to receive and sign for reimbursement slip on behalf of MoPoTsyo the payment in either in Khmer riel or in USD dollars from contracted pharmacies. The Revenue Collector is responsible for all cases of loss of money and all documents related to this collection, and he has to collect the money from contracted pharmacy according to the medicine received slip signed by Head of RDF and which corresponds to the medicine received slip representing the medicines delivered to the contracted pharmacy. Revenue Collector is not authorized to sign for reimbursement slip of a lower amount or a partial payment of the total amount of the each reimbursement slip, only the exact total amount of each reimbursement slip can be paid by the contracted pharmacy and received by the revenue collector. The Revenue Collector has to collect money on the set date by head of RDF from the contracted pharmacy and not later than 3pm. Immediately after collection of each payment at the contracted pharmacy, the Revenue Collector must to go to deposit the total amounts of the payments into MoPoTsyo’s RDF bank account. The Revenue Collector is not allowed to take a meal between revenue collections at the pharmacy and going to the bank for deposit, and also not allowed to collect

the revenue from a 2nd contracted pharmacy before going to the bank for deposit, and he must go to deposit the total amounts of the payments by contracted pharmacy into MoPoTsyo's bank account at ACLEDA bank as above, the Revenue Collector must collect reimbursement slip paid by contracted pharmacy together with the bank's Transfer Slip (**Appendix 6**) make one copy to keep for him and send the original to Head of RDF at MoPoTsyo HQ. For every time that the Revenue Collector collects the payment and deposits it at the bank, MoPoTsyo will pay Revenue Collector the total sum of 20,000 riel, this amount covers that time spent by the revenue collector, the transportation cost, the cost of copying invoice and bank transfer sheet, it does not cover the cost of bank charge and sending the envelope to MoPoTsyo HQ in Phnom Penh.

The cash collection system, in addition to accountability measures, regular supervision and very strong use of disciplinary and legal measures results in a high efficiency of cash collection and the entire elimination of a deficit (**Figure 4**).



The analysis of the finding from 2008-2010 has shown that the cash collection was facing to a deficit. But, the Head of RDF said that, this because of MoPoTsyo has used the advanced method for collecting the money of drug sales from the contracted pharmacy. It means that the reimbursement slip (**Appendix 5**) occurs, when the advancement slip (**Appendix 2**) of the RDF drug has been sold by contracted pharmacy to its members.

RDF Expenses:

Comparing Cost and Revenue for one Operational District gives the following financial picture (**Table 7**):

Table 7: The cost per month at Ang Roka OD per June 2010									
Items	Incentive 100%	Cellcard 100%	Salary 20%	Transportation 20%	Insurance 20%	Evaluation 100%	Reward 100%	HQ 3%	TOTAL
10 Peer Educators	\$150	\$50					\$58		\$258
1 PPPM		\$2	\$19	\$19	\$1				\$40
1 DPPM		\$2	\$19	\$15	\$1				\$37
1 PA		\$2	\$19	\$19	\$1				\$40
1 MD	\$64	\$2		\$90					\$156
Management Cost						\$328		\$251	\$579
									\$0
TOTAL	\$214	\$58	\$57	\$143	\$2	\$328	\$58	\$251	\$1,111

The incentives for the 10 Peer Educators are only USD 258 per month during the first half of 2010, The cost includes the telephone cards, the rewards for the peers every six months as well as their costs of transportation because PE incentive includes the reimbursement of their transportation costs.

In order to sustain not just the Peer Educators through the cost recovery from the RDF but also the whole organization, MoPoTsyo adds further costs of salaried staff and management costs which it has put at 3% per month per OD, bringing the total of its cost to USD 1,111. However, currently these extra costs do not have to be born by Ang Roka OD as all these extra costs are booked onto projects that are donor financed as they serve as investment into MoPoTsyo to help it increase the membership and its scope of action, and strengthen the

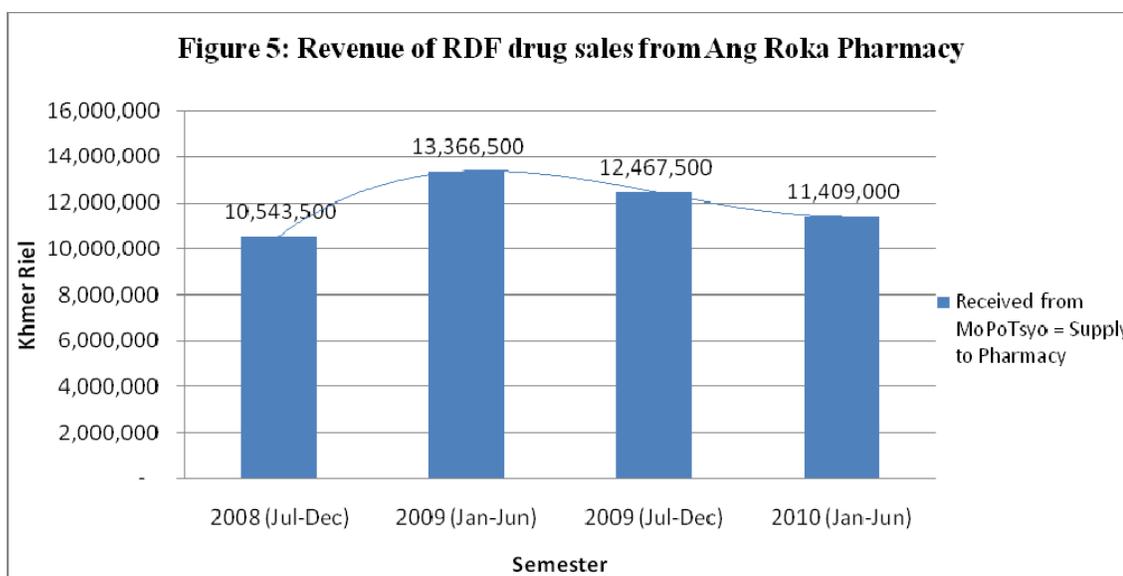
organization until it reaches its break even benefiting from economies of scale and gains in efficiency over time. The Hospital Medical Doctor in Ang Roka Referral Hospital never learned from the visiting Specialist MD during the time the project was running how to do consultation, so MoPoTsyo continues to organize the consultations twice per month, which creates some extra cost there.

By putting the management cost at 3% per OD, MoPoTsyo can become independent from donor financing as soon as it covers 33 out of 77 of Cambodia's OD's.

RDF Revenue:

The costs covered by the revenue from drug sales to the 115 (18%) out of 630 registered DM Members in Ang Roka OD.

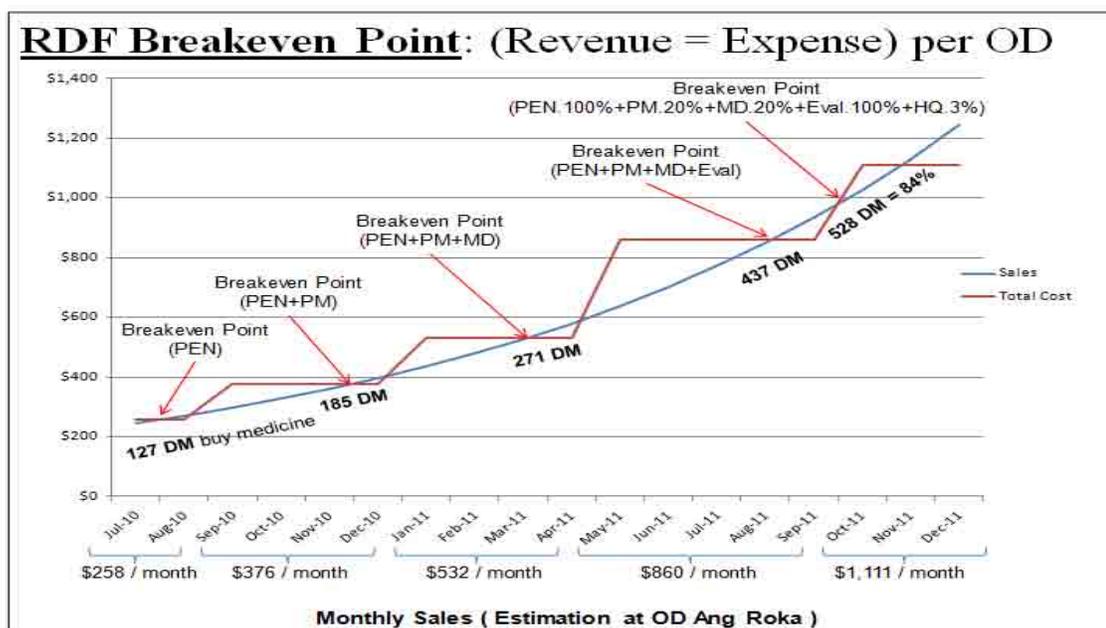
Comparing semesters since the start of the RDF in July 2008 (**Figure 5**):



The slight decline seen during the 12 months is because MoPoTsyo opened 5 additional pharmacies in neighboring OD's from where the registered DM members there had previously been procuring medicines at Ang Roka Pharmacy when it was still the only RDF pharmacy in the province.

The revenue from the DM patients residing in Ang Roka has in fact remained stable at more than 11 million riels, which equals USD 447 per month, of which USD 201 are needed to purchase new drugs and USD 246,- are available to pay the incentives of the PE's at USD 258 per month. This shows a cost recovery of 95% of the incentives of the Peer Educators in Ang Roka, not taking into account the current expansion of scope there to High Blood Pressure and the revenue from the Laboratory Service that started in 2010 January.

The revenue from the drug sales at Ang Roka OD is expected to rise because there had not been screening for HBP in Ang Roka, nor consultations and no prescription for HBP members. Since March 2010, however, HBP screening has generated 564 people with HBP, assessed and member of MoPoTsyo as HBP patient. They are now managed through 108 Village High Blood Pressure Groups but only very few of them have yet received a prescription (**Appendix 3**) with which they can buy their medication. They are yet to benefit from the laboratory service after which over time they will access consultation and increase the cost recovery from laboratory services and also from drug sales but not beyond the total cost recovery of USD 1,111 (**Figure 6**).



Research Question2: What are the members' demographic profiles of MoPoTsyo?

2.a: Members' demographic profiles of MoPoTsyo

There are now in total **2,148** people with diabetes registered with MoPoTsyo-Patient Information Centre per June-2010 within the 8 Operational District, 2 ODs (Srash Chork, Anlong Kangan, Boeung kak2, Boeung Salang and Borei Kela) in urban Phnom Penh, 6 ODs (Operational District: Ang Roka, Kirivong, Don Keo, Prey Kabass, Bati, Thmar Pouk) in Rural Takeo province and Banteay Meanchey (Table 8 & 9)

Table 8: Diabetics identified by MoPoTsyo's Peer Educators

AREA	TOTAL	DIABETIC REGISTERED					
		2010 Jan-Jun	2009	2008	2007	2006	2005
1. Phnom Penh City	748	48	107	136	198	199	60
<i>Srash Chork</i>	<i>218</i>	<i>13</i>	<i>39</i>	<i>46</i>	<i>29</i>	<i>51</i>	<i>40</i>
<i>Anlong Kangan</i>	<i>181</i>	<i>13</i>	<i>16</i>	<i>24</i>	<i>39</i>	<i>69</i>	<i>20</i>
<i>Boeung Kak2</i>	<i>179</i>	<i>12</i>	<i>19</i>	<i>23</i>	<i>46</i>	<i>79</i>	<i>-</i>
<i>Boeung Salang</i>	<i>71</i>	<i>1</i>	<i>13</i>	<i>7</i>	<i>50</i>	<i>-</i>	<i>-</i>
<i>Borei Kela</i>	<i>99</i>	<i>9</i>	<i>20</i>	<i>36</i>	<i>34</i>	<i>-</i>	<i>-</i>
2. Takeo Province	1,248	135	563	389	161	0	0
<i>Ang Roka Operational District</i>	<i>664</i>	<i>26</i>	<i>159</i>	<i>318</i>	<i>161</i>	<i>-</i>	<i>-</i>
<i>Kirivong Operational District</i>	<i>171</i>	<i>33</i>	<i>89</i>	<i>49</i>	<i>-</i>	<i>-</i>	<i>-</i>
<i>Don Keo Operational District</i>	<i>108</i>	<i>21</i>	<i>65</i>	<i>22</i>	<i>-</i>	<i>-</i>	<i>-</i>
<i>Prey Kabass Operation District</i>	<i>147</i>	<i>22</i>	<i>125</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
<i>Bati Operational District</i>	<i>158</i>	<i>33</i>	<i>125</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
3. Banteay Meanchey Province	152	100	52	0	0	0	0
<i>Thmar Pouk Operational District</i>	<i>152</i>	<i>100</i>	<i>52</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
Total 3 networks (1+2+3)	2,148	283	722	525	359	199	60

Table 9: Members' demographic profiles of MoPoTsyo

Members' demographic profiles	Rural (n = 1,400)		Urban (n = 748)		Total (n = 2,148)	
	n	%	n	%	n	%
SEX						
Male	657	47%	261	35%	918	43%
Female	743	53%	487	65%	1,230	57%
AGE						
Under 5 years	-	-	-	-	-	-
5 to 15 years	-	-	-	-	-	-
16 to 34 years	69	5%	44	6%	113	5%
35 to 44 years	237	17%	114	15%	351	16%
45 to 54 years	467	33%	260	35%	727	34%
55 years and older	627	45%	330	44%	957	45%
OCCUPATION						
Farmer	1,128	81%	12	2%	1,140	53%
Labour Job	-	-	354	47%	354	16%
Government employee	126	9%	52	7%	178	8%
Company employee	2	0.5%	2	0.5%	4	0.5%
NGO employee	-	-	2	-	2	-
Vendor	142	10%	324	43%	466	22%
Business people	2	0.5%	2	0.5%	4	0.5%

CHAPTER III

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

3.1. Summary

The research study of Evaluation of the RDF project of MoPoTsyo NGO has attempted to look at the organizational structure, drug supply system and financial system of the Revolving Drug Fund management of MoPoTsyo. In addition it also has addressed the relevant of the members' demographic profiles of MoPoTsyo. This research is based on the primary data and secondary data which were gathered from: interviewing the key concerned personnel of MoPoTsyo and interviewing with people with diabetes enrolled with MoPotsyo. The secondary data which gathered from the information source of MoPoTsyo NGO, which included the annual reports of management revolving drug fund of NGO and it was conducted based on real expenditures and based on consumption data through patient invoices since mid 2008 when the MoPoTsyo started its Revolving Drug Fund project.

3.2. Conclusion

Based on the research study, the Revolving Drug Fund (RDF) project of MoPoTsyo has been achieved such as:

- The RDF structure which attributed to its small and flexible structure; it combines social objectives with private style management. The key factor for success has been financial autonomy and funding from cash sales with a small staff at RDF head office and with the peer educator networks selected for their competence and the private sector approach to personnel accountability, financial and drug supply management;

- People living with diabetes and hypertension can access to the most affordable of good quality essential drugs in the place where the RDF project located. The most of the members of MoPoTsyo have an RDF facility reasonably close and within walking distance. Before the RDF, travel and time costs involved in seeking alternative sources of care were high. When drugs became available at local, the fees paid represented an effective reduction in the price of care;
 - People living with diabetes can access to cost effective for their medical consultation;
- These achievements could be successfully replicated in other Operational District in Cambodia with the similar contexts in Ang Roka Operational District in Takeo province.

However, the Revolving Drug Fund (RDF) project of the NGO MoPoTsyo has not yet fulfilled their financially sustainable. Based on the research study during the first half of 2010 of the Revolving Drug Fund (RDF) project of MoPoTsyo in Operational District Ang Roka, Takeo Province, and the figure show that, the cost recovery from drug sales of 95% of the incentives of the Peer Educators in Ang Roka.

In order to sustain not just the Peer Educators through the cost recovery from the RDF but also the whole organization, MoPoTsyo adds further costs of salaried staff and management costs which it has put at 3% per month per OD, bringing the total of its costs to 1,111 US dollar. So, the cost recovery from drug sales became of 22% to sustain as the whole organization.

3.3. Recommendation

Based on the research study finding, some recommendations should be provided for managing of Revolving Drug Fund for improvement as following:

- Monitoring and evaluation of the RDF on a regular basis is essential to determine the success of the project. Particular MoPoTsyo should be pay attention to the supervision of the RDF contracted pharmacies and the revenue collection administration;
- The prescribers and the users of drug show some serious features of the nr of DM who has been prescribed medicine by MD, but only half of them purchased medicine from the RDF. Particular MoPoTsyo should be considered on Training & Education, providing of information and communication to improve practice;
- Since the RDF fund is not a commercial entity, MoPoTsyo should be find the ways to reduce, the current expenditure for example, cost packaging, bank charges, custom duties and clearance charges, and drug quality testing cost could all be addressed;
- The poor patients who unable to pay for RDF drugs MoPoTsyo should be strengthened, for example through community involvement;
- Expansion of scopes will necessarily demand the participation and involvement of service users. MoPoTsyo needs to develop ways to include the community in its structure for RDF project; and
- Presently the stock management should be developing software based on the principle system for data feeding, and the personnel working in this unit should be trained;

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APPENDIX 1

RDF contract detailing the arrangements and obligations of the pharmacy

អង្គការ ម.ព.ជ មណ្ឌលព័ត៌មានជំងឺ

មូលនិធិបង្វិលទុនឱសថមិនស្វែងរកប្រាក់ចំណេញ

កិច្ចព្រមព្រៀងសំរាប់ឱសថស្ថានដៃគូ PHARMACY CONTRACT	NR.01 CP.....
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អង្គការ ម.ព.ជ មណ្ឌលព័ត៌មានជំងឺ ការិយាល័យផ្ទះលេខ ២៩ដ ផ្លូវលេខ ១៣៨ ភូមិបឹងឈូក សង្កាត់ទឹកថ្លា ខណ្ឌសែនសុខ ភ្នំពេញ តំណាងដោយប្រធានអង្គការ.....ពីនេះតទៅហៅថា ម.ព.ជ ។
 MoPoTsyo patient information centre, Headquarters at 29D, Street 138, Phum Boeung Chhouk, Sangkat Toek Thla, Khan Sen Sok, Phnom Penh, represented by.....Director of MoPoTsyo, hereafter "MoPoTsyo"

ឱសថស្ថាន.....តំណាងដោយ.....
 អាស័យដ្ឋាន
 ស្រុកប្រតិបត្តិ..... លេខទូរស័ព្ទ ពីនេះតទៅហៅថា ឱសថស្ថាន..... ។
 Pharmacy, represented by,
 Address:,
 operational District, hereafter, Tel nr:

កិច្ចព្រមព្រៀងនេះមានខ្លឹមសារដូចខាងក្រោម / The meaning of this Contract

- អង្គការ ម.ព.ជ មណ្ឌលព័ត៌មានជំងឺ ជាអង្គការក្រៅរដ្ឋាភិបាលមិនស្វែងរកប្រាក់ចំណេញ ដែលជួយប្រជាជនកំពុងរងគ្រោះដោយជំងឺរ៉ាំរ៉ៃជាពិសេសជំងឺទឹកនោមផ្អែមនិងលើសឈាម។
- អង្គការ ម.ព.ជ ផ្តល់ព័ត៌មានជាក់លាក់ដោយមិនគិតប្រាក់ និងបង្រៀនអ្នកជំងឺអោយចេះគ្រប់គ្រង និងថែទាំជំងឺដោយខ្លួនឯង។
- អង្គការ ម.ព.ជ បានបង្កើតមូលនិធិបង្វិលទុនឱសថនេះដើម្បីអោយអ្នកជំងឺមានលទ្ធភាពរកទិញថ្នាំប្រកបដោយគុណភាព សុវត្ថិភាព ប្រសិទ្ធភាព និងតម្លៃសមរម្យតាមវេជ្ជបញ្ជាត្រឹមត្រូវនៅក្នុងសៀវភៅតាមដានសុខភាពរបស់អ្នកជំងឺ។
 -MoPoTsyo is a not-for-profit NGO that helps people who have a chronic disease, in particular diabetes and hypertension.
 -MoPoTsyo gives free information to these patients to bring their disease under control.
 -MoPoTsyo established a not-for-profit revolving drug funds for its members to buy affordable medicine of good quality, safety and efficacy according to a Medical Doctor's prescription in MoPoTsyo's patient book.

- ឱសថស្ថានដៃគូ ជាឱសថស្ថានស្របច្បាប់ និង/ឬ ទទួលស្គាល់ដោយស្រុកប្រតិបត្តិ មានទីតាំង អ្នកទទួលខុសត្រូវ និងអ្នកលក់ថ្នាំត្រឹមត្រូវ ដែលអាចអោយអ្នកជំងឺទិញថ្នាំបានគ្រប់ពេលវេលា ។
- ឱសថស្ថានដៃគូ ត្រូវធ្វើការទំនាក់ទំនងយ៉ាងស្និទ្ធស្នាលជាមួយអង្គការដើម្បីរក្សាថ្នាំអោយមានគុណភាពល្អសំរាប់លក់ជូនអ្នកជំងឺ ។
- ឱសថស្ថានដៃគូ ត្រូវគោរពតាមគោលការណ៍ និងលក្ខខណ្ឌនៃកិច្ចព្រមព្រៀង ដែលមានខ្លឹមសារដូចខាងក្រោម៖
 - Contracted Pharmacy is a licensed pharmacy which is recognized by the operational district director and has a suitable location, responsible pharmacist and/or drug seller who can sell medicine to our patient every time.
 - Contracted Pharmacy will cooperate closely with MoPoTsyo to maintain sufficient levels of the medicine to sell to patient who are member of MoPoTsyo
 - Contracted Pharmacy has to follow all accounts and conditions in meaning as below:

- ឱសថស្ថានដៃគូ យល់ព្រមអនុវត្តន៍ និងគោរពតាមគោលការណ៍ និងលក្ខខណ្ឌដូចជា៖
 1. លក់ថ្នាំក្នុងតារាងតំលៃថ្នាំរបស់អង្គការទៅអោយអ្នកជំងឺដែលបានចុះឈ្មោះជាមួយអង្គការតែប៉ុណ្ណោះ
 2. លក់ថ្នាំទៅអោយតែអ្នកជំងឺដែលមានវេជ្ជបញ្ជាក្នុងសៀវភៅតាមដានសុខភាពអ្នកជំងឺ
 3. លក់ថ្នាំទៅតាមវេជ្ជបញ្ជាចុងក្រោយដែលមាននៅក្នុងសៀវភៅតាមដានសុខភាពអ្នកជំងឺ
 4. មិនត្រូវលក់ថ្នាំ ច្រើនជាងថ្នាំនៅក្នុងវេជ្ជបញ្ជានិង មិនត្រូវប្តូរថ្នាំ រឺ លក់ថ្នាំផ្សេងក្រៅពីថ្នាំរបស់ ម.ព.ជ ទៅអោយអ្នកជំងឺ
 5. ឱសថស្ថានទទួលបានតំលៃចំណេញទៅតាមតំលៃថ្នាំ (ថ្នាំមានតំលៃថោកជាង ២៥០រៀលក្នុងៗគ្រាប់តំលៃចំណេញគឺ ១៥ភាគរយនៃតំលៃលក់ជូនអ្នកជំងឺ និងថ្នាំមានតំលៃថ្លៃជាង ២៥០រៀលក្នុងៗគ្រាប់តំលៃចំណេញគឺ ១០ភាគរយនៃតំលៃលក់ជូនអ្នកជំងឺ និងថ្នាំមានតំលៃថ្លៃជាង ៥០០រៀលក្នុងៗគ្រាប់តំលៃចំណេញគឺ ៥ភាគរយនៃតំលៃលក់ជូនអ្នកជំងឺ)
 6. មិនត្រូវលក់ថ្នាំខុសពីតំលៃដែលអង្គការបានកំណត់ក្នុងតារាង និងវិក័យប័ត្រ ដែលផ្តល់ដោយអង្គការ
 7. ត្រូវសរសេរ និងចុះហត្ថលេខាគ្រប់វិក័យប័ត្រទាំងអស់ និងអោយទៅគ្រប់អ្នកជំងឺទាំងអស់រាល់ពេលដែលគាត់បានទិញថ្នាំ
 8. ត្រូវពន្យល់អ្នកជំងឺពីវិធីប្រើប្រាស់ថ្នាំ និងតាមដានរយៈពេលដែលគាត់ទិញថ្នាំ
 9. ត្រូវច្រកថ្នាំតាមប្រភេទនីមួយៗក្នុងថង់ប្លាស្ទិកស្និទ្ធស្នាល និងសរសេរអោយបានច្បាស់លាស់
 - Contracted Pharmacy agreed to follow:
 1. Sell medicines mentioned on the list below to MoPoTsyo's registered patients only
 2. Sell medicines to patients who have prescription in their MoPoTsyo's patient book
 3. Sell medicine for only the last prescription of patient book
 4. Do not sell more medicines than on the prescription or replace or sell other generic medicines instead of MoPoTsyo's medicines
 5. Percentage of pharmacy profit is dependent on the price of each medicine
 6. Sell medicines according to price on the list below, invoice and not for more than or less
 7. Write and sign all completed invoices for every MoPoTsyo's patient who comes to buy medicine
 8. Explain on how to use and follow up time of buying for each patient
 9. Package each kind of medicine in different suitable plastic bag and mark a noticed

តារាងតម្លៃថ្នាំរបស់មូលនិធិបង្វិលចុនខិតស្វែងរកប្រាក់ចំណេញ / MoPoTsyo's RDF medicines price list

លរ	ឈ្មោះថ្នាំ	កំរិតថ្នាំ	ឯកតា	តំលៃទិញរាយ	តំលៃចំណេញ	តំលៃរាយលក់ដូនអ្នកជំងឺ
01	Insulin NPH អាំងស៊ុយលីន អិនប៉េហាស់	3 ml	3 ml + ម្ពល5	9,350.00 រៀល	1,650.00 រៀល	11,000 រៀល
02	Insulin Lantus អាំងស៊ុយលីន ឡង់ទូស	3 ml	3 ml + ម្ពល5	9,350.00 រៀល	1,650.00 រៀល	11,000 រៀល
03	Insulin Actrapid អាំងស៊ុយលីន អាក់ត្រាប៊ីត	3 ml	3 ml + ម្ពល5	9,350.00 រៀល	1,650.00 រៀល	11,000 រៀល
04	Insulin Mix 30/70 អាំងស៊ុយលីន 30/70	3 ml	3 ml + ម្ពល5	9,350.00 រៀល	1,650.00 រៀល	11,000 រៀល
05	Glibenclamide / គ្លីបេនក្លាមីដ	5 mg	1កំប៉ុង 1000គ្រាប់	42.50 រៀល	7.50 រៀល	50 រៀល
06	Metformine / ម៉េតហ្វរមីន	500 mg	1កំប៉ុង 1000គ្រាប់	85.00 រៀល	15.00 រៀល	100 រៀល
07	Glipizide / គ្លីពីប៊ីត	5 mg	1ប្រអប់ 500គ្រាប់	170.00 រៀល	30.00 រៀល	200 រៀល
08	Hydrochlorothiazide អ៊ីដ្រូក្លរូត្យាប៊ីត	25 mg	1កំប៉ុង 1000គ្រាប់	42.50 រៀល	7.50 រៀល	50 រៀល
09	Furosemide / ហ្វូសេមីដ	40 mg	1កំប៉ុង 1000គ្រាប់	42.50 រៀល	7.50 រៀល	50 រៀល
10	Atenolol / អាតេណូឡូល	50 mg	1កំប៉ុង 1000គ្រាប់	85.00 រៀល	15.00 រៀល	100 រៀល
11	Propranolol / ប្រូប្រាណូឡូល	40 mg	1កំប៉ុង 1000គ្រាប់	85.00 រៀល	15.00 រៀល	100 រៀល
12	Aspirin / អាស៊ីរីន	300 mg	1កំប៉ុង 1000គ្រាប់	42.50 រៀល	7.50 រៀល	50 រៀល
13	Captopril / កាប៊ីតូប្រីល	25 mg	1កំប៉ុង 1000គ្រាប់	127.50 រៀល	22.50 រៀល	150 រៀល
14	Enalapril / អេណាប្រីល	10 mg	1កំប៉ុង 1000គ្រាប់	127.50 រៀល	22.50 រៀល	150 រៀល
15	Amitriptyline / អាមីត្រីប៊ីតីន	25 mg	1កំប៉ុង 1000គ្រាប់	85.00 រៀល	15.00 រៀល	100 រៀល
16	Amlodipine / អំលូឌីពីន	10 mg	1កំប៉ុង 1000គ្រាប់	127.50 រៀល	22.50 រៀល	150 រៀល
17	Nicotinamide (VitB3) នីកូទីណាមីដ	500 mg	1ប្រអប់ 30គ្រាប់	212.50 រៀល	37.50 រៀល	250 រៀល
18	Simvastatine / ស៊ីមវ៉ាស្តាទីន	20 mg	1ប្រអប់ 100គ្រាប់	220.00 រៀល	30.00 រៀល	250 រៀល
19	Gemfibrozil / ទេមហ្វីប្រូហ្សីល	600 mg	1ប្រអប់ 30គ្រាប់	950.00 រៀល	50.00 រៀល	1,000 រៀល
20	Losartan / ឡូសាតង់	50 mg	1ប្រអប់ 100គ្រាប់	760.00 រៀល	40.00 រៀល	800 រៀល
21	Fenofibrate / ហ្វេនូហ្វីប្រាត	200 mg	1ប្រអប់ 30គ្រាប់	712.50 រៀល	37.50 រៀល	750 រៀល
22	Thiamine (Vit B1) / ធ័យ៉ាមីន	250 mg	1ប្រអប់ 100គ្រាប់	85.00 រៀល	15.00 រៀល	100 រៀល
23	Multivitamin / មុលទីវីតាមីន		1កំប៉ុង 1000គ្រាប់	25.50 រៀល	4.50 រៀល	30 រៀល
24	Syringe Insulin ស៊ីរីន្ទ័ងចាក់អាំងស៊ុយលីន	1 ml	1ប្រអប់ 100ដើម	450.00 រៀល	50.00 រៀល	500 រៀល

• អង្គការ ម.ព.ជ មណ្ឌលព័ត៌មានជំងឺ នឹងផ្តល់ជូននូវសំភារៈប្រើប្រាស់មួយចំនួនដូចជា៖

1. វិក័យបត្រលក់ថ្នាំជូនអ្នកជំងឺ
2. ថង់កិបមាត់សំរាប់ច្រកថ្នាំ
3. ទូកញ្ជក់ពិសេសសំរាប់ដាក់ថ្នាំ (សំរាប់ធានាឱសថស្ថានដៃគូខ្លីក្នុងអំឡុងពេលកិច្ចសន្យា)
4. ទូទឹកកកសំរាប់ក្បួង ចាក់ (សំរាប់ធានាឱសថស្ថានដៃគូខ្លីក្នុងអំឡុងពេលកិច្ចសន្យា)
5. អំឡុងពេលចុះកិច្ចសន្យាដំបូង ម.ព.ជ នឹងជូនថ្នាំដោយមិនគិតថ្លៃមានក្នុងតារាងខាងក្រោម

លរ	ឈ្មោះថ្នាំ	កំរិត	ឯកតា	ចំនួន	លេខទូរស័ព្ទ	ថ្ងៃផុតកំណត់
01	Glibenclamide / គ្លីបិនក្លាមីដ	5 mg	1កំប៉ុង 1000គ្រាប់	2	HE09J39	09-2012
02	Metformine / ម៉េតហ្វរមីន	500 mg	1កំប៉ុង 1000គ្រាប់	1	HE09F02	05-2012

-MoPoTsyo will supply free materials and lets contracted pharmacy to borrow equipment as below:

1. Patient Invoice as required
2. Plastic bag as required
3. Mirror cupboard (for borrow during contract)
4. Refrigerator (for borrow during contract)
5. Upon signing of contract, MoPoTsyo donates one time medicines in list above to pharmacy

យ៉ាងតិចណាស់មុនរយៈពេល 10ថ្ងៃ ដែលថ្នាំអស់ពីស្តុក ឱសថស្ថានដៃគូត្រូវជូនដំណឹងមកអ្នកគ្រប់គ្រងមូលនិធិបង្វិល ទុនឱសថ របស់អង្គការ ម.ព.ជ ធានាបានដឹងមុន តាមរយៈលេខទូរស័ព្ទ 012 926 071 / 023 884 483

-At least ten days before an out-of-stock happens, Pharmacy has to inform MoPoTsyo revolving drug fund manager by telephone above.

កិច្ចព្រមព្រៀងនេះ មានរយៈពេល 1ឆ្នាំ និងមានប្រសិទ្ធភាពចាប់ពីថ្ងៃចុះហត្ថលេខានេះតទៅ ហើយមួយច្បាប់នៃ កិច្ចព្រមព្រៀងនេះនឹងថតចម្លងជូនស្រុកប្រតិបត្តិដើម្បីជាបដាព័ត៌មាន។

This agreement comes into force on the date of signature and is valid for a period of one year. One copy of this agreement is sent to OD for information.

ប្រធានអង្គការ ម.ព.ជ មណ្ឌលព័ត៌មានជំងឺ
Director of MoPoTsyo

តំណាងឱសថស្ថានដៃគូ / ម្ចាស់ឱសថស្ថាន
Contracted pharmacy represented

.....
Name:.....
Date:.....

.....
Name:.....
Date:.....

APPENDIX 3

RDF Prescription Form

Date :		Prescription					
Patient ID :		Nr	Medicine Name	Dosage			
Name :		01	Insulin NPH	3 ml			
Sex : <input type="checkbox"/> M <input type="checkbox"/> F Age:		02	Insulin Lantus	3 ml			
Weight: Height:		03	Insulin Actrapid	3 ml			
Blood Sugar Result	FBG (mg/dl)						
	PPBG (mg/dl)						
Blood Pressure Result	Systolic (mmHg)		04	Insulin 30/70	3 ml		
	Diastolic (mmHg)		05	Glibenclamide	5 mg		
	Pulse		06	Metformine	500 mg		
Dyslipidemia	Triglyceride		07	Hydrochlorothiazide	25 mg		
	Total Cholesterol		08	Furosemide	40 mg		
	HDL Cholesterol		09	Atenolol	50 mg		
	TC / HDL		10	Propranolol	40 mg		
Kidney Function	Creatinine		11	Aspirin	300 mg		
	Potassium		12	Captopril	25 mg		
			13	Enalapril	10 mg		
			14	Amitriptyline	25 mg		
			15	Amlodipine	10 mg		
			16	Simvastatine	20 mg		
			17	Gemfibrozil	600 mg		
			18	Thiamine	250 mg		
			19	Multivitamin			

Sign and Symptom: <input type="checkbox"/> Paresthesia <input type="checkbox"/> Fourmillement <input type="checkbox"/> Blurred Vision <input type="checkbox"/> Polyuria <input type="checkbox"/> Polydipsia <input type="checkbox"/> Polyphagia <input type="checkbox"/> Asthenia <input type="checkbox"/> Pruritus	Complications : <input type="checkbox"/> Microvascular <input type="checkbox"/> Macrovascular <input type="checkbox"/> Retinopathy <input type="checkbox"/> Nephropathy <input type="checkbox"/> Peripheral neuropathy <input type="checkbox"/> CV symptoms <input type="checkbox"/> Other endocrines <input type="checkbox"/> Wound healing problem	Test requesting: <input type="checkbox"/> Albuminemia <input type="checkbox"/> Albuminuria <input type="checkbox"/> Creatinine <input type="checkbox"/> Total Cholesterol <input type="checkbox"/> Triglyceride <input type="checkbox"/> HDL Cholesterol <input type="checkbox"/> HbA1c <input type="checkbox"/> Blood Sugar <input type="checkbox"/> Ionogramme (K ⁺ , Na ⁺ , Cl ⁻) <input type="checkbox"/> Transaminase <input type="checkbox"/> <input type="checkbox"/>
Advice:		Next appointment date:.....

Doctor's name and signature:..... Date.....
--

APPENDIX 4

RDF Standard Invoices Form

លេខកូដអ្នកជំងឺ/Patient's ID:.....	វិក័យប័ត្រ / INVOICE
ឈ្មោះអ្នកជំងឺ/Patient's Name:.....	
Date/ថ្ងៃទី.....ខែ.....ឆ្នាំ20.....	
លេខវិក័យប័ត្រ/Invoice Nr.....Version2	

មូលនិធិបង្វិលទុនឱសថមិនស្វែងរកប្រាក់ចំណេញ / Not-For-Profit Revolving Drug Funds
តារាងតម្លៃថ្នាំរបស់មូលនិធិបង្វិលទុនឱសថមិនស្វែងរកប្រាក់ចំណេញ / MoPoTsyo's RDF medicines price list

លរ Nr	ឈ្មោះថ្នាំ Medicine's Name	កំរិតថ្នាំ Dosage	ឯកតា Unit	ចំនួន QTY	តម្លៃរាយ Unit Price	តម្លៃសរុប Amount
01	Insulin NPH / អាំងស៊ុយលីន អិនប៉េហាស់	3មីលីលីត្រ+ផ្តល់5	កញ្ចប់		11,000 រៀល	
02	Insulin Lantus / អាំងស៊ុយលីន ឡង់ទូស	3មីលីលីត្រ+ផ្តល់5	កញ្ចប់		11,000 រៀល	
03	Insulin Actrapid /អាំងស៊ុយលីនអាក់ត្រាពីត	3មីលីលីត្រ+ផ្តល់5	កញ្ចប់		11,000 រៀល	
04	Insulin Mix 30/70 / អាំងស៊ុយលីន 30/70	3មីលីលីត្រ+ផ្តល់5	កញ្ចប់		11,000 រៀល	
05	Glibenclamide / គ្លីបេនក្លាមីដ	5 មីលីក្រាម	គ្រាប់		50 រៀល	
06	Metformine / ម៉ែតហ្វរមីន	500 មីលីក្រាម	គ្រាប់		100 រៀល	
07	Glipizide / គ្លីប៊ីប៊ីត	5 មីលីក្រាម	គ្រាប់		200 រៀល	
08	Hydrochlorothiazide / អ៊ីដ្រូក្លរ៉ូត្យាប៊ីត	25 មីលីក្រាម	គ្រាប់		50 រៀល	
09	Furosemide / ហ្វូសេមីដ	40 មីលីក្រាម	គ្រាប់		50 រៀល	
10	Atenolol / អាតេណូឡូល	50 មីលីក្រាម	គ្រាប់		100 រៀល	
11	Propranolol / ប្រូប្រាណូឡូល	40 មីលីក្រាម	គ្រាប់		100 រៀល	
12	Aspirin / អាស៊ីរីន	300 មីលីក្រាម	គ្រាប់		50 រៀល	
13	Captopril / កាប់តូប្រីល	25 មីលីក្រាម	គ្រាប់		150 រៀល	
14	Enalapril / អេណាប្រីល	10 មីលីក្រាម	គ្រាប់		150 រៀល	
15	Amitriptyline / អាមីត្រីប្រីប៊ីន	25 មីលីក្រាម	គ្រាប់		100 រៀល	
16	Amlodipine / អំលូឌីពីន	10 មីលីក្រាម	គ្រាប់		150 រៀល	
17	Nicotinamide / នីកូទីណាមីដ (វីតាមីន B3)	500 មីលីក្រាម	គ្រាប់		250 រៀល	
18	Simvastatine / ស៊ីមវ៉ាស្តាទីន	20 មីលីក្រាម	គ្រាប់		250 រៀល	
19	Gemfibrozil / ទេមហ្វីប្រូប៊ីល	600 មីលីក្រាម	គ្រាប់		1,000 រៀល	
20	Losartan / ឡូសារតង់	50 មីលីក្រាម	គ្រាប់		800 រៀល	
21	Fenofibrate / ហ្វេនូហ្វីប្រាត	200 មីលីក្រាម	គ្រាប់		750 រៀល	
22	Thiamine (Vit B1) / ទីយ៉ាមីន (វីតាមីន B1)	250 មីលីក្រាម	គ្រាប់		100 រៀល	
23	Multivitamin / មុលទីវីតាមីន		គ្រាប់		30 រៀល	
24	Syringe Insulin / ស៊ីរីន្ទាំងអាំងស៊ុយលីន	1 មីលីលីត្រ	ដើម		500 រៀល	

សរុបទាំងអស់ / Grand Total:

* មូលនិធិបង្វិលទុនឱសថជាមូលនិធិមិនស្វែងរកប្រាក់ចំណេញបង្កើតឡើងដោយអង្គការ ម.ព.ជ ដើម្បីផ្តល់ឱកាសដល់អ្នកជំងឺមានជំនួញអាចដោយរហ័សទាញបានវិសេសាជីវកម្មរបស់អង្គការ ក្នុងការបញ្ជាទិញឱសថ និង ចែកចាយឱសថនោះទៅដល់សមាជិកក្រុមតំបន់មួយដែលទទួលបាន។ ទូរស័ព្ទ 012 926 071

កំណត់សំគាល់: សូមអ្នកជំងឺសូមរកវិក័យប័ត្រនៅកាល់ទូរស័ព្ទ និងរក្សាទុកវិក័យប័ត្រនេះ ដើម្បីទទួលបានប្រយោជន៍នៅថ្ងៃខាងមុខ។ សូមអរគុណ!!!

អ្នកទិញ / The Buyer

អ្នកលក់ / The Seller

APPENDIX 5

RDF Reimbursement Form

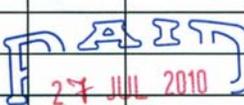
ប័ណ្ណបង់ប្រាក់ត្រលប់ / REIMBURSEMENT SLIP

លេខប័ណ្ណបង់ប្រាក់ត្រលប់ / Number.....20100047.....	ថ្ងៃទទួលប្រាក់/Received Date
យោងលេខប័ណ្ណទទួលថ្នាំ/Ref Received Slip Nr.....20100054.(16-03-2010)...	22 កក្កដា 2010
ព័ត៌មានអំពីឱសថស្ថានដៃគូរ/Contracted Pharmacy's Data	
ឈ្មោះឱសថស្ថាន/Name..... <i>វេ.ខ.អង្គរកែវ</i>	លេខកូដ/Pharmacy code..... <i>CP003</i>
តំណាងដោយ/Represented by:..... <i>លោក អ៊ិន ចាន់ធី</i>	លេខទូរស័ព្ទ/Tel..... <i>092.945.814</i>
អាសយដ្ឋាន/Address:..... <i>ផ្ទះលេខ 33 ភូមិព្រៃព័ទ្ធជុំវិញវិទ្យាល័យស្រុកត្រាំកក់ ខេត្តតាកែវ</i>	

មូលនិធិបង្វិលទុនឱសថមិនស្វែងរកប្រាក់ចំណេញ / Not-For-Profit Revolving Drug Funds

អង្គការ ម.ព.ជ ជាអង្គការក្រៅរដ្ឋាភិបាលមិនស្វែងរកប្រាក់ចំណេញដែលបានចុះបញ្ជីនៅក្រសួងមហាផ្ទៃលេខ 713 សជណ

លរ Nr	លេខកូដ Code	បរិយាយ Description	ទម្រង់ Form	ឯកតា Unit	ចំនួន QTY	តំលៃរាយ Unit Price	តំលៃសរុប Amount	លេខទូរត្រី Lot nr	ថ្ងៃផុតកំណត់ Expiry date
1	MET01	Metformin 500mg	កំប៉ុង	1000គ្រាប់	10	85,000	850,000	HE09F02	05-2012
2	GLB01	Glibenclamide 5mg	កំប៉ុង	1000គ្រាប់	5	42,500	212,500	HE09J39	09-2012
3	NPH01	Insulin NPH 3ml	ដប	3 ml	20	8,500	170,000		
4	LAN01	Insulin Lantus 3ml	ប៊ីច	3 ml	10	8,500	85,000		
5	ACT01	Insulin Actrapid 3ml	ដប	3 ml	10	8,500	85,000		
6	SYN01	Syringe Insulin 0.5ml	ស៊ីរីង	0.5ml	200	170	34,000	8024427	02-2013
7		Pharmacy Invoice	ក្បាល	100សន្លឹក	3	Free of charge			
Subtotal / សរុបទាំងអស់							1,436,500 រៀល		



BY:

សរុបទាំងអស់ជាអក្សរ មួយលានបួនរយសាមសិបប្រាំមួយពាន់ប្រាំបួនរយរៀលគត់

* មូលនិធិបង្វិលទុនឱសថជាមូលនិធិមិនស្វែងរកប្រាក់ចំណេញបង្កើតឡើងដោយអង្គការ ម.ព.ជ ដើម្បីធ្វើអោយកម្មវិធីមាននិរន្តរភាពដោយប្រើវិភាគទានពីសមាជិករបស់អង្គការក្នុងការបញ្ជាទិញឱសថ សំភារៈបរិក្ខារពេទ្យនិងចែកចាយឱសថនោះទៅដល់ពួកគេវិញក្នុងតំលៃមួយដែលទទួលយកបាន។

<p>អ្នកបង់ប្រាក់ពីតំណាងឱសថស្ថានដៃគូរ Paid by contract pharmacy represented:</p> <p style="text-align: center;"></p> <p>ឈ្មោះ:.....លោក អ៊ិន ចាន់ធី</p>	<p>អ្នកទទួលប្រាក់ពីឱសថស្ថានដៃគូរ Received by revenue collector:</p> <p style="text-align: center;"></p> <p>ឈ្មោះ:.....លោក ពិល ឌឹម.....</p>	<p>អ្នកគ្រប់គ្រងមូលនិធិបង្វិលទុនឱសថ Head of RDFs</p> <p style="text-align: center;"></p> <p>ឈ្មោះ:.....លោក មៅ ចារ.....</p>
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APPENDIX 6

RDF Bank's Transfer Slip

25.5.12
 15.2.56
 50281
 25.5.36
 15.2.25
 55214

ពាក្យសុំផ្ទេរប្រាក់
TRANSFER APPLICATION
 កាលបរិច្ឆេទ 25 05 2010
 Date DD MM YY

ធនាគារ អេស៊ីធីដា ភីអិលស៊ី
ACLEDA Bank Plc.

ផ្ទេរទៅ Transfer To	ធនាគារ: <u>សេន្ទីរីនា សាន់ហ៊ីប ភូមិក្រសែក</u> Name of Bank Corporation or Individual អាសយដ្ឋាន: <u>សេន្ទីរីនា ភូមិក្រសែក ភ្នំពេញ</u> Address ចំនួនទឹកប្រាក់ជាលេខ: <u>KHR. 1,409,000</u> Amount in Figure ចំនួនទឹកប្រាក់ជាអក្សរ: <u>មួយពាន់ បួនម៉ឺនប្រាំបួនពាន់ ព្រឹមតែ</u> Amount in Words ឈ្មោះអ្នកផ្ទេរ: <u>ស៊ិន ឆិន (09១១៦៧៧១២)</u> Name of Remitter អាសយដ្ឋាន: <u>ទួលកែវ ១៣៧៧</u> Address	សំរាប់ធនាគារ FOR BANK USE លេខយោង Transfer Ref. No. ចំនួនទឹកប្រាក់ផ្ទេរ Amount of Transfer KHR 1,409,000 ថ្លៃសេវាផ្ទេរ Transfer Charges អត្រាផ្តល់ជូនពិសេស Special Offer ផ្សេងៗ Other ចំនួនទឹកប្រាក់សរុប Total KHR 1,409,000
ផ្ទេរប្រាក់ចូល Credit To	គណនីលេខ: <u>2900 - 20 - 532263 - 17</u> Account No. ឈ្មោះអ្នកទទួល: <u>Meo Isyo - ១១៩ - KH</u> Name of Beneficiary អាសយដ្ឋាន: <u>សេន្ទីរីនា ភូមិក្រសែក ភ្នំពេញ</u> Address	

ការណែនាំ (ប្រសិនបើមាន) Deduct fee charge at Branch (KHR 12,000)
 Special Instructions (If Any)

ចំណាយសរុប
IN PAYMENT OF THE TOTAL COST

ដកប្រាក់ពីគណនីលេខ.....
 Debit My/Our Account No.

មូលប្បទានប័ត្រលេខ.....
 Cheque No.(s)

បង់ជាប្រាក់.....
 Cash

CASH TRANSFERRED
 * 2 5 MAY 2010 *
 ACLEDA Bank Plc
 TKO BRANCH

ហត្ថលេខាអ្នកផ្ទេរប្រាក់
 Remitter's Signature (s)

ផ្នែកខាងក្រោមនេះសំរាប់ធនាគារ FOR BANK USE ONLY

អនុញ្ញាតដោយ _____ ពិនិត្យដោយ _____ រៀបចំដោយ _____
 Authorized By _____ Checked By _____ Prepared By _____

FORM-07

APPENDIX 7

RDF Income Voucher

Income Voucher

Not-For-Profit Revolving Drug Funds, Medical Section

Voucher's date: Friday, May 28, 2010

Number of Voucher: Med00037

Nr	Pharmacy Code	Pharmacy Name	Received date	Reimbursement Slip nr	Ref Received slip nr	Total in riel
A. Medicine Income						
01	CP003	Ang Roka Pharmacy	24-May-10	20100040	20100047	1,317,500
02	CP003	Ang Roka Pharmacy	24-May-10	20100041	20100048	388,500
03	CP003	Ang Roka Pharmacy	24-May-10	20100042	20100049	1,343,000
04	CP003	Ang Roka Pharmacy	24-May-10	20100043	20100050	212,500
05	CP006	Ang Seng Pharmacy	24-May-10	20100015	20100015	850,000
06	CP006	Ang Seng Pharmacy	24-May-10	20100016	20100016	807,500
07	CP005	Osot Tep Pharmacy	24-May-10	20010006	20090005	578,000
08	CP005	Osot Tep Pharmacy	24-May-10	20010007	20100006	831,000
09	CP007	Sorya Pharmacy	24-May-10	20100005	20090004	547,000
10	CP007	Sorya Pharmacy	24-May-10	20100006	20090006	702,000
A. Total in riel of Medicine Income						7,577,000
B. Insulin Income						
01	CP003	Ang Roka Pharmacy	24-May-10	20100040	20100047	297,500
02	CP003	Ang Roka Pharmacy	24-May-10	20100041	20100048	340,000
03	CP003	Ang Roka Pharmacy	24-May-10	20100043	20100050	382,500
04	CP006	Ang Seng Pharmacy	24-May-10	20100015	20100015	127,500
05	CP006	Ang Seng Pharmacy	24-May-10	20100016	20100016	51,000
B. Total in riel of Insulin Income						1,198,500
C. Syringe Income						
01	CP003	Ang Roka Pharmacy	24-May-10	20100042	20100049	51,000
C. Total in riel of Syringe Income						51,000
Grand total (A+B+C) in riel:						8,826,500
Deduct bank transfer fee charge						36,000
Grand total deduct bank transfer fee charge in riel:						8,790,500
Convert to US Dollar		1 US\$ = 4,200 riel		Grand total in US\$		2,092.98
Grand Total in writing: Two thousand ninety two and 98/100 US\$ only						

Received by


 Suy Vannak, Finance-Admin

Posted by


 Soeung Sochitra, Accountant

Reported by


 Mao Ngeav, Head of RDFs

THE RESULT OF THE EXAMINATION
Subject: Business Research Project, Lecturer: Dr. Domingo S. Aranal

Day: Monday

N°	Name	Gender	ID N°	Prog. & Batch	Total Score 100%	Grade Point	Grade	Remarks
1	Chhy Lebply	F	G20080251	MBA 16	32.00	0.0	F	
2	Chhay No Rathya	M	G20080195	MBA 16	0.00	0.0	F	
3	Dith Channa	M	G20080068	MBA 15	83.00	3.5	B+	
4	Dor Thea	M	G20080297	MBA 16	0.00	0.0	F	
5	Et Borena	F	G20070039	MBA 13	0.00	0.0	F	
6	Hoy Kimheang	M	G20080349	MBA 16	30.00	0.0	F	
7	Kun Chanthom	F	G20080203	MBA 16	0.00	0.0	F	
8	Ky Visal	M	G20080396	MBA 16	0.00	0.0	F	
9	Leng Kimhom	M	G20080156	MBA 15	82.00	3.5	B+	
10	Leng Narong	M	G20080277	MBA 16	0.00	0.0	F	
11	Long Chhay	M	G20080246	MBA 16	33.00	0.0	F	
12	Ly Samol	F	G20080255	MBA 16	31.00	0.0	F	
13	Nuon Pisith	M	G20080375	MBA 16	0.00	0.0	F	
14	Pen Por Seng	M	G20080371	MBA 16	30.00	0.0	F	
15	Pen Sothy	M	G20080177	MBA 16	0.00	0.0	F	
16	Pum Veasna	F	G20080366	MBA 16	80.00	3.5	B+	
17	Seang Sivoum	M	G20080083	MBA 15	75.00	3.0	B	
18	Si Sodany	F	G20080250	MBA 16	32.00	0.0	F	
19	Soung Engchhay	M	G20060047	MBA 11	0.00	0.0	F	
20	Suy Vannak	M	G20080020	MBA 15	85.00	4.0	A	
21	Tep Kalyan	F	G20080290	MBA 16	0.00	0.0	F	

N°	Name	Gender	ID N°	Prog. & Batch	Total Score 100%	Grade Point	Grade	Remarks
22	Yi Chamroeun	M	G20080102	MBA 15	0.00	0.0	F	

N°	Name
1	Bouy Sok
2	Chap Na
3	Eng Bun
4	Heang L
5	Heng K
6	Heng R
7	Houy S
8	Keo S
9	Keo V
10	Khear
11	Kong
12	Kry S
13	Lath
14	Lum
15	Ly S
16	Ma
17	Mu
18	Na
19	Ph
20	P
21	P
22	S
23	

N°	Name
24	
25	

