CO-PRODUCTION OF PUBLIC HEALTHCARE SERVICE IN LOCAL COMMUNITIES: A CASE STUDY OF THE FAMILY CARE TEAM

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ABSTRACT

Title of Dissertation	Co-production of Public Health Care Service in Local Communities: A Case Study of the Family Care Team
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The objectives of this research study are 1) To study the structure and operation of the Family Care Team, a network of health promotion and disease prevention services under Thai health security system, 2) To study the components of public co-production in the management of public healthcare services for Thai local communities by the Family Care Team, and 3) To study the factors of the co-production of public healthcare services for Thai local communities. This study is a qualitative research using the methods of document study, in-depth interviews, focus groups, observation, and qualitative data compilation using descriptive data analysis. The scope of this study is the primary care service provision under the Family Care Team with the participating private sector limited to the private pharmacy. Three health service centers and their respective service areas were selected for the case studies: Khlong Sala Urban Community Healthcare Center in Phetchabun municipality; Ban Klang Health Promoting Hospital, Nong Phai District, Phetchabun; and Public Healthcare Service Center No. 45, Bangkok Metropolitan Administration, for additional information regarding the participating pharmacy.

The study results show that the public health service provided under Family Care Team can be considered a form of co-production with the people and the private sector, i.e. the private pharmacy, participating in the community service provision. However, the operation of Family Care Team does not stress the role of the patient in the participation, in spite of their being the person who understands their own strength and weakness as the owner of their health. As a result, Thailand's public health

service provision is still in the process of moving toward the old form of the service provision, which is viewing the service as a merchandise to be delivered to the service recipient, even though there has been an attempt to increase the role of other sectors in the service provision. The study finds the organizational structure between the officials and the volunteers is still in the form of a vertical hierarchy, while the structure between the government and the private sector is more independent. The problem of favoritism is also found to be an obstacle preventing the participants from having the smooth operation. In terms of the factors leading to the participation in the health service provision in the community, the government sector is driven by the laws but still has a limitation of accessibility of all population groups. For the factors of the people sector, the volunteer mindset plays a role leading to the participation with the desire to have an opportunity to help fellow community members. The use of free time for a good cause, the acceptance and praise from the community, and certain "privilege" received from the government are also the factors leading to the people's participation with the government. For the private pharmacy, the acceptance from other professionals, the volunteer mindset of the pharmacist owner of the pharmacy, and its proximity to the health service center are the major factors leading to the participation with Family Care Team in the government's health service provision.

The author proposes a management model of primary care toward the healthy and sustainable community by introducing the service recipient, i.e. the patient, to be an additional basic element and participant of co-production. Such element must possess a mechanism encouraging the collaboration, in which the author proposes the mechanism with the characteristics of familiarity and closeness among the participants, mutual reliance, freedom of working of government officials, and relevant knowledge base. Finally, the co-participation must be in the horizontal organizational structure, and the participants must be willing to assist in the comprehensive health service provision in the area of prevention, treatment, and health care of the community.

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CHAPTER 1

INTRODUCTION

1.1 Statement of Problem and Significance of the Study

The public sector has been the primary healthcare service provider in the country from the beginning; however, as time has passed and the economic and social development has expand throughout the country, healthcare services have gone through many changes and have become much more complex, as a result, overwhelming the government agencies and personnel with the volume of demands that they cannot thoroughly handle. In addition, the government is also suffering from insufficient budget, inefficient operations, and ineffective management when facing new challenges from the ever-increasing population and needs.

Considering the strengths and weaknesses of both the public sector and the private sector and the healthcare needs that have become more diverse and more complex, there has occurred the necessity for co-operation between both sectors. Many countries that are members of the Organisation for Economic Co-operation and Development (OECD) have developed a new form of public management by adopting decentralized structure in place of centralized management structure in order to meet the demands of the population in each location (OECD, 2011, p. 15).

Moreover, it can be seen that some government services, whose model was borrowed from that of the private sector, such as contracting-out, cannot satisfactorily meet the present needs because of the lack of motivation to reduce management costs or in order to find more efficient alternatives in providing services (Boyle & Harris, 2009). Therefore, in order to address the problem of insufficient funding and the population's higher expectations regarding the quality public services, western scholars have come up with the concept of co-production, in which the local people in the area, who are the main beneficiaries, can have more roles in the production or the management toward more efficient public service.

Healthcare service is one of the most important public services that the government is responsible for providing to everybody in all countries regardless of the location of residence. However, with the limited resources, the government is having problems providing efficient healthcare services. Especially with the higher demographic ratio of elderly persons and the rapid expansion of urban dwellers, it has become clearly visible that the government's healthcare services are not sufficient to handle the increasing number of patients, resulting in the hospitals being overcrowded and of very low quality. Even though the services provided by the government are subsidized and free for qualified patients, the long wait time and the low quality have led to many agreeing to pay more for the private service provider or choosing self-medication in the case of minor treatments.

The Ninth National Economic and Social Development Plan (2002-2006) of Thailand was the first development plan that introduced a nationwide health security policy in order to guarantee that the health services received are standardized and accessible for everybody in terms of medical treatment, health restoration, health promotion, and disease prevention. In addition to the above policy, the World Health Organization's (WHO) Bangkok Charter for Health Promotion (2005) also resulted in a broad range of co-operation of health promotion and disease prevention.

Furthermore, Section 47 of the National Health Security Act (2002) of Thailand indicated that the national health security system in a local area was to be implemented by encouraging the participation of the locals according to their readiness, appropriateness, and needs. The responsible committee was to support and cooperate with local government organizations in determining regulations so that the health security could be locally administered, in which the expenses were to be paid for by a fund. This decentralized policy has strengthened and empowered people in all areas in taking care of their own health and that of their family.

The involvement of local government organizations and the local population in the management of the health security system is an important strategy toward the reformation of health services in both developed and developing countries. As can be seen, the decentralized approach can result in an effective and efficient health security system nationwide because local government organizations can respond to the needs of local communities more quickly than does the central government. Presently, local

governmental organizations at all levels from the municipality, district, province, and even the special administrative area, such as Bangkok, are constantly growing and having a greater role in the development of the health of the population.

Currently, there has been a network of co-operation in providing primary care, which incorporates the applied knowledge from the areas of medicine, psychology, and social studies in order to form services that encompass health promotion, disease prevention, medical treatment, and health restoration. This co-operation also provides continuous services for individuals, families, and communities with a holistic concept that properly connects with hospitals if any transfer of information or even transfer of patients is needed. Working under co-production at the organization and individual levels among the population is not only a model encouraged by WHO but is also an opportunity for the greater access and more efficiency in providing public healthcare services for people in local communities toward better health conditions.

1.2 Research Questions

This research studies the public healthcare services provided to Thai local communities under Thailand's national health security policy, which was initiated by the government, enabling the government to provide and administer the services in order to achieve the healthy well-being of the population with the strategy of permitting people to participate in the services. The national health security policy permits the management of primary care services, including health promotion and disease prevention, to be participated in by both the government and the general public. This research answers the following questions:

1) What is the structure, operation procedures, and participating service providers of the family care team? What are the Family Care Team's services and activities?

2) What are the components of the co-production of the management of public healthcare services under the operation of the family care team in Thailand?

3) What are the factors that allow the people or the private sector to participate with the public sector in providing public healthcare services in Thailand?

1.3 Research Objectives

The research objective details are as follows.

1) To study the structure and operation of the Family Care Team, a network of health promotion and disease prevention services under Thai health security system

2) To study the components of public co-production in the management of public healthcare services for Thai local communities by the Family Care Team

3) To study the factors of the co-production of public healthcare services for Thai local communities

1.4 Definition of Terms

The objective of this part of the study was to elaborate on the definition of terms and to let readers have a better understanding of this study. The details are as follows.

1) Primary care refers to the system of providing medical and public healthcare services that leverages the applied knowledge in the areas of medicine, psychology, and social studies. The services include health promotion, disease prevention, medical treatment, and health restoration. The holistic concept is applied to provide continuous services for individuals, families, and communities with proper connections with hospitals in the transfer of information and patients. The system also cooperates with the local administrations in order to educate locals on self-medication and health promotion toward better well-being.

2) Primary care unit (PCU) refers to the primary unit of the medical and public healthcare services provision. The PCU is responsible for the management of responding to the basic needs of the population and is a point of contact for various health-related activities, allowing convenient access to the public healthcare services in the local communities. The PCU also provides consultation toward strengthening people's health condition and preventive care in the physical, mental, and social aspects with the participation of local people.

3) The contracting unit for primary care (CUP) refers to a location offering a contract to provide primary care under the nationwide health security system in Thailand. The service purchaser must be under a contract with the service provider in order to receive the primary care services. However, if the local health station is not qualified or equipped to properly offer a contract, the purchaser must go to the community hospital to sign the contract. In this way, the community hospital is acting as a CUP in place of the health station.

4) The contracting unit for secondary care (CUS) refers to a location where general healthcare services are offered for inpatients. These locations include community hospitals, general hospitals, university hospitals, and any private hospitals that are interested in participating in the secondary care network. These healthcare institutions normally receive patients transferred from the primary care units and admit them as inpatients.

5) The contracting unit for tertiary care (CUT) refers to a location offering specialized services, which requires technology and high maintenance costs. The CUT can be hospitals, university hospital centers, or specialized healthcare institutions. Any healthcare institution can be a contracting unit for more than one level of care provider if the services can be offered according to the standards at each level.

6) Primary healthcare (PHC) refers to primary care in the sense that the PHC is an operation and an activity within the local community and also is managed by local people for other local people in terms of public healthcare, where the government personnel act as counselors.

7) Primary medical care (PMC) refers to the first level of medical and public healthcare service provider managed by the government. The operation may be based on the public healthcare principle or the technique of the personnel of the service provider.

8) Quality Pharmacy refers to a pharmacy certified by the Pharmacy Council of Thailand. The Quality Pharmacy provides medicine services and health consultation in the quality that often surpasses the standards administered by the Food and Drug Administration.

9) Family Care Team (FCT) refers to a team consisting of personnel from various medical and public healthcare professions from the area service units and hospitals, including the general public and those responsible for public healthcare. The purpose of the FCT is to perform physical treatment, health promotion, preventive care, stress and social relief, and improvement of the quality of life.

CHAPTER 2

LITERATURE REVIEW

2.1 The Concept of Co-Production

2.1.1 Definition, Components, and Conditions of Co-Production

The concept of co-production was first coined in the United States by Elinor Ostrom et al. in a study of the Chicago police force (1973), in which she explains why the crime rate went up when the police force switched from foot patrol to cars, thus becoming detached from everyday people's lives. Ostrom notes that the services provided by the police relied on the connection with the community and vice versa, using the term "co-production" to explain the relationship. In addition, a study by Anna Coote et al. showed that, in the area of the medical care, both medical staff and patients need to build a relationship with one another, and the relationship will reduce the burden of the public sector in the provision of public healthcare service and, at the same time, promote sustainability in terms of economic development. Meanwhile, Professor Edgar Cahn looked to reform the youth justice system of Washington, D.C., which was overburdened with court cases, and proposed a similar concept of having more involvement of youth and their family in the justice system in order to reduce the crime rate.

During the 1990s, the study of co-production attracted little interest because most organizations were more interested in the development of public services via market driving, which placed importance on the management between service providers and service recipients, thus making the public healthcare service become more like the sale of merchandise. In this way, the service purchaser or recipient was only the endpoint of the process rather than being more involved with the service provider. In the mid-2000s, co-production gained more interest when the voluntary sector became involved in providing services for mental health, social care, and youth justice. Since then, scholars from around the world have extensively studied the

concept of co-production, for example, Whitaker, 1980; Parks et al., 1981; Ostrom, 1996; Alford, 2002; Brandsen and Pestoff, 2006; Bovaird, 2007 and Pestoff et al., 2012. The concept of co-production was conceived in order to deal with budget shortfalls by the government and the higher expectation of the people regarding the quality of public services. This resulted in the involvement of voluntary and community organizations with the public sector toward the more efficient management of public service (Pestoff, Osborne, & Brandsen, 2006; Needham, 2007). After that, the government of the United Kingdom under the leadership of the Labour Party undertook the concept of co-production as the model of the public service reform from 1997 on (Needham, 2007).

Alford defines the term "co-production" as co-operation between people, service recipients, consumers, and voluntary and/or community organizations in the production of public service and the consumption or the receipt of such service (Alford, 1998, p. 128). In the meantime, Bovaird (2007, p. 847) defines co-production in terms of policymaking and the organization of the public service as the constant organization of various services, thus leading to a long-term relationship between the service providers and service recipients or other members of the community, who provide the resources for the service.

Brudney and England (1983, p.59) define co-production within the frame of public policy as "the critical mix of activities that service agents and citizens contribute to the provision of public services." Co-production involves the work of the service agents as "regular producers" and voluntary activities as "consumer production" by the citizens for the purpose of enhancing the quality and/or quantity of services being received. In addition, Brandsen and Honingh (2015) give a definition of co-production as "a relationship between a paid employee of an organization and (groups of) individual citizens that requires a direct and active contribution from these citizens to the work of the organization."

Pestoff, Osborne, and Brandsen (2006) explained the co-production concept whereby a user can design and make a delivery in the same manner as can professionals. In the United Kingdom, the public services that implement a co-production model are in the area of public healthcare, education, and certain law enforcement (Boyle & Harris, 2009). Additionally, welfare states, such as Canada,

Germany, and France, have also used the model to administer their own public services.

Howlett, Kostro and Ora-orn Poocharoen (2015) see co-production as a tool for policymaking, in which co-production emphasizes the participation of the people or service recipients in the community or private sector. In this way, co-production then becomes a tool for policymaking and implementation in order to enable the policy to serve the needs of the service recipients. Co-production also stresses the co-operation of different levels between the public sector, the people, and the private sector. More importantly, the voluntary participation of the people also helps the government to reduce production costs and efficiently deliver public services.

However, the participation of the people in the production process leads to costs in terms of the time spent and the limitation of skills among the volunteers (Brandsen & Pestoff, 2006), thus making co-production interesting in terms of being a policymaking tool. In the studies of co-production as a policymaking tool, there is an attempt to categorize co-production according to the people's participation level in the policymaking and the type of activities involved. In addition, co-production is also categorized according to the form of policymaking and the implementation of the policy. However, Howlett finds that there is little research that attempt to answer why the government chooses to use the strategy of co-production to manage and implement policy.

Howlett concludes that co-production is a complex tool, which is widely discussed for its potential to be a catalyst in knowledge transfer and operation via the policymaking process and also to has a role in being the security of the legitimacy of the government. However, the argument does not analyze the cross-disciplinary issue, that NPM and NPG might cause a blurred accountability that would cause a division in policy and allow local privileged citizens to dominate and take advantage of the system, which would eventually lead to unreliability and disrespect for government officials.

Co-production can be classified into three types: co-governance, co-management, and co-production (Brandsen & Pestoff, 2006). Co-governance is the operation that allows the participation of a third sector in the planning and public service by those that once were professionals in the service. Co-management is the

operation in which a third sector provides public services with the co-operation of government agencies. Finally, co-production is the operation in which people are able to provide public services absolutely by themselves or with the co-operation of professionals. Moreover, Ora-orn Poocharoen and Bernard Ting (2013) add co-consultation as one more type of co-production, which is the operation where each individual, as a citizen, an expert, or even someone that has the vested interest in the public services being provided, is equal to the professionals in the planning and the providing of the public services.

According to the definition of co-production, Brandsen and Honingh (2015) have summarized the basic components of co-production as follows.

1) Voluntary input – "Volunteer work" as defined by the International Labour Organization (ILO) is "the activities performed willingly and without pay" (ILO, p. 4, referenced by Brandsen & Honingh, 2015), which also includes minor compensation, such as travel expenses.

2) Professional – A study by Parks explains the relationship between professionals or experts and the people or service recipients as the important characteristics of co-production, which emphasizes a change in the role of the people or service recipients. In the past, during normal situations, the people only acted as the service recipients (passive role). In other words, the service provider and the service recipient were normally separated from each other. Usually, under the concept of co-production, the professional is the one that loses some of the roles and activities, which are taken away by the service recipients (Joshi & Moore, 2004). Therefore, Brandsen and Honingh (2015) concluded that it is difficult to understand the reason why the service provider or professional is willing to participate in co-production.

3) Professional knowledge – In the process of producing a public service, professional knowledge is important among professionals and the people, but the said knowledge must go hand in hand with the knowledge of the management of the relationship between the professionals and the people. In the process of creating such a relationship, the goals and professional standards of one person are going to change. Normally, a person tends to understand his/herself and his/her family members the most. Therefore, a profession can be explained in terms of the knowledge of interaction with others. The gap between professionals and the people

that enroll in a service will be reduced. At first, both parties possess different kinds of knowledge: one is professional knowledge of the process of producing the services to be provided by the organization and the other is the knowledge of the community (Brandsen & Honingh, 2015). For example, in providing a service involving children, which presents different scenarios with different children, the parents of those children are the ones that understand them the most. Therefore, it would be beneficial in solving the problems of providing public services by bringing in knowledge from both the people in the community and professionals.

4) Economic organization – Within an economic organization, members rely on one another, where producers with different factors of productions are put together within a single hierarchy and there is a process of monitoring to prevent those producers from leaving the production (Alchian & Demsetz, 1972). The idea of the people participating in production but still not being within the organization is considered with the definition of the economic organization in mind, which is clear on the employment contract and compensation.

From a sociological point of view, an organization is understood to be a social group with a shared purpose. This interpretation expands the boundary of the organization due to the fact that people, which are the main part of the organization, are now a part of the production process. Such co-operation initiates the relationship between the people and others, which in turn solidifies the formation of the organization. For example, the service recipient needs to be trained with the knowledge and ability of the service, where the process is similar to employee training conducted by an organization.

2.1.2 Theory Critique

Bovaird (2007) points out the advantage of co-operation that it has to be based on the mutual relation between the service provider or the government official and the service recipient or the community. Both parties have to trust each other and be ready to accept and bear the risks of the co-management. This kind of relation helps to create equal participation in accordance with the model of democracy, which is at the heart of co-production. Since the co-production of public services between the people and government representatives requires the sharing of power, resources, and

responsibilities, co-production will be at the maximum level of efficiency when all parties actively and equally participate (Boyle & Harris, 2009).

In the general method of the management of public services, the relation between the government and the people is clearly distinguishable. That is, the government is the public service provider or the producer, while the people are the public service recipients or consumers (Brudney & England, 1983). Any improvement to the public services will only occur when there is feedback from the people to the government after receiving the services. On the other hand the management of public services in the form of co-production is based on the fact that the government and people are taking part in the production and management of public services together. In this way, feedback can occur during the process of management itself, as it is called internal feedback, resulting in the improvement during and within the process. In turn, the product of such service then becomes more efficient than that of the general process (Whitaker, 1980; Brudney & England, 1983; Bovaird, 2007). In other words, co-production helps manage factors that can cause the unsuccessful management of public services (Needham, 2007).

As can be seen, co-production requires government representatives, especially local officials, to adjust their attitude and learn the new skills of public service management, in which their roles are going to become rather accommodators, and they should not view the participating service recipients as patients, customers, or consumers (Boyle & Harris, 2009).

In addition to the role adjustment within the public sector, the co-production process also reshapes the thought process and role of the people because co-production helps to create varieties of public service management to choose from. The people as the co-producers can then brainstorm and plan for the successful management of public services. This leads to learning and the development of new skills for the management in the long term. This also leads to insight into the prevention of any problem that may occur in the future. Altogether, co-production helps to foster sustainable development both in enabling people to become responsible citizens and improving public service management (Needham, 2007; Boyle & Harris, 2009).

However, the definitions, components, and benefits of co-production mentioned above are taken from the experience within the developed nations. This becomes a limitation if such a concept and its management implementation are to be explained within the scope of a developing nation.

Additionally, Batalden et al. (2015) explain the challenges and limitation of co-producing good healthcare services as follows.

1) Diversity Among Patients

Batalden explains that patients sometimes prefer health professionals to care for them rather than having self-medication in the event of an emergency care, surgery, or visit to the ICU. The manner of the partnership between the professional and patient changes with different situations. Different patients have different backgrounds; therefore, the participation level in co-operation is also different. In their study, Batalden et al. found that, in Scotland, not every patient that was selected for and then completed the training had the same intention or ability to cooperate with the public healthcare officials. Despite completing the training, few patients from the Cambridge Clinic agreed to participate in group visits and other activities. Therefore, figuring out the number of participants and time frame of the activities has become a challenge for clinicians and the care team.

2) Power and Responsibility

Mutual accountability for outcomes is an issue being discussed in the present days because the responsibility to perform healthcare services still belongs to the professional and, even if the patient chooses not to do enough for his or her health or has poor personal hygiene, the healthcare professional still needs to care for the patient no matter what. The healthcare system cannot simply abandon any patient that does not cooperate with the healthcare professional in taking care of his or her health.

3) Letting the Pendulum Swing Too Far

The co-production model seems to devalue the importance of healthcare professionals by transferring the responsibilities of one’s own healthcare to the patient and his or her family, where the freedom that the patient receives may result in bad health outcomes.

4) Contextualizing Standardization

Co-operation in healthcare services is a challenge to standardization. There are many ways to reduce the number of unnecessary variables in providing healthcare services, but those that support the co-operation process are interested in having more variables that help drive more interest in seeking healthcare among the people. Note that the varieties of healthcare services from the co-production models tend to slow down the progress of the standardization of the healthcare professional's work.

5) A Resistant Healthcare Culture

In order to achieve a level of co-operation between professionals and patients is somewhat difficult and takes time, even if both parties have been trained to work together. However, it has been found that both still do not bring out the necessary skills of co-operation and insist on having intermediate personnel co-ordinate and perform the service. Healthcare services are often viewed as a product, consisting of advice, evaluation, and the management of professionals. Nevertheless, the paradigm shift to the co-production model is considered to be difficult and will probably require funding in training among both professionals and patients.

2.1.3 Co-Production in Thailand

2.1.3.1 Waste Management in the Irrigation Department Community, Ubon Ratchathani

In order to learn about the co-operation of the management of public services at the community level, Arunee Seenthitiwanit (2013) studied waste management in the Irrigation Department Community in the province of Ubon Ratchathani as a case study. The goal of the study was to answer the question of whether co-production has any role in the improvement of the public service management at the community level and what factors allow the people to participate in the production by way of document studies, small-group seminars, in-depth interviews, and observations.

In order to select the community for the case study, the researcher evaluated the three communities selected for the pilot program for the waste management experimental project, which was co-produced by the people under the

Zero-waste Community Policy in the area of Warin Chamrap Municipal District, Ubon Ratchathani. It was found that there only the Irrigation Department Community was able to continuously implement the program for the time being and even received a national award for this; therefore, the researcher selected this community for the case study.

The result of the study revealed that the waste management program participated in by the members of the Irrigation Department Community helped to reduce the amount of waste of Warin Chamrap Municipal District within their own community area only. However, their initiative and actions then became inspiration for other communities to follow suit. There was an impact of the co-production in the Zero-waste Community project on the behavior of the community members in the sense that members became more disciplined and more aware of not littering. Waste management with people co-participating in the program can be explained by the co-production model, but the feedback evaluation within the program still needs to be processed through the government system. This result is in accordance with the conclusion by Oraorn Poocharoen and Bernard (2013) in a study of the network of co-participation in Singapore, which explains that co-production in a network-like environment still has the same structure as that of governmental work, such as the establishment of a committee or advisors. In terms of the equality of participation, the Warin Chamrap Municipal District was found to be in the upper hierarchy, more than the Irrigation Department Community in terms of the way that the Community still needed resources and support from the Municipal District, while the Municipal District received a new waste management model devised by the community.

One of the contributing factors that allow the community members to participate in the waste management in their own community is the social power of the community committee, including volunteerism, the benefit of public awareness, and the relationship among the members of the working group. However, the economic and political factors are not important. This is quite different from the conditions for co-production found in the welfare state by Bovaird (2007). Furthermore, the co-production in this waste management program has a positive effect on the co-producers and other volunteers.

2.1.3.2 Elderly Care

The co-production of public service in the area of elderly care appears in the study of Howlett, Koštro, and Ora-orn Poocharoen (2015), entitled "Merging Policy and Management Thinking to Advance Policy Theory & Practice: Understanding Co-Production as a New Public Governance Tool" which studies the co-production projects in Croatia and Thailand.

In Thailand, the author selected an elderly club in an elderly care project in Ubon Ratchathani as a case study. Throughout Thailand, elder clubs plays an important role in the movement toward elderly care within the province. In Ubon Ratchathani, the selected area of the study, the province allows any person to found an elderly club with an initial number of 30 members or more and a registration with the responsible local government agency. In 2012, Ubon Ratchathani had the biggest number of clubs in Thailand with 2,816 clubs, but it was found that not all of them are still operating at present.

The study found that there was elderly care operation in the form of a network and collaboration between the provincial government agencies and the local counterparts, such as the Department of Mental Health, the Department of Disease Control, local hospitals, heads of local communities, public healthcare volunteers in the communities, and the elderly clubs acting as the center of co-ordination. In addition to these agencies, there was also an urge given to the public sector to participate in the network. Within the program itself, the elderly were encouraged to volunteer and provide services for other members. Even if they did not receive any compensation, they were still proud that they were able to help others in the community. However, there was also a market mechanism, with the marketing activities supported by the government, to generate profits for the club, such as sales of the products made via the activities of the elderly in the club.

In addition, there is also the work by paid volunteers, which is a part of the project funded by the Ministry of Social Development and Human Security to pay each village for up to five volunteers trained and qualified to care for the elderly that live by themselves. Most of the paid volunteers are the same people as the volunteers working for the Ministry of Public Health in other projects. With this method of working, there is systematic evaluation and measurement by the local government,

and the results are to be reported to the Ministry of Public Health, which also determines the standards and areas of responsibilities. However, the community has the liberty to set up volunteer health groups where some are set up with a hierarchical structure, while some are informal and more friend-like. The study also found that the trained volunteer groups receive some form of distribution of power from the government while enabling some groups of people to attain the status of being semi-professional within the local community.

In addition, politicians both at the local and national levels realize that the elderly are the biggest demographic group in the country and also the most populous number of base voters in many areas, especially the countryside, which is in contrast to the working generation, who work and live in large cities, such as Bangkok, Phuket, and Chiang Mai. In terms of politics, the study found the following: 1) the elderly club has political influence over the club members in which political party or particular politician has supported; and 2) tight-knit elderly clubs are usually located near the town center and often asked to provide guidance to the clubs located farther away in the countryside; therefore, political views are often sent to the local clubs via such guidance. In the event that some members or even the leader of the club have a close tie to a political party, the club itself then implicitly becomes an unofficial branch of the political party. Furthermore, the study also compared the clubs in the town center area and in the countryside and found that the members in the countryside clubs were more comfortable in exchanging their news, opinions, and ideas of their own communities, including death in the family and marriage, which is in contrast wCh 2 parith the members of the clubs in the town center.

The research study concluded that this project in Ubon Ratchani was deemed successful by the government's public health officials for the following reasons.

1) Most elderly agreed to participate and received sufficient information about healthcare and disease prevention.

2) With self-medication being widely implemented among the community members and volunteers, it allowed physicians and other public health personnel to be able to handle more critical tasks.

3) The elderly were able to generate more income.

4) The volunteer elderly felt more valuable and proud of themselves that they were able to assist other members in the community, and at the same time, they gained more respect from fellow members.

5) The volunteer groups were able to compile crucial information on every aspect of the community, which would be very useful in determining which area of improvement the community should implement.

Overall, most of the participating members agreed that the co-production helped to reinforce the strength and bonds within the community.

2.2 The Concept of the Public-Private Partnership (PPP)

For many years, the public sector has been looking for ways to improve the performance of providing basic public health services to the people. The privatization of state-owned enterprises is one of the tools used with the goal to bring in the private organizations that have bought state-owned enterprises in order to provide and manage the services on behalf of the government agencies. By shifting the responsibilities from the public sector to the private sector, after the completion of the privatization, the private sector will then be able to control and manage all of the operations, including the fact that the private sector will need to make an investment on their own and be responsible for all risks, while the government oversees the management of the private sector via laws and regulations.

An alternative to privatization in increasing the performance of public service is to allow the private sector to participate more in procurement and provision by way of financial potentiality, management skills, innovative resources and technology, and the ability to efficiently manage risks. In the past, the government was the sole provider of services, but various pressures, such as economic recession and changes in the demographics of the elderly causing a strain on budget allocation of services and benefits, caused the government to permit the public sector and interested people to participate in public service provision in order to improve the performance and access of the service. This change has led to the public sector taking on a new role, albeit smaller, and the private sector playing a greater part through co-operation with government agencies, as shown in Figure 1. The government is still responsible for

selecting which private organization provides the services, while the selected private organization is responsible for providing access and the management of risks. In order to guarantee the same level of service, the government requires that a contract with the private organization be furnished and monitors the contracted organization.

Malhotra (1997) explains the conditions that enable successful co-operation between the public sector and private sector in the implementation of a public service projects as follows.

1) The transparent process – The private organization interested in participating in investment with the government prefers transparency in the policy and in the process, including the bidding process and the announcement of the winning contractor.

2) The transparent and impartial bidding process – The bidders are clear on the procedures, and the bidding and selection are based on an equal opportunity and can be examined by the bidders.

3) Appropriate risk diversification – The public sector, the private sector, and the financial institutions are supposed to diversify and manage the risks of the projects appropriately.

4) The proportion of the income generated from the projects to the risk must be assessable.

5) The guarantee by the government – The financial institution is more inclined to approve the loan applied for by the private contractor toward the implementation of the project if the government guarantees the investment.

2.2.1 The Definition of the Public-Private Partnership (PPP)

The Organisation for Economic Co-operation and Development (OECD) gives the meaning of PPP as an agreement between the government and one or more private partners to deliver public services and to generate profits from the service provision while the government achieves the goal of fulfilling the services to the people in return.

The International Monetary Fund (IMF) has proposed that the PPP is an agreement permitting the private sector to use its capital assets and deliver the infrastructure necessary for the services. In addition, the PPP also allows risk mitigation from the public sector to the private sector.

The European Commission (EC) explains that, in general, the PPP is a form of partnership between government agencies and business enterprises with the purpose of providing sources of funding, construction, repair, maintenance, and management of the infrastructure.

Standard and Poor's (S&P) defines the PPP as the relation between the public sector and private sector in both the medium-term and long-term in the areas related to risk diversification and return management, which require different sets of skills, such as skills in management and finance, in order to achieve the expected outcomes of a policy.

The European Investment Bank (EIB) views the PPP as a generic term, meaning that it is a relation between the public sector and private sector with the purpose of utilizing resources and skills to manage and deliver capital assets and public services.

Considering all of the above, the PPP is a partnership that allows private partners to participate with the government in the procurement, construction, development, and maintenance of public utilities and infrastructure, including other related public services, by way of the resources and skills of the private partners in order to deliver assets and public services to the people within the specified time frame and risks.

2.2.2 Forms of the Private Partner's Participation in Public Service Provision

There are many levels and forms of the participation of the private sector depending on the level of responsibility to be transferred from the public sector. Figure 2.2 shows the many alternatives as determined by the government originating from the administration and management contract, the concession to lease, partially or fully operate, and to the purchase of the government assets by the private partner. The level of participation of the private sector also determines the level of risks in operating the project; that is. the government is still in control of management and regulations by transferring some of the risks to the private sector or, on the other hand, the government elects to transfer all of the control and risk responsibility to the private sector completely (Nutavoot Pongsiri, 2002).

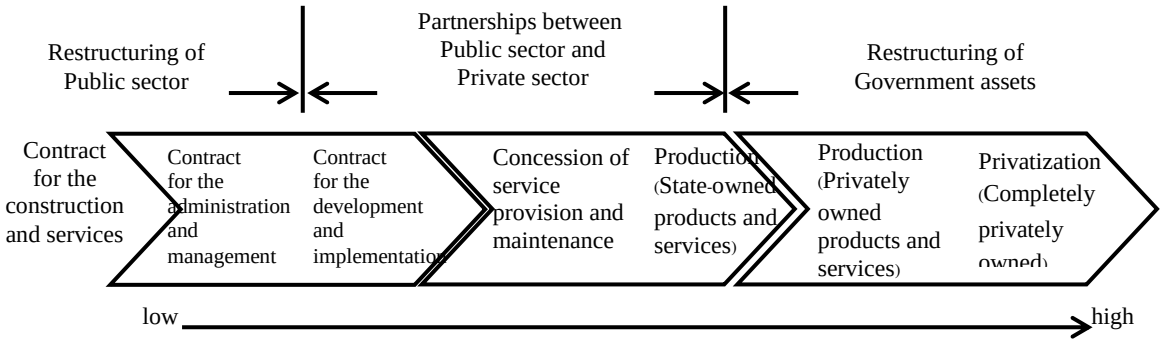

Figure 2.1 The Levels of the Partnerships of the Private Sector

The following shows the various forms and operations of partnerships with the government.

1) Contracting-out – There are two formats of contracting-out. One is contracting a private company for an operation that is not very complicated, such as janitorial services, the repair of government equipment, and security services. The other is a management contract, which is when the government is responsible for infrastructure, the overall operation, and regulations. The ownership of the infrastructure and the service is still the government, and the private company receives the right to manage and operate according to the contract with the government.

2) Lease contract – The private company leases the operation or the state-owned property throughout the lease term with the private company being responsible for all of the operating expenses. The government grants the right to the private company to temporarily utilize the government property for the investment, but the ownership of the property is not transferred to the private company. At the same time, the private company is to compensate the government at the rate specified in the lease contract and return the property upon the lease expiry. The government also determines the service fees and the investment insurance premium. The private company is to operate and make an investment under the rules and regulations set by the government. Therefore, the revenues and profits that the private company can generate solely depend on the performance and efficiency of the management and service.

3) Concession – The government grants all of the rights to the private company to produce and distribute the products and services under government supervision. The private company is responsible for the investment, management, and operation of the property. The concession usually lasts about 20-30 years, during which time the private company will receive the service fees from the people directly, while the government may opt to collect a fee or a share of the profits as indicated in the concession contract. Basically, the format of the concession consists of two or more of the following components.

Design (D) – the design of the project

Build (B) – the building and construction of the project

Finance (F) – the source of funding for the project

Own (O) – fully owning or partially owning the assets during the period of concession

Operate (O) – the operator of the project with the profits shared with the government

Maintain (M) – the maintenance of the project

Transfer (T) – the ownership to be transferred back to the government at the end of the concession period

Lease (L) – payments to be paid for the lease of the property

For example:

Build, lease, and transfer (BLT) is the format whrereby the private sector constructs and develops the infrastructure and any necessary public utilities on its own, including being responsible for all of the risks from the management and construction. After the construction is completed, the property and its ownership are then transferred to the government, which in turn leases it to the private company to operate the service.

Build, operate, and transfer (BOT) is the format where the private sector constructs new public utilities, operates and manages its own risks, and transfers the utilities and associated property to the government when the contract expires.

Build, own, and operate (BOO) is the format where the private company and other private organizations construct new public utilities and jointly own and manage the structures and service within the period of the contract.

4) Divestiture – There are three ways for the government to execute divestiture. First, the government reduces the proportion of its shares by selling the shares to the general public, but the government still holds more than 50 percent of the total shares, as a result, keeping the operation as a state-owned enterprise. Second, the government reduces its shares to no more than 50 percent, resulting in the operation no longer being a state-owned enterprise. Lastly, the government creates a subsidiary under the state-owned enterprise to operate in place of the government. At first, the state-owned enterprise completely owns the newly-created subsidiary and then increases the number of shares of the subsidiary or divests no more than 50 percent of the shares to the general public. This subsidiary will operate very much like a private company after the divestiture.

5) Joint venture with strategic partners – The joint venture is an investment partnership between the state-owned enterprise and the private partner that is experienced in the operation, helping to expand the scope of the operation of the state-owned enterprise to wider customers. In addition, the joint venture enables the development and improvement of the management technique toward a better and more flexible operation. There are three ways to implement a joint venture with strategic partners. 1) The government and the private partner establish a joint company to perform the existing operation, and the private partner is responsible for all of the management, while the government still possesses the ownership of the joint company. 2) The government assesses its own assets and invests with the private partner in the operation so that the private partner is able to operate in the highly-competitive market, with the government holding the minimum number of shares but no more than 49 percent. 3) The government and the private partner jointly invest in the same type of business or related business operation, which is called a strategic partnership.

2.3 Development of Health Promotion

It has been over thirty years since the concept and principle of health promotion were first conceived to respond to the changes in the world's health and environmental problems. There has been a number of revisions of policies and

strategies in order to be responsive to the modern problems in the world. The World Health Organization (WHO) has continuously conducted several initiatives and international conferences, and the development of its health promotion initiatives can be seen as follows (World Health Organization, 2009).

2.3.1 The Ottawa Charter for Health Promotion

The First International Conference on Health Promotion took place in Ottawa, Canada, on 17-21 November, 1986. The conference presented the charter with the goal of achieving "Health for All" by the year 2000. Leading up to the conference, there were increasing expectations toward a modern public health movement worldwide. Discussions took into account of all the regions of the world, not just the industrialized or developed countries. The conference was conducted as progress made via the Declaration on Primary Healthcare at Alma-Ata (present-day Almaty, Kazakhstan), the Targets for Health for All document by WHO, and various discussions at the World Health Assembly.

The conference defined health promotion as "the process of enabling people to increase control over, and to improve, their health". In order to achieve the state of well-being in physical, mental, and social aspects, an individual or a group must identify his or her needs and be able to adapt to his or her surroundings. Health is therefore an important social and personal resource to realize such satisfaction. A public with good health is crucial for social, economic, and individual development. The factors in the areas of politics, economics, society, culture, the environment, behavior, and biology all have an effect on health promotion, as well as health deterioration. Therefore, as the conference concluded, "health promotion is not just the responsibility of the health sector, but goes beyond healthy life-styles to well-being".

In addition, the conference identified the following fundamental conditions for health and improvement in health: peace, shelter, education, food, income, a stable eco-system, sustainable resources, and social justice, and equity.

Health promotion as defined above emphasizes the equal access to healthcare services and a reduction in the health gaps between different social classes of citizens by creating opportunities for all people to gain such access. It is important to establish

an environment that promotes healthy living and broadens the access to accurate health information in order to educate people with basic skills in healthcare and to present them with health alternatives. The people will not be able to achieve healthy well-being without equal opportunities, environments, and resources.

The fundamental conditions and opportunities for accessing the health mentioned above does not solely depend on the work of the public health sector; effective health promotion must be the work of the co-ordination among all sectors, be it the public health sector, the social sector, the economic sector, the private sector, the volunteer sector, the local administrative sector, the industrial sector, the press sector, the professional sector, the communities, and citizens including individuals, friends, and family members.

The conference in Ottawa also defined the process of health promotion as the creation of healthy public policy, which encompasses not only the healthcare but also makes health itself an important term for the policymakers in all sectors and at all administrative levels to be aware of and responsible for the impact of the health condition of people.

The policy of health promotion has various forms but they also support one another. Examples of the forms of policymaking include legislation, financial measures, taxation, and re-organization. Implementing these policies together can lead to the state of happiness among the people along with income generated and social equality. This can create confidence among people concerning the quality and safety of goods and services, leading to an environment that promotes healthy well-being.

In terms of creating a health-friendly environment, the complex but interconnected societies today means that the health objective cannot be separated from other objectives. Humans and their environment are deeply connected to each other, meaning that the fundamental views of health can also include the views of sociology and ecology. The health objective is an objective at national and even community levels. It has been agreed and stressed that environmental protection is the responsibility of everyone for the achievement of a healthy environment.

Any change to daily life, work, and rest most of the time results in an impact on health. These activities should always lead to healthy living. The government or the community is supposed to organize society so as to be health-friendly. Effective

health promotion can bring about safety in daily life, enthusiasm and motivation, satisfaction, pleasure, and relaxation.

The constant evaluation of the health impact by the rapidly changing environment, especially those involved with technology, the energy generation, and urban expansion, is important and regularly needs to be followed up in order to monitor and provide security for healthy well-being. The protection of both the natural and man-made environment, including natural resources, must be included in all health promotion strategies.

In addition to the health policy mentioned above, the conference also discussed the idea that health promotion within the community should consist of tangible and effective activities, the prioritization of problems, decision making, strategic planning, and implementation so that the people in the community can live healthily. The heart of the working process in the community is to empower the community, meaning that the community should be able to feel that it has ownership and control of the operation, including the power to determine the next steps of the operation in the future. The community should utilize the potentials of its human resources and natural resources to develop itself into a self-sustained community and also to be able to support other communities. This network of communities can then be developed into a system whose flexibility can help improve health conditions. All of this can be realized when the community has complete and continuous access to the necessary information, the opportunities to access to the health promotion process, and appropriate funding.

Health promotion helps to drive both individual and social development by providing health information and developing more skills. This kind of process allows the people to have more control of their health and environment and to make decisions that are more beneficial for them. Further, this can enable a lifetime learning opportunity and preparation for life-changing events, especially when suffering from a disease or illness. Furthermore, health promotion should be developed at school, in the home and workplace, and in the community, including all other sectors, such as the education sector, the professional sector, the press sector, the volunteer sector, and affiliated organizations.

As can be seen above, health promotion within the healthcare service system is the responsibility of all sectors – individuals, community groups, health professionals, health service centers, and the public sector. These sectors must work together toward the state of happiness. The health service sector must adjust its direction toward health promotion, not just healthcare provision. The healthcare service must be able to promptly respond to the delicate tasks that are increasingly culture-oriented. These tasks are supposed to assist individuals and communities that prefer better health and to allow the healthcare sector to connect with other sectors. The change in healthcare services must be strongly advocated by health research as well as changes in education and professional training. These activities will lead to changes in the attitudes of individuals and organizations so that a bigger picture is grasped.

The principles in developing strategies for health promotion, according to the Ottawa Charter, are caring holism and ecology. Therefore, the responsible personnel should keep these principles in mind so that, in each phase of work—planning, implementation, and evaluation of activities—both males and females can be equal partners.

In conclusion, the process of health promotion, according to the definition given by the First International Conference on Health Promotion, includes the creation of healthy public policy, creation of a health-friendly environment, the empowerment and strengthening of the community, the development of personal skills, and the adjustment and improvement of the healthcare service system to be aligned with the aforementioned definition. The conference participants pledged the following actions:

1) To set in motion healthy public policy and to advocate political commitment to health and equity in all sectors

2) To counter harmful products, resource depletion, an unhealthy environment and living conditions, and malnutrition, and to focus on public healthcare issues, such as pollution and occupational hazards in housing

3) To reduce the health gap within and between societies, and to take care of the inequities in health as a result of rules and social practices

4) To acknowledge the importance of people as the main health resource; to support and keep individuals and their family and friends healthy through financial support and other means; to listen to the community regarding matters of health, living conditions, and well-being

5) To adjust the health service system and the resources the health promotion; and to share the resources and power with other sectors, other disciplines, and, most importantly, people

6) To stress the importance of health and health maintenance and to recognize that it is a major social investment and challenge; and to address the ecological issues that affect our way of living

In addition, the conference also appealed to the World Health Organization (WHO) and other international organizations to support health promotion policy in all areas and to assist each country in planning health promotion strategies and activities. The conference was confident that individuals of all genders and ages, private development organizations, volunteer groups, governments, WHO, and all sectors that see the importance of health promotion will cooperate in demonstrating health promotion strategies that are in accordance with morality and social values, as stated in this charter. If the co-operation is genuinely followed, the goal of Health for All by the year 2000 will become a reality. The charter has been adopted at an international conference on health promotion, the move towards new public health, on November 17-21, 1986, in Ottawa, Canada.

2.3.2 The Adelaide Recommendations on Healthy Public Policy

The Second International Conference on Health Promotion took place in Adelaide, Australia, on 5-9 April, 1988. The conference presented the Adelaide Recommendations as an acceptance of the Declaration on Primary Healthcare at Alma-Ata, which was an important step in the movement of Health for All by the year 2000. Health for All was announced as a fundamental social target at the beginning of the new millennium of healthcare policy with emphasis on the co-participation of the people and all other sectors.

The Spirit of Alma-Ata was cited when the Ottawa Charter for Health Promotion was adopted in 1986. The charter rekindled the challenge for a new public

healthcare movement with the re-certification that social justice and equality in the society are the basic conditions leading to the target of healthy living. The Ottawa Charter specified five main actions for health promotion as follows: 1) the making of good public health policy; 2) the creation of a health-friendly environment; 3) the strengthening of the community; 4) the development of personal skills; and 5) change in and improvement of the health service system. These actions are mutually dependent with good public health policy being the environment that helps push the other four actions toward a mutual goal. The Adelaide Conference on Healthy Public Policy continued the intention set at Alma-Ata and in Ottawa, and proceeded with the momentum from the previous two conferences. The participants from many countries exchanged experiences in drawing up and implementing good public health policy. The recommended strategies for this policy were achieved as follows.

1) Good Public Health Policy

Good public health policy is based on the fundamentals of providing health and equity in all aspects of policy and being accountable for any impact. The main objective of such public policy is to enable people to have healthy living via a supportive environment. Health choices for people then become more possible or easier with such policy. The social and physical environments are also enhanced in the area of health. In order to successfully implement good public health policy, the areas of the public sector responsible for agriculture, trade, education, industry, and communications have to take health into account and be accountable for any consequences of their policymaking decisions. These sectors need to pay attention to health as much as to economic concerns.

2) The Value of Health

Health is both a fundamental human right and a worthwhile social investment where the government needs to invest resources in good public health policy and health promotion in order to improve the health condition of everybody in one's country. The principle of social justice is that all people have access to a healthy and satisfactory life, which will increase the productivity in both social and economic areas. Good public health policy in the short term will lead to economic benefits in the long term; therefore, there should be continuous efforts to integrate economic, social, and health policies in order to ensure the success of the policy. For this study, the

researcher mainly focused on the idea of management support influencing the hospital to build collaboration between buyers and suppliers in Thai public and private hospitals.

3) Equity, Access, and Development

The inequalities in health are the root of the inequalities in the society. Closing the gap between those with social and educational limitations and those with more access requires a policy to increase access to health-related products and services in all locations and to create a health-friendly environment. Such policy tends to put the underprivileged and risky groups as a high priority. Moreover, good public health policy should recognize indigenous peoples, ethnic minorities, and immigrations. Equality in access to health services is the crucial aspect of equity in health

4) Accountability for Health

The development of good public health policy is important at all levels,, from the national level all the way up to the local administrative level. The government should explicitly define health goals that place importance on health promotion. Public accountability for health is one of the most essential ingredients necessary to foster the growth of good public health policy. The government and all the administration of resources are absolutely accountable to the people and their health for any consequence of the policies, or lack thereof. In terms of the commitment to good public health policy, the government must take measurements and report the health impact of the policies in language understood by everybody in the society. Communication is crucial. Extra efforts must be made to ensure that all groups, of all educational and literacy levels, affected by the policies are communicated with. The conference stresses the need for the evaluation of the impacts of the policy. There is also a need to develop health information systems to support the evaluation process. This process will encourage the decision-making regarding resource allocation toward the implementation of good public health policy in the future.

5) Moving Beyond Healthcare

The dynamic and technological changes in the present world and the complexity in ecology and international interconnections propel the need for

responsive public health policy. The current and near-future state of healthcare seems to be not enough to remedy many of the health challenges. Therefore, health promotion is essential, and combined economic and social efforts will help rebuild the links between health and social reform. The policies of the WHO in the past decades have addressed such combined efforts as a basic principle.

6) Partners in the Policy Process

The public sector plays an important role in health, but health is also immensely influenced by business, nongovernmental organizations, and community organizations. Their ability to help preserve and promote the health of people should be supported and encouraged. Other organizations, such as trade associations, commerce and industry, academies, and religious leaders, are presented with opportunities to assist in the health interests of the local community. They are readily providing new alliances for health actions.

7) Action Areas

The conference identified actions in four areas as top priorities for good public health policy as follows.

(1) Supporting the health of women – Even if women are the main health supporters around the world, they often work without compensation or for a minimal wage. The work of women's organizations is a model for the organization of health promotion. They should receive more support from policymakers and institutions, or the labor of their inputs will result in the increase of inequity. Women need equal access to information, networks, and funds in order to participate in health promotion effectively. All women, especially the indigenous and minorities, have the right to determine their own health and need to be admitted as full partners in the creation of good public health policy in order to ensure the policy's cultural relevance.

(2) Food and nutrition – One of the fundamental objectives of good public health policy is the eradication of hunger and malnutrition. The policy should grant nationwide access to sufficient amounts of healthy diets appropriate to the culture of the country. Food and nutrition policies need to consider the appropriate method of food production and distribution, in both the private and public sectors, in order to achieve reasonable prices. The priority of the government should ensure the positive impact of such food and nutrition policy by taking into account agricultural,

economic, and environmental factors. The first step of the policy should be to set up goals for nutrition and diet. Taxation and subsidies should be appropriate to give nationwide access to healthy food and improved diets.

(3) Tobacco and alcohol – It is generally accepted that the use of tobacco and the abuse of alcohol are two major health risks. They require immediate action through the implementation of good public health policy. Tobacco not only directly causes harm to the health of the smokers themselves, but is a health danger in terms of passive smoking, especially for young children and infants, and this is now widely recognized. Alcohol causes social conflicts and arguments, which are taxing both physical and mental health. Moreover, the ecological consequences of the harvest of tobacco contribute to the impoverishment of economies and the shortage of the land areas for food production and distribution. It is obvious that the tobacco and alcohol businesses are highly profitable. Even though the government also gains from the sale of tobacco and alcohol through taxation, it should consider the economic price of the loss of human productivity through the loss of life and illness due to smoking and alcohol abuse. The government should commit to good public health policy by significantly reducing tobacco and alcohol production, marketing, and consumption by the year 2000.

(4) Creating supportive environments – The proper environmental management can protect human health from both the direct and indirect side effects of physical, biological, and chemical factors, and should recognize that humans of both genders are a part of the complex ecosystem. The limited yet diverse natural resources are essential to life. Effective health promotion policies can only be achieved by having environments that conserve natural resources via global, regional, and local strategies. The government must commit to creating supportive environments with health considerations as part of industrial and agricultural development. The World Health Organization, as an international entity, must play a major role in obtaining acceptance of the principles and advocate the concept of sustainable development.

(5) Developing new health alliances – Consultation and negotiation with other organizations are required to achieve good public health policy. Strong advocates are needed in order to push such policy to the top items on the agenda of policymakers. This means forging partnerships with advocacy groups and the media to articulate the complex policy issues.

2.3.3 Sundsvall Statement on Supportive Environments for Health

The Third International Conference on Health Promotion: Supportive Environments for Health was held in Sundsvall, Sweden, on 9-15 June, 1991. This conference was part of a sequence of events beginning from the World Health Organization's goals of Health For All (1977), the UNICEF/WHO International Conference on Primary Healthcare in Alma-Ata (1978), the First International Conference on Health Promotion in Industrialized Countries in Ottawa (1986), the Second International Conference on Health Promotion in Adelaide (1988), and a Call for Action: Health Promotion in Developing Countries in Geneva (1989). The Sundsvall Conference expressed concern over the global environment, which was under threat by growing social and economic development. This conference was the first international conference on health promotion, attended by representatives from 81 countries, with an intention to call upon people worldwide to actively create more supportive environments for health.

The conference examined several health and environmental issues and announced that millions of people are still living in severe poverty and degraded environments that put their health at risk, thus making the goal of Health for All very difficult to attain. It is, therefore, crucial to make the environment—the physical, social, economic, and political environments supportive of health rather than detrimental.

In terms of health, a supportive environment is comprised of both the physical and social aspects of the surroundings. It includes where people live, their home, their community, their work, and where they spend their leisure. It also encompasses access to natural resources and opportunities for empowerment. There are many dimensions for the creation of supportive environments; namely, the physical, social, spiritual, economic, and political. Each dimension is closely linked to others. There must be coordination at all administrative levels in order to achieve solutions for sustainable and supportive environments.

The conference emphasized the following four aspects of a supportive environment.

1) The social dimension includes customs, social procedures, and even everyday life. Thee traditional social relationships in certain societies are

transforming, with increasing health risks, for example, the greater number of people that prefer social isolation, have a lack of purpose, or even challenge values and heritage.

2) The political dimension requires the government to allow participation in the decision-making process and to decentralize access to and use of resources. The government is also required to commit to providing people with human rights, peace, and the re-assignment of resources from military use.

3) The economic dimension requires the allocation of resources to achieve Health for All and a sustainable environment, including the utilization of reliable technology.

4) The need to encourage and utilize women's skills and knowledge in all sectors, including the areas of policymaking and the economy, is essential for the development of positive and supportive environments. The work by women should be recognized and shared between co-workers. The voice of women's organizations must be heard in the process of creating health promotion policies.

The Sundsvall Conference believes that the implementation of Health for All must follow the two principles as follows.

1) Equity is the priority in creating supportive health environments. It offers opportunities to all people to achieve healthy well-being. The policies for sustainable development must incorporate accountability for the actions being implemented in order to achieve equity in the distribution of resources and responsibilities. In addition, resource allocation must consider all levels of the economic status of the people in society, especially those with the extreme poverty, minority groups, and those with disabilities. The conference also called for industrialized countries to repay the environmental and human obligation accumulated through exploitation of other countries.

2) Public action for supportive health environments must take into account the dependency of all living beings. The management of all natural resources must consider the needs of later generations and the indigenous peoples' spiritual relationship with their land. Therefore, it is important to have the indigenous peoples involved with the development of policies and negotiations in order to properly conserve their rights and cultural heritage.

2.3.4 Jakarta Declaration on Leading Health Promotion into the 21st Century

The Jakarta Declaration is the outcome of the Fourth International Conference on Health Promotion: New Players for a New Era - Leading Health Promotion into the 21st Century in Jakarta, Indonesia, on 21-25 July, 1997. The conference was the first of its kind taking place in a developing country and also was the first involving the private sector regarding its contribution to the implementation of health promotion. The conference presented an opportunity to discuss the lessons learned from effective health promotion, to review the elements of health, and determined the directions and strategies toward health promotion in the 21st century. As a result, the Jakarta Declaration presented the following as actions for health promotion into the next century following the conference.

1) Health Promotion is a Key Investment

Health is a basic human right and an important component for social and economic development. Moreover, health promotion is essential for health improvement and development. It is a process that allows people to gain control and improve their health. Investment and implementation in health promotion are essential for determining the health level of people, and at the same time, greatly reducing inequities in health and increasing social capital. Health promotion's ultimate goal is to increase health expectancy and to decrease the gap in health expectancy between countries and different groups.

The Jakarta Declaration identified the prerequisites for health as follows:

> peace, shelter, education, social security, social relations, food, income, the empowerment of women, a stable ecosystem, sustainable resource use, social justice, respect for human rights, and equity. (WHO, 1978)

The conference also identified poverty as the greatest threat to health. Changes in demographic trends, such as urbanization, the increasing number of elderly, and the high rate of the occurrence of diseases, present new problems in every country. Furthermore, social, behavioral, and biological changes, such as sedentary

behavior, drug abuse, and civil and domestic violence, are also detrimental to the health of millions of people. In addition, new and re-emerging epidemics and mental health problems also require urgent solutions.

Other factors that have significant impacts on health include the global economy, finance and trade, access to media and technology, and degradation of the environment due to irresponsible resource use. The people's lifestyles can be affected by these changes. While some of these can provide great potential for health improvement, such as the advancement in communication technology, others, such as the international tobacco trade, can present a negative effect.

2) Health Promotion Makes a Difference

Research and case studies from around the world present reliable evidence that health promotion is effective and can develop improved lifestyles. It can have an impact on social, economic, and environmental development for health. In order to achieve success and greater equity in health via health promotion, five strategies were laid out in the Ottawa Charter for Health Promotion as follows: build good public health policy, create supportive environments, strengthen community actions, develop personal skills, and reorient health services.

3) New Responses are Needed

New responses are needed to address the challenges that threaten health in the near future. It is important to employ the potential for health promotion existing in many sectors, local communities, and families. There is also an obvious need to penetrate the traditional barriers among government agencies, between government and nongovernment organizations, and between the public and private sectors. New equal partnerships between these sectors are essential. The conference identified priorities for health promotion in the 21st century as follows.

(1) Promote social responsibility for health – Those responsible for decision-making must be committed to social responsibility. The public and private sectors must promote health by adhering to the following practices: 1) avoid harm to the health of individuals; 2) protect the environment and practice sustainable natural resource use; 3) restrict the production of harmful substances, such as tobacco and weapons; 4) protect citizens from threats in the marketplace and the workplace; and 5) conduct equity-focused health impact assessments as part of policymaking.

(2) Increase investments for health development – The investment in health is insufficient and ineffective in many countries. An increase in investments for health development is needed and requires an approach in multiple sectors, such as adding more resources for education, housing, and health.

(3) Consolidate and expand partnerships for health – Partnerships between different sectors are required for health and social development as part of health promotion. This applies to the existing partnerships and potentially new partnerships to be forged. Partnerships can explore the benefit for health through sharing skills and resources. Every member in the partnership must be accountable and transparent based on ethics, mutual understanding, and respect, as set by WHO guidelines.

(4) Increase community capacity and empower the individual – Allowing the people to carry out health promotion improves the ability of each person and the capacity of organizations and communities to influence their health. The capacity of communities can be improved via education, leadership training, and equal and nationwide access to resources. By allowing people to take part in the decision-making process, they can be empowered and gain necessary skills and knowledge toward the goal of health promotion. Both existing and new communication media, including innovations in mass media, can support this process in better utilization of social, cultural, and spiritual resources.

(5) Secure an infrastructure for health promotion – There is a need for a new mechanism in global, national, and local funding. In order to attract interests and actions toward a maximum level of resource mobilization, incentives should be developed among the government, the private sector, academic institutions, and other organizations.

The Jakarta Declaration calls for action from governments, institutions, and communities to accelerate progress toward global health promotion. The priorities for action in health promotion identified in this declaration include the follows.

> Raising awareness of the changing determinants of health; supporting the development of collaboration and networks for health development; mobilizing resources for health promotion; accumulating knowledge on best

practices; enabling shared learning; promoting solidarity in action; and fostering transparency and public accountability in health promotion (WHO, 1978)

Governments around the world are encouraged to take the initiative in contributing to and advocating health promotion networks within and between their countries. The WHO is called upon to take the leadership in building alliances for global health promotion among the member states in order to practically carry out the actions outlined in the Jakarta Declaration. The key responsibility of this role is for the WHO to actively enlist governments, financial institutions, international and interregional organizations, and the private sector in proceeding with the priorities for action in health promotion.

2.3.5 Mexico Ministerial Statement for the Promotion of Health

The statement is the result of the Fifth Global Conference on Health Promotion in Mexico City on 5 June, 2000. This is a statement whose signees pledged the following:

1) The capability to achieve the highest possible health standard is one of the most important and positive assets for the happiness of life and is mandatory for social and economic development and equality.

2) Health promotion and social development are the main commitments and responsibility of the government and are to be shared by all sectors.

3) With the continuous efforts by the governments of many countries around the world working together with societies, there have been tremendous improvements and progress in health services in the recent years.

4) There are still many health problems impeding social and economic development; therefore, they must be immediately addressed in order to continue the efforts toward equality in healthy well-being.

5) It is accepted that new and re-emerging diseases are hindering the health promotion progress.

6) To commit to the social, economic, and environmental elements of health, collaboration and strengthened mechanism are required for health promotion in all sectors and at all levels of society.

7) Health promotion is a fundamental component of the public policies and activities in all countries toward achieving equality and better health for all.

8) There is plenty of evidence that good strategies for health promotion are effective.

According to the Mexico City Statement, the participating ministers agreed to the following actions.

1) To uphold health promotion as a fundamental priority in the policies at all administrative levels: international, national, regional, and local

2) To lead in the participation of all sectors and society in implementing health promotion with actions that strengthen and expand health partnerships

3) To support the preparation of nationwide health promotion plans by enlisting the expertise of the WHO and other partners. The scope of the plans depends on the context within each country, but the plans still adhere to the framework outlined in the Fifth Global Conference on Health Promotion and may include these topics: the determination of priorities of healthy public policies and programs, the support of advancement research on those priorities, and the accumulation of financial resources to increase the capability for the development, implementation, and evaluation of nationwide actions.

4) To establish or reinforce national and international health promotion networks

5) To encourage the United Nations to be responsible for the impacts caused by their development plans

6) To advise the Director General of the WHO of the progress resulting from the actions above

2.3.6 The Bangkok Charter for Health Promotion in a Globalized World

The Bangkok Charter is the result of the Sixth Global Conference on Health Promotion in Bangkok, Thailand, on 7-11 August, 2005. The charter identifies the actions, commitments, and pledges to respond to the determinants of health in a globalized world through health promotion. It is an agreement confirmed by the participants that policy and partnerships are to empower communities and improving health and equality in health should be the central policy of global and national

development. The charter complements and builds on the values, principles, and strategies of health promotion established by the Ottawa Charter for Health Promotion.

The participants identified the four key areas of commitment as follows.

1) To make health promotion central to the global development agenda – Health promotion must be a part of both national and foreign policy, regardless of the international situations, such as war and conflict. This requires actions and cooperation among nations, civil society, and the private sector. These efforts can be based on existing treaties, such as the World Health Organization Framework Convention for Tobacco Control.

2) To make health promotion a core responsibility for all governments It has become an urgency that all governments must properly respond to health problems and inequalities because health is a major factor of social, economic, and political development. All administrative levels of government must:

(1) give importance and priority to investment in health both within and outside the health sector

(2) provide sustainable financial aid for health promotion

In order to ensure the above actions, all administrative levels of government should be explicit on the policies, legislation, and consequences of such policies by using tools such as equity-focused health impact assessment.

3) To make health promotion a key focus of communities and civil society – In order to effectively lead in undertaking health promotion, communities and civil society need to have the rights, resources, and opportunities to exert their contributions. It is important, especially in less developed communities, that capability building be continuously supported. Well-organized communities are very effective in determining and managing their own health and are capable of holding policymakers and the private sector accountable for the consequences of their policies and business operations. The civil society possesses an influence in the marketplace by showing preferences for the products and services whose companies demonstrate corporate social responsibility. Grass-roots community projects, women's organizations, and civil society have shown their effectiveness in the implementation of health promotion and have set examples and models of practice for others to follow.

4) To make health promotion a requirement for good corporate practice – The private sector, especially corporations, can have an impact directly on the health of the people through its influence on the following: local settings, national cultures, environments, and wealth distribution. The private sector holds the responsibility to uphold health and safety in the workplace and to promote healthy well-being among employees, families, and communities. The private sector can help minimize global health impacts, such as the global corporations involved in global environmental change by being in compliance with international, national, and local regulations that protect and promote health. Ethical business practices and fair trade demonstrate the type of practice that should be favored and supported by consumers and government incentives and regulations.

2.4 Health Promotion and Disease Prevention under the Health Security System in Thailand

2.4.1 Health Security in Thailand

The concept of universal healthcare coverage in Thailand is to place importance on providing access to healthcare for those with low income or those that cannot perform self-medication. The establishment of health security in Thailand was first attempted during the government of Kukrit Pramoj (1975-1976), who initiated a project to assist people with low income in terms of healthcare service. This assistance project allowed low-income individuals and families to receive public healthcare services free of charge. Later, the assistance project broadened the coverage to other groups, such as the elderly, children up to 12 years of age, the disabled, veterans and their families, and monks and novices of all religions (Anchana Na Ranong).

In 2002, the government under the leadership of the Thai Rak Thai Party announced a universal healthcare coverage policy under the name “30 Baht Raksa Thuk Rok” (Thirty Baht Healthcare Program). The announcement resulted in the National Health Security Act and the establishment of the National Health Security Office (NHSO), a government agency to coordinate with the public sector and the public sector for effective nationwide healthcare administration and standardized public healthcare services for all Thai citizens.

The National Health Security Act led to many changes within Thailand's public healthcare system, such as the separation of the roles among the agencies as a service purchaser and service provider, budget allocation reform, and the usage of budgets and closed-end payment systems (a flat-rate payout for each outpatient and the usage of the relative weight of the diagnosis related group (DRG) for budget allocation for inpatients). In addition, there has also been innovation in procurement management, such as categorization per disorder and condition, the development of a service system, and the setting up of sub-district health funds. Furthermore, the benefit system for the healthcare of public servants also underwent thorough reimbursement reform during the past decade, when the payment for inpatient services was changed from payment per service transaction to payment per DRG and, for outpatient service, the payment can be paid directly without having to pay out-of-pocket. These changes implemented during the past century have had considerable impacts both as benefit and hindrance on the healthcare system and overall Thai society.

Currently, there are three main health security systems in Thailand: the public servant medical benefit, social security, and universal healthcare coverage. However, each system originated from a different concept and has evolved distinctly. The public servant medical benefit is provided by the government to its employees, their parents, and no more than two underage children. Social security is a system whose funds are provided by the government and the employer together in order to guarantee social support for employees. The universal healthcare coverage is a benefit provided by the government to the rest of the citizens. It was founded by aggregating other health security systems available at that time, such as benefit assistance, the health security card system, and the uninsured. Generally, the three main health security systems vary in many aspects, as detailed in Table 2.1.

Table 2.1 Differences between the Three Health Security Systems in Thailand

	Public Servant Medical Benefit	**Social Security**	**Uuniversal Healthcare Coverage**
Number of Participants	**5 million (8%)**	**9.84 million (15.8%)**	**47 million (75%)**
Source of funding	government budget Expense in 2008: THB 54.904billion (~THB 11,000 per person)	Equal contribution from government and employer 1.5% of monthly salary Individual flat-rate payout (2007): THB 1,250 Total expense: THB 2,133.50 per person	Government budget Individual flat-rate payout (2008): THB 2,100
Benefits	All-around: outpatient, inpatient, dental, prescription drugs, private room and board, labor and delivery	All-around: outpatient, inpatient, dental, prescription drugs, regular room and board in the event of labor and delivery, death, or disability	All-around: outpatient, inpatient, dental, prescription drugs, regular room and board, labor and deliver (compensation per Section 41)
Service providers	Mainly public hospitals and private hospitals are allowed in case of inpatient	Public hospitals, contracted private hospitals, and in-network medical centers	Public hospitals, contracted private hospitals, and in-network medical centers

Table 2.1 (Continued)

	Public Servant Medical Benefit	**Social Security**	**Uuniversal Healthcare Coverage**
Number of Participants	**5 million (8%)**	**9.84 million (15.8%)**	**47 million (75%)**
	emergency but no more than THB 3,000		
Forms of payment	Outpatient: paid per item of service and retroactive Inpatient: rate indicated by DRG	Individual flat-rate payout for both outpatients and inpatients. Additional available on the case-by-case basis.	Individual flat-rate for preventive care and outpatients. Inpatient determined by the relative weight of DRG

2.4.2 Health Promotion and Disease Prevention

Health promotion is multi-dimensioned comprehensive work in public health; therefore, many different definitions are given for this term. The Ottawa Charter, for example, defines health promotion as follows:

> the process of enabling people to increase control over, and to improve, their health toward the state of well-being in physical, mental, and social aspects. (WHO, 1978)

The World Health Organization (WHO) defines health promotion as actions or contributions to changes in the determinants of health not only in an individual, such as health and living, but also in the areas of the economy, society, education, and the workplace.

The significant actions toward health promotion and disease prevention originated from the Declaration on Primary Healthcare at Alma-Ata (WHO, 1978), when the participants declared the goal of achieving Health for All by the year 2000 using the strategies of primary healthcare. In 1986, the Ottawa Charter was announced at the First Conference on Health Promotion conducted in Ottawa, Canada, by the WHO Office for Europe to identify appropriate primary healthcare for the European countries, which were mainly industrialized countries. The Ottawa Charter identifies the issues as follows:

1) The term "health" is defined as the state completed with physical, mental, and social conditions, not just sanitized well-being.

2) Health promotion is the process of enabling people to increase control over, and to improve, their health.

3) Three basic prerequisites are required for health promotion:

(1) Advocacy for health in order to create the conditions favorable for health promotion

(2) Enabling people with a supportive environment, and access to information, skills, and opportunities to achieve their fullest health potential

(3) Mediating between differing interests in society for the purpose of health

4) Five Health Promotion Actions:

(1) Build healthy public policy – The policy-making process must take into account any health consequences.

(2) Create supportive environments – The environments of life, work, and leisure can have a significant impact on health.

(3) Strengthen community actions – Community development enables public participation in health matters.

(4) Develop personal skills – Personal and social development via providing information, education for health, and enhancing personal skills enables people to have control over their own health and environments.

(5) Reorient health services – The responsibility for health promotion is shared among individuals, the government, the health sector, and other sectors.

In 2005, the Bangkok Charter, the result of the Sixth Global Conference on Health Promotion, called for four key areas of commitment to health promotion as

follows: 1) a global development agenda; 2) responsibility for all governments; 3) a key focus on communities and civil society; and 4) the requirement of good corporate practice (Office of the Permanent Secretary, Ministry of Public Health, 2011).

The Bureau of Policy and Strategy, Office of the Permanent Secretary, Ministry of Public Health, studied health promotion policies in different countries as shown in Table 2.2 (The Bureau of Policy and Strategy, The Strategic Framework of Nationwide Health Promotion and Disease Prevention, p. 38).

Table 2.2 Comparison of Health Promotion and Disease Prevention Structures

Topic	Thailand	Canada	Australia	Japan
1. National and local administrative organizations	1) National Health Commission Office of Thailand 2) Ministry of Public Health 3) Department of Disease Control / Department of Health 4) Thai Health Promotion Foundation / National Health Security Office 5) Local administrations	1) The federal government: Ministry of Health (1) Public Health Agency of Canada (PHAC) (2) Health Canada 2) Provincial governments: Department of Health Promotion and Protection 3) Local administrations 4) Others associations	1) The federal government: Commonwealth Department of Health and Aged Care 2) State and territory governments: Department of Health 3) Non-governmental organizations: foundations, professional organizations	1) Ministry of Health, Labour, and Welfare 2) Local administrations, municipalities, municipal health center, and civic communities

Table 2.2 (Continued)

Topic	Thailand	Canada	Australia	Japan
2. Policies and plans	1) National Health Act 2) National Health Development Plan 3) Department-level plans 4) Thailand Healthy Lifestyle Strategy (diabetes, high blood pressure, heart disease, stroke, and cancer) 5) Health Promotion Sub-district Hospital Policy 6) Integration of national health promotion and disease prevention plans	1) Pan-Canadian Healthy Living Strategy (Adjustment in healthy habits: diet, exercise, and weight monitoring) 2) PHAC Strategic Plan 2009-2010 (1) Health promotion: children and family, overweight, obesity, reduction health inequality (2) Preventing chronic disease strategic Plan: diabetes, cancer, heart attack, stroke	1) National Preventive Health Strategy (Australia: The Healthiest Country by 2020) to reduce obesity and tobacco and alcohol consumption	1) National Health Promotion Movement in the 21th century: Health Japan 21 (1) Preventive primary care (2) Supportive environments (3) Health actions: food and nutrition, exercise, mental health, reduction of tobacco use, reduction of alcohol consumption, dental health, diabetes, heart disease, coronary artery disease, and cancer

Table 2.2 (Continued)

Topic	Thailand	Canada	Australia	Japan
		(3) Infectious disease prevention plan: HIV/AIDS, bird flu, respiratory diseases, and esophageal diseases (4) Emergency disaster plan 3) Health Canada Strategic Plan (1) Easy and equal access to health (2) Safe access to health products and food (3) Reduction of health and environmental risks (4) Drug abuse prevention (5) Tobacco control		

Table 2.2 (Continued)

Topic	Thailand	Canada	Australia	Japan
3. Human resources	1) Public health volunteers, public health professionals, skilled professional in preventive medicine	1) Public health professionals, scientists, technicians, communicators, administrators, policy analyst, and planners 2) Volunteers	1) Strategic partnership among all levels: the public sector, the private sector, industry, labor union, private development organizations, research institutes, and communities	1) Community leader, health officials, health professionals
4. Financial system	1) Budget for privilege package of health promotion and disease promotion for personnel of the National Health Security Office	1) Comprehensive and integrated individual health insurance	1) Mediare Australia	1) Social health insurance plan 2) Appropriation from the national government to local governments 3) Health promotion activities supported by private health insurance companies

Table 2.2 (Continued)

Topic	Thailand	Canada	Australia	Japan
5. Management	1) Local administration providing primary care to the subdistrict level	1) Multi-model community development 2) Encouraging partnered organizations to hold health promotion activities in communities	1) Primary care in the community level	1) Health promotion center in the municipality and community levels
6. Laws and regulations	1) Laws promoting health of mothers and children 2) Laws for alcohol and tobacco consumption control 3) Health Charter 4) National Health Act	1) Public Health Agency of Canada Act 2) Canada Health Act	1) Tax and appropriation laws for tobacco and alcohol 2) Environmental regulations 3) Smoking bans in public areas 4) Regulations for promotion and advertisement of junk food	1) Health promotion laws at all administrative levels, health monitoring, smoking bans, nutrition labeling

Table 2.2 (Continued)

Topic	Thailand	Canada	Australia	Japan
7. Risk factors and health threatening conditions	1) Environmental problems 2) Mental health from social and political conflicts 3) Overweight, obesity, HIV/AIDS 4) Poverty 5) Malnutrition 6) Immigrant-related health problems 7) Domestic violence	1) Overweight, obesity, HIV/AIDS 2) New strains of flu and contagious diseases 3) Risks from determinants of health, such as inequality in the elderly and minorities 4) Domestic violence	1) Obesity, tobacco, alcohol are three of seven preventable risks.	1) By 2020, a quarter of the population will be elderly. This will pose a burden for long-term care. 2) Diseases related to metabolic syndrome, smoking, alcohol, diabetes, heart, coronary, and cancer 3) Economic problems 4) Mental health and stress

The health promotion and disease prevention task is a part of primary care, which is the medical and public health service provision near one's home or workplace and cooperates with the people in healthcare that corresponds to the needs of the service recipients. This primary care concerns not only primary health screening but also is a combination of medical, psychological, and social applications so that it can provide continuous, holistic service for health promotion, disease prevention, disease treatment, and recovery to individuals, families, and communities. There is also an appropriate connection with the health center or hospitals in the event of the transfer of patients. The community and local organizations can also take part in the primary care by providing health-related information to the people in the areas regarding self-medication and self-health promotion toward better well-being. In summary, the characteristics of primary care are:

1) A healthcare unit that combines health promotion, disease prevention, treatment, and recovery within the holistic model

2) The first point of access to healthcare services for the people in terms of geography, psychology, and economy

3) An emphasis of a proactive role in health promotion, disease prevention, and an increase in the people's potential for self-reliance

4) Continuous participation in healthcare with people before, during, and after illness, including recovery, and a collection of citizen's records from birth to death

5) A point of coordination with other points of service, such as health institutes, social workers, and the local administration, in order to provide a seamless and all-around service

In general, healthcare can be divided into two main components: professional medical service and self-care. Furthermore, the self-care can be sub-divided into two types of activities: general healthcare in daily life (diet, work, leisure) and self-medication when having an illness without the need for a professional medical service.

In addition to showing the methods of self-treatment of the people, the public healthcare agencies also mentioned in three levels: primary, secondary, and tertiary care. Furthermore, health promotion and disease prevention can also be distinguished into two levels according to the form of operation as follows:

1) Individual level – By strengthening an individual's skills in order to enhance the potential to effectively respond to health problems and handle life and environmental situations

2) Community level – By creating a supportive environment and improving the potential of socio-ecological aspects

The purpose of the health promotion activities is for people to have appropriate behaviors and gain healthy physical and mental conditions. It also allows participation in the management of surrounding factors toward healthy well-being, the improvement of health behaviors, and the monitoring, prevention, control, and treatment of illness using standardized methods. Especially with the universal healthcare coverage being in force, the process of achieving health promotion and disease prevention has become even more apparent with the aim of people having healthy physical and mental conditions. Moreover, the health promotion and disease prevention activities result in the reduction of illness and its complications, leading to a healthier lifestyle and also a decrease in medical expenses.

The health promotion and disease prevention activities encouraged by the universal healthcare coverage are funded by the budget specifically indicated for such activities and the benefits of coverage in health promotion and disease prevention for those eligible. The coverage includes the medical and public healthcare services directly provided for health promotion and disease prevention. The usefulness and effectiveness of the activities have been confirmed by health professionals, indicating that they help increase Thailand's average life expectancy, improve quality of living, and reduce the rate of sickness and impotence. Overall, the purposes of the universal healthcare coverage are as follows: 1) screening to identify risk conditions leading to unhealthiness and the threat to building a potential for health promotion; 2) support for behavioral changes, consultation, and education toward health promotion and disease prevention; and 3) reinforcement of immunization, medicinal usage, and procedures for health promotion and disease prevention. The details of the activities follow.

1) Regular check-ups and care for health development and nutrition in children and youth as outlined by the Department of Health, Ministry of Public Health, and/or the Health Check-up Guidelines for Thais by the Medical Council of Thailand

2) Reinforcement of immunization according to the nationwide plan for immunization, including medicinal usage and procedures for health promotion and disease prevention

3) Screening to identify risk conditions leading to unhealthiness and the threat to building a potential for health promotion for the general public and high-risk groups as outlined by the Health Check-up Guidelines for Thais by the Medical Council of Thailand

4) Family planning per the guidelines of the Department of Health, Ministry of Public Health, and/or the Health Check-up Guidelines for Thais by the Medical Council of Thailand

5) Dispensation of HIV drugs for the prevention of mother-to-child transmission

6) Home visits and tending to patients at home

7) Consultation, support for behavioral changes, and education toward health promotion and disease prevention for the individual and family, including those participating in health promotion programs

8) Health promotion and oral disease prevention:

(1) Oral health check-ups

(2) Dental health consultation

(3) Fluoride varnish for groups at risk of developing dental carries, such as children, the elderly, and those subject to head and throat radiotherapy

(4) Dental sealant (for those under 15 years of age)

2.5 Health Service Provision by Pharmacies under the Health Security in Foreign Countries

The role of pharmacies in foreign countries encompasses not only the distribution of drugs and medical supplies for patients, but also the provision of prescribed medications. Furthermore, these pharmacies also have upgraded their position to be primary care service centers in order to broaden healthcare access for the general public.

2.5.1 The Roles of Pharmacies in Developed Countries

Extending beyond the provision of prescribed medications, the pharmacies in developed countries now have more roles in healthcare services, including pharmaceutical care and consultation, advocating efficient medicinal usage, and positioning themselves as a primary care service center for the community, as explained below.

1) The Pharmacy in Germany

The law requires every pharmacy in Germany to have at least one registered pharmacist present during the hours of operation. The pharmacist can both fill prescriptions and dispense over-the-counter medications, as well as provide pharmaceutical care. The continuous development in the health industry in Germany has also led to the pharmacy being able to provide consultation and to service patients as their family pharmacy. Furthermore, the contract between the family pharmacy and the social security trust fund allows the participating pharmacist to be compensated for the pharmaceutical care provided in conjunction with the patient care by the family doctor. (Eickhoff & Schulz, 2006)

2) The Pharmacy in Portugal

In each area in Portugal, the number of pharmacies is limited by the size of the area and the population. Only a registered pharmacist can own a pharmacy, and the pharmacist can fill prescriptions and dispense over-the-counter medications. Every pharmacy is required to provide basic health-related services, such as measurement of weight, blood pressure, blood sugar level, and blood lipid level. In addition, the pharmacy can also provide other health services as needed, such as drug waste management and pharmaceutical care. (Costa, Sontos & Silveira, 2006)

3) The Pharmacy in Australia

In Australia, the community pharmacy agreements between pharmacy owners and the government of Australia places emphasis on the role of the pharmacy in patient care. The pharmacy has the responsibility of dispensing medications and reviewing prescriptions under the instruction and guidance of the prescribing physician. The pharmacy also provides counseling and drug information to a patient on a case-by-case basis. (Shalom & Alison, 2005)

Additionally, in the area of minor ailments, pharmacist-only medicines are to be dispensed by pharmacists only. The pharmacist is also responsible for the medication management service, which is a drug regimen review with the patient's physician. Furthermore, pharmacies in Australia also have a prominent role for patients with chronic diseases in the provision of health promotion and disease prevention services, such as screening, self-care follow-ups, and drug use and its effectiveness review, especially for those suffering from diabetes and asthma.

4) The Pharmacy in England

The medications regulated in England are classified into three categories: prescription only medicines (POMs), general sale list medicines (GSLs), and pharmacy medicine (Ps). The majority of GSLs are safe for preliminary self-care, while the pharmacy medicine is under the supervision of a pharmacist. Pharmacies in England have been promoted to be primary care pharmacies in order to provide primary care for the people. (Silcock, Raynor, Petty, 2004)

Moreover, the community pharmacist can dispense medications for patients with chronic diseases, such as diabetes, high blood pressure, and asthma, resulting in the greater convenience for the patient. This also reduces the burden of the general practitioner and the family doctor, allowing them to care for and treat other patients. Pharmacies that are authorized to fill prescriptions must be registered as a contracted provider with the Nation Health Service (NHS) and attend trainings in pharmacy administration and pharmacy service for patient follow-ups and prescription drug dispensation.

5) The Pharmacy in Canada

Like those in other developed countries, the pharmacies in Canada provide a prescription filling service, health consultation, and a review and evaluation of the patient's prescriptions. During the past years, pharmacies have taken on a new responsibility in the provision of the nation's public healthcare services. Because the cost of medication is becoming more expensive due to the new pharmaceutical drugs introduced into the market, and because the individual's health expenses are also rising significantly, pharmacies in Canada also play an important role in bringing in pharmaceutical knowledge to help consumers use drugs optimally and at the same time protect them from wasting their money on unnecessary drugs and supplements.

Furthermore, due to the fact that there is an increasing number of patients with chronic diseases, who frequently require care and treatment, the Canadian Association of Chain Drug Stores (CACDS) has proposed that pharmacies become a part of the system of the primary healthcare service of the nation. (Jones, Mackinnon & Tsuyuki, 2005)

2.5.2 The Roles of Pharmacies in Developing Countries

The pharmacy in developing countries is an important venue for health provision and drug dispensation. Pharmacists have a significant role in providing consultation regarding medicine, health, self-care, preliminary treatment, and chronic diseases. The majority of the population opts to receive health services from the pharmacies for various reasons (Goel P., Ross-Degnan D., Berman P., Soumerai S., 1996), including convenience and ease of access, the availability of walk-ins, favorable hours of operation, and lower costs incurred, when compared to other medical institutes. In general, pharmacies are the first point of health-related service centers in many countries. More than 80% of the people of Vietnam, for example, choose to visit the pharmacies first when they are suffering from illness.

The study of the role development of pharmacies in Asian countries has revealed that some countries, such as South Korea and the Republic of China, separate the process of drug prescription and drug dispensation. The physician that examines the patient would write a prescription, and the pharmacist would then fill it for him or her. In this way, it increases the role of the drugstore and the profession of pharmacy, especially that of the community pharmacists in those countries.

In addition, healthcare organizations, such as the International Pharmaceutical Foundation (FIP), are actively advocating the development of the potential of the pharmacy, which plays an important role in the public healthcare system in developing countries, in order to turn the pharmacy into the primary healthcare unit by encouraging and supporting the introduction of Good Pharmacy Practice (GPP). Good Pharmacy Practice consists of four elements as follows: access to pharmacy service, the availability of qualified pharmacists, standardization of the quality of service, and the establishment of a national medicine registry.

2.6 Related Research Papers

Ora-orn Poocharoen and Ting (2013) studied service provision in terms of the relation between the networking concept, collaboration, and co-production in order to analyze the operation of four selected networks in Singapore: The National Family Violence Networking System (NFVNS), Community Action for the Rehabilitation of Ex-offender (CARE), Community in Bloom (CIB), and the Response, Early intervention and Assessment for Community mental Health (REACH). These four networks were selected from a list of collaborative networks in Singapore with the criteria of having been in operation for more than one year, consisting of an established team of operators and volunteers to participate in the study. Among these four selected networks, three were networks in the social service sector, and one was in the environmental sector. The study found that the three factors of network process, network structure, and the characteristics of actors were significant for the network's performance and co-production effectiveness. The three factors affect one another and, at the same time, influence the overall quality of the collaboration and co-operation of the network.

The authors of the study divided the categories of co-production into four dimensions under co-production-oriented collaboration, which were co-governance, co-management, co-production, and co-consultation. The first three dimensions have been identified and defined by Brandsen and Pestoff (2006) as follows. Co-governance is the process that allows a third sector to participate in the planning and production of public service by a professional organization. Co-management is when a third sector produces the public service in coordination with government agencies; and co-production is the process in which citizens can produce a public service absolutely by themselves or with the help of professionals. In addition, the authors added a fourth dimension, co-consultation, as the process in which an individual, as a citizen, an expert, or even someone that has the vested interest in the public services being provided, is equal to the professionals in the planning and providing of the public service. The study proposed a co-production-oriented collaborations matrix, as shown in Figure 2.4, to explain the forms of the relations between the organization, the individual, and planning and production.

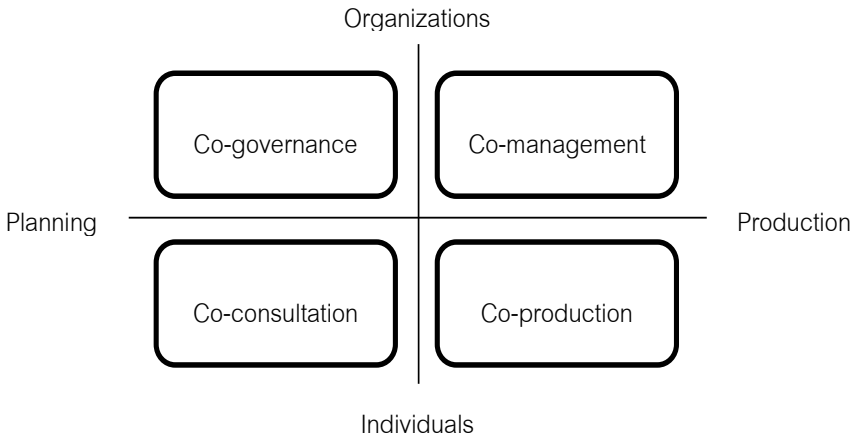

Figure 2.2 The Co-production-oriented Collaborations Matrix
Source: Ora-orn Poocharoen and Ting, 2013.

In the study to answer the questions of how the context of the policy affects collaboration and how the process and the network structure affect the co-production process, including the study of the key values of a network and the process of creating key values, and the study of management and the necessary skills to manage the network, the authors studied using a research framework as shown in Figure 2.5.

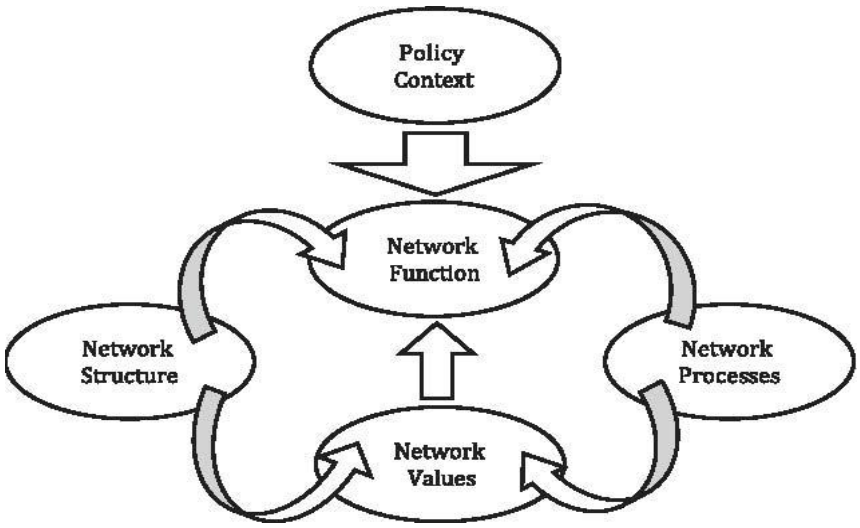

Figure 2.3 Conceptual Framework for Network Analysis
Source: Ora-orn Poocharoen and Ting, 2013.

The aforementioned analysis of networks and different forms of collaboration helps to study the networks of public service provision in every facet and the relations between one organization and another and between an organization and individuals in the production of products and services. The study found that the four selected networks exhibited the components of collaboration and co-production, as illustrated in Figure 2.6, which shows the network structures created by the individuals' collaboration and co-production.

In terms of the three factors considered in the study, 1) the characteristics of actors that can influence the collaboration at the network level are the dependency level of resources, the consistency level of goals, and leadership that encourages collaboration. 2) The network structure is an important factor that can determine the characteristics of actors, the process of operations, and the quality of collaboration and co-production, where the authors studied the issues of power relations, power concentration, and level of density. 3) The network process consists of the communication within the network and the decision-making process. The study found that, in the four selected networks, there was little difference in the communication and the decision-making process, reflecting the duration of the existence of the network, the network structure, and the characteristics of the actors. These networks conduct official meetings, which has led to the transformation of operational issues into policy.

The study also found that these four selected networks were formed according to the relation between an organization and individuals. They also exhibited co-production schemes with the service recipients or those with vested interests. Therefore, it is necessary to study collaboration and co-promotion in the context of the network, while the study of how different categories of collaboration and co-production can affect each dimension of the network is important as well. It is important to note that the co-production within the four selected networks must reach a level of trust among the co-producers, which depends on the network structure and the sustainability of the process.

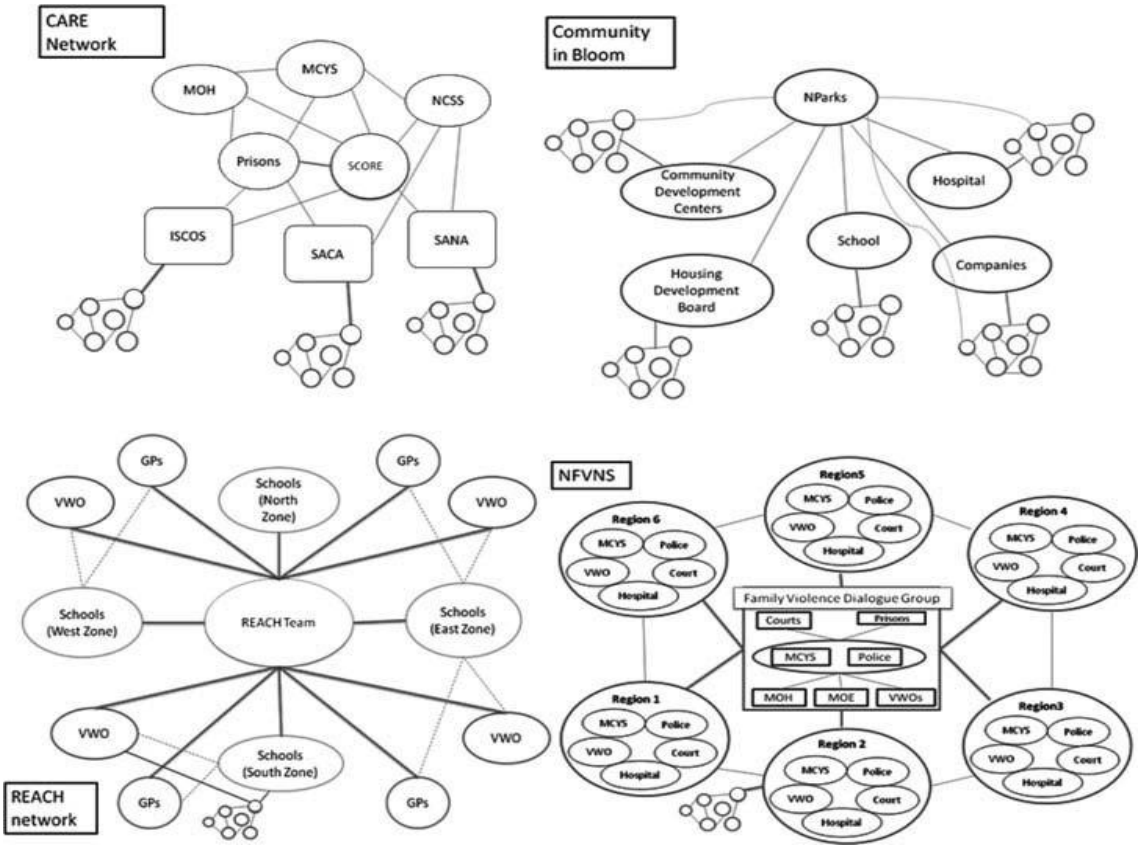

Figure 2.4 Structures of the Four Networks

Source: Ora-orn Poocharoen and Ting, 2013.

The study of the four selected networks in Singapore revealed common traits among all four as follows: 1) the government has been taking on a leadership role of the network's operations; 2) these voluntary welfare organizations (VWO), and also most other VWOs and community groups, are relying on government funding; 3) the government initiates the program and collaborates with the VWOs and the citizens; 4) the government plays an important role in strengthening the VWOs; and 5) the government guides the leaders of the VWOs and communities into having the government's work structure, such as setting up an advisory committee or nominating a candidate to be the committee chairman. In addition, the authors analyzed the selected networks and made comparisons as shown in Table 2.3.

Table 2.3 Descriptive Comparison of the Networks

	NFVNS	CARE	CIB	REACH
Year started	**1996**	**2000**	**2005**	**2007**
Objectives	Help victims of family violence	Help ex-offenders to reintegrate	Build gardening groups	Help children with mental and behavior issues
Actors	Organizations, communities, individuals	Organizations, communities, individuals	Organizations, communities, individuals	Organizations, communities, individuals
Funding from government	For each case government funds 75%	For each case government funds 90%	NParks provides minimal funding to citizen groups	Funding provided to VWOs and schools
KPIs	Case Management framework	Case Management framework	Number of garden groups + qualitative indicators	Quantity and quality of cases consulted, satisfaction levels of partners
Learning	Learning + Policy change	Learning + Policy change	Learning by all actors	Learning by VWOs and Schools
Outcomes	Policy change, implementation improved, public value change	Policy change, implementation improved, public value change	Public value change	Implementation improved, public value slowly changing

2.7 The Conceptual Framework

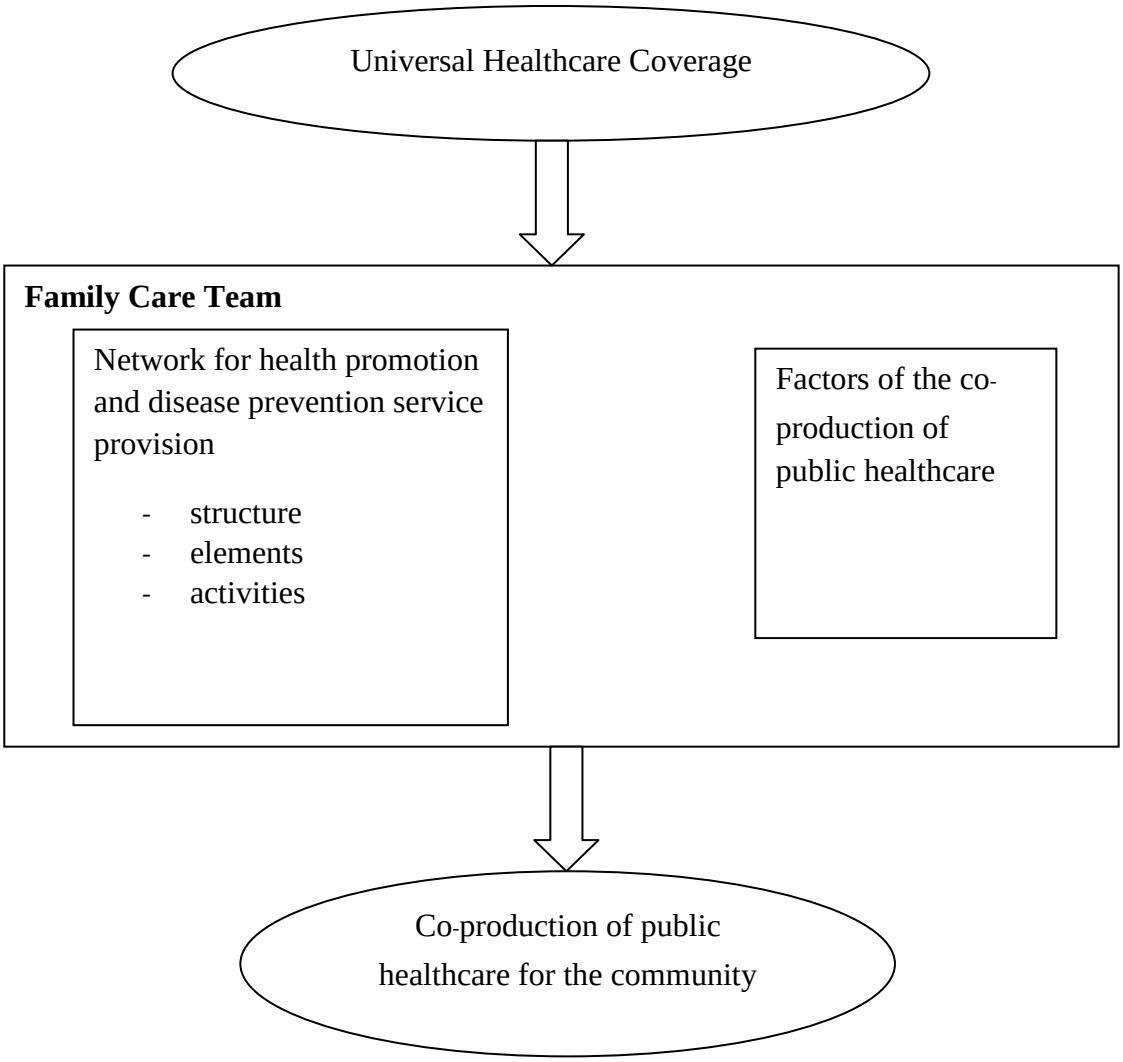

Figure 2.5 The Conceptual Framework

CHAPTER 3

RESEARCH METHODOLOGY

This study, entitled the Co-Production of Public Healthcare Service in Local Communities: A Case Study of the Family Care Team, is a qualitative research and is a study of the social phenomena from the natural surroundings. It is also a case study using the methods of document study, in-depth interviews, focus groups, observation, and qualitative data compilation with descriptive data analysis.

This study uses the conceptual framework of co-production to present the main topic of the operation of the Family Care Team in order to understand the form of operation, the influential motivation of public sector toward co-production with the public sector, the structure, the process, the activities, and the characteristics of the actors in the co-production of health promotion and disease prevention in the people's sector and within different administrative levels of the government, such as the community, sub-district, district, province, and the policy, ultimately leading to the answers to this research study.

3.1 Informant Groups

This study is a case study of the Family Care Team. Interviews were conducted with four informant groups as described below.

1) Government officials in charge of policy making – officials of the Ministry of Public Health, officials of the National Health Security Office, and officials from other related agencies

2) Government officials working in the Family Care Team – the primary care personnel (working for sub-district health center, community doctor center, town health center, municipal public health service center, and community clinic), including physicians, registered professional nurses, public health scholars, community health officials, public health administrators, dental care personnel, social

workers, psychologists, physical therapists, pharmacists, general practice physicians, and specialized physicians

3) The private sector cooperating with the Family Care Team – private pharmacies

4) The civil sector cooperating with the Family Care Team – public health volunteers, rights advocate volunteers, local administrative organizations, volunteer community leaders, and families

3.2 Research Instrument

3.2.1 Semi-Structured Interviews Consisting of:

1) Interviews with government officials in charge of policymaking to learn about issues on policy, proposals, budgets, operational processes, goals, and evaluation processes

2) Interviews with government officials working on the Family Care Team to learn about its operation, the compositions of the team, service activities, collaboration within the team, and communications with external organizations, including problems and issues

3) Interviews with the private sector cooperating with the Family Care Team to learn about: 1) personal information, occupation, education level; 2) work of the Family Care Team, period of participation, types of work and activities, participation level, resource contributions, reasons for participating, frequency of participation, evaluation process; 3) opinions and inputs concerning the Family Care Team, and problems, difficulties, limitations, expectations, and suggestions

4) Interviews with the people sector cooperating with the Family Care Team to learn about: 1) personal and family information, occupation, period of residence, education level, leisure, reliance, assistance with family and other community members; 2) work with the Family Care Team, period of participation, types of work and activities, participation level, resource contribution, reasons for participating, frequency of participation, evaluation process; 3) opinions and inputs toward the Family Care Team, problems, difficulties, limitations, expectations,

suggestions; 4) relation to society, relation to community, and responsibility to community

3.2.2 Using focus groups to analyze the qualitative information of the mechanisms of operation in each sector, including the problems and difficulties within the operation

3.2.3 Collecting information through observations and documenting

3.2.4 Observation of activities held by the target groups, such as patient care, home visits, and group meetings

3.3 Data Collection

During the first phase of the study project, the author reviewed the literature in order to understand the public health services in Thailand and inquired about the feasibility of the study with several qualified scholars. The service in primary care was first studied and then narrowed down to health promotion and disease prevention services under the collaboration of the public and people sectors. However, it was found that there was an operation by the Family Care Team, which was participated in by the people and drugstores in the community, thus exhibiting the concrete work by the private sector in helping provide public healthcare services. As a result, the author finally was able to pinpoint the subject of the study and conducted the research by collecting the relevant documents and selecting the case study areas from those that had exhibited outstanding achievement and that were widely accepted as one of the prototypes of the Family Care Team operation.

During the information collection phase, the author began with interviews with officials from the National Health Security Office, which is one of the government organizations that promote the Family Care Team policy, and the president of the Community Pharmacy Association, Thailand, in order to create a list of pharmacies that are working with the government in public health service provision. It was found there were not many such pharmacies and the locations of these were not nationwide. After that, the author visited the areas and performed observations as well as conducted interviews with the members of the Family Care Team. In order to obtain information about pharmacies, the first two locations visited

were Public Healthcare Service Center No. 45, Health Department, Bangkok Metropolitan Administration, and the Community Health Center, Khlong Sala, Phetchabun. Then information on community participation was obtained at the Health Promotion Subdistrict Hospital, Khlong Sala, Mueang District, Phetchabun.

3.4 Unit of Analysis

The Family Care Team

3.5 Area of Study

This research set the area of study as the primary care provided by the Family Care Team. The private sector participating was in the form of private pharmacies only. The geographic area was also limited in this study to the public service in the area of the municipality and sub-district of Ban Klang, Nong Phai District, Phetchabun. The study also collected additional information on the pharmacies in the service area of Public Health Care Service Center No. 45, Health Department, Bangkok Metropolitan Administration.

3.6 Data Analysis

After the document study, the field study, and the observations of activities performed by the studied groups, the information was then analyzed according to the descriptive data analysis within the areas of study.

3.7 Duration of Research Study

The duration of this study was 24 months, from April, 2015 to April, 2017.

3.8 Study Limitations

1) Obtaining permission for the observation of the working process and interviews with informants in government agencies is complicated and involves many steps and procedures. Oftentimes, a letter of authorization must be obtained from the head of the agency and the permission requires consideration of the ethics department of each respective agency.

2) The duration of interviews with government officials is limited due to the high volume of work that the officials are responsible for.

3) The study is conducted during the time of a military regime with neither elections nor active political representatives to influence voters. As a result, the political aspect cannot be clearly defined nor observed.

CHAPTER 4

CASE STUDY

4.1 Case Study: Ban Klang Health Promoting Hospital (HPH), Nong Phai District, Phetchabun

Ban Klang is a village in Wang Tha Dee Sub-district, Nong Phai District, Phetchabun. Nong Phai is adjacent to Mueang Phetchabun District.

The health promoting hospital (HPH), or as the locals commonly call it, “Anamai” (Thai word for “health”), is a healthcare institute covering a sub-district, providing the primary care services under the administration of the Ministry of Public Health. The health promoting hospital was promoted by the community health center (“Sathanee Anamai” in Thai) with the responsibility of primary care provision for people in the sub-district but it is not capable of inpatient care, which is handled by the district-level hospital.

The Ban Klang HPH is housed in a two-story wooden building, which was the place of the original community healthcare center. The ground floor has been renovated and expanded and is currently used as the main area in providing the primary care services to the people of Wang Tha Dee Sub-district. According to the officials working for the HPH, the entire cost of renovation and expansion of the ground floor was personally funded by Mor Mai (Doctor Mai), which is the name that the locals gave to this particular registered professional nurse who has been the head of the Ban Klang HPH for more than 15 years. The staff of the HPH consists of four registered professional nurses and no physician. The nurses are responsible for performing in the area of medicine for the primary care services in health promotion, disease prevention, treatment of minor illness, patient follow-up, and medication dispensation for the patients with chronic disease, who were earlier transferred from the Nong Phai District hospital. Out of the four staff nurses mentioned, only two are government officials under the Ministry of Public Health, while the other two are contracted personnel, whose employment is funded by the people in the sub-district.

4.1.1 Overall Picture of the Operation

The activities provided by the HPH to the people of Wang Tha Dee Sub-district include vaccinations, physical check-ups, preventive care, prenatal medical care, school healthcare, chronic disease patient care, and follow-up home visits. The hospital's hours of operation are 8:30-16:30 Monday to Friday, the normal government hours of operation. Normally, at other HPHs, a person can visit the hospital for service at no charge; however, for the Ban Klang HPH, patrons are asked to pay 30 Baht for each visit in order to help pay for the operating expenses of the hospital.

Since the HPH is responsible for the primary care services in an area of more than 4,000 residents with a very limited budget and personnel resources, Mor Mai added that the public health volunteers are an essential part of the operations of the hospital. The public health volunteers collaborate with the hospital personnel at almost all levels, including the planning process. The public health volunteers are recruited from, and thus work on behalf of, each village (a subdivision of a sub-district). They keep track of the population count within the village and report the demographics to the HPH in order to identify and categorize patients into different categories, such as the elderly, bedbound patients, pregnant women, and the disabled. With the volunteers' data collected, Mor Mai and the hospital personnel would then lay out the plans and project activities of the healthcare provision for all of the population groups.

However, in terms of the operation under the Family Care Team, Mor Mai believes that it is difficult to set up the Family Care Team in practice because, according to his understanding, the Family Care Team must consist of registered professional nurses, public health officials, physical therapists, local administrative organizations, community developers, the sub-district chief, village chiefs, and public health volunteers, and the time constraints of all personnel limit their involvement, making the formation of the Family Care Team very difficult:

> We are actually working as a team per the policy from the central government; however, it is difficult, very difficult, to gather everyone to convene at the same time because our free times do not coincide. For the photo showing that we did the field study work in the villages with the whole team, it was a very rare moment that we were able to get everyone out together. It is relative easy for just the doctors and the volunteers, but to get the village chiefs, the sub-district and local administrative officials is much more difficult. I think, the entire team with professionals and government officials can meet only once a year. (Mor Mai, personal communication, February 8, 2017)

In fact, the hospital personnel, including Mor Mai, other workers, and volunteers, all voiced in unison that "the workload is overwhelming" because their routine work has to be completed with a tight deadline, which limits their involvement in the Family Care Team. The major problem at the sub-district hospital today is the inadequate number of staff members to handle the workload within the deadline indicated by their affiliated department of the Ministry of Public Health. According to Mor Mai, two permanent positions are allocated in proportion to the area population; therefore the hospital strongly needs support from the community sector in completing the assigned work by the deadline, especially the assignment of field study, which is frequently joined by the public health volunteers. Consequently, the public health volunteers have then been an important workforce in supporting the work of the hospital. Mor Mai commented that there are currently a lot of volunteers making it easier to work with them than other sectors. There are always 4-5 volunteers participating in the field study with the hospital personnel.

4.1.2 "Colleague" or "Subordinate"?

The work performed by the public health volunteers has been outstanding. The personnel of Ban Klang HPH communicated the idea that the first step of the work process is when Nong Phai Hospital, the affiliated district level hospital, submits a list of patients within Ban Klang Sub-district to the HPH. The HPH then assigns the public health volunteers, along with the hospital professionals, for home visits and the

evaluation of the activities of daily living (ADL). This evaluation allows the hospital to sort the patients and the elderly into groups for appropriate healthcare and treatment. In the case of bedbound patients at home or others that choose not to receive healthcare at the hospital, the volunteers will collect their information and submit it, including the summarized entries, such as the number of patients in each group and demographics, as a part of the monthly report to the HPH. Finally, each volunteer is assigned 10-15 households and is responsible for monthly home visits and healthcare activities, such as health measurements (blood pressure, weight, and waist size), note taking, and report preparation. The duties in the community also include helping and educating people in the community to take care of their environment, especially the elimination of mosquito habitats, which are the primary cause of dengue fever.

The work by the public health volunteers is not formally evaluated, but the HPH does evaluate the performance from the submission of the monthly report. If the monthly report is not submitted, the volunteer cannot be compensated for his or her work in that month. If three months are overdue, the status of being a volunteer will then be revoked:

> We are looking at the monthly report [submitted by the volunteer]. If the report was not submitted, we would not compensate the volunteer, which is 600 Baht per month. We usually mail a letter out to remind them to submit the monthly report." (the hospital personnel, personal communication, February 8, 2017)

For the monthly report, each village will prepare a summary report and submit it to the chief of the village group, who will then collect the reports from all of their respective villages and submit them to the sub-district chief and, in turn, to the HPH.

Another duty of the public health volunteer is to attend to the work and activities inside the HPH, such as cleaning, filling medications, and packaging medicine bags and bottles. For phlebotomy, only the volunteers that were trained as a Care Giver are allowed to perform this duty. They will perform this service every Wednesday morning in conjunction with the hospital personnel in obtaining blood

samples from patients with diabetes and chronic diseases. However, the work in phlebotomy is not compensated.

Mor Mai talked about her impression of the time that she had worked with the public health volunteers, indicating that the volunteers that had been working with Ban Klang HPH were helpful and kind as a result of her inviting them to cultivate generosity according to Buddhism:

> The volunteers helping us here are very kind-hearted. I usually tell them that I like taking time to go to the Buddhist temple to give alms and practice generosity." (Mor Mai, personal communication, February 8, 2017)

The public health volunteers, Mor Mai added, are working in tandem with the HPH personnel very well. Many of them already possessed and were committed to the volunteer mindset—the thought of giving to others before yourself—when they first applied to help the hospital. There was a time, Mor Mai remembered very well, that the volunteers contributed their own money to the funds toward the necessities of the patients in the hospital:

> That time we had three volunteers who went to a Care Giver training, and each received around 125 Baht daily. Altogether they got something a little more than 1,000 Baht. Then each of them chipped in 500 Baht – 1,500 Baht in total – for bed sheets and pillow covers for the patients. I told them to wash them first before handing them to patients. It was like releasing the soul of generosity to the patients. You see, if we just bought and gave them to the patients right away, they wouldn't feel anything special. But if we washed them with detergent and softener, the patients could feel the softness and fragrance, and they would be happy and feel appreciated. (Mor Mai, personal communication, February 8, 2017)

The Care Givers that Mor Mai mentioned are the public health volunteers that have been trained in the more intensive healthcare operations, such as wound treatment and phlebotomy, in addition to the basic training required for all volunteers.

In Nong Phai Sub-district, the area of responsibility of Ban Klang HPH, there are 3 Care Givers, and one of them is the leader of the public health volunteers, out of 131 volunteers. The head of the HPH gets to select which volunteer is qualified to receive the Care Giver training. In turn, the Care Giver must coordinate with the registered professional nurses in wound treatment, phlebotomy, and patient care. If there is any change in the patients' symptoms or overall condition, the Care Giver will immediately notify Mor Mai via the LINE messaging application. However, each Care Giver still receives a monthly compensation of 600 Baht, the same amount that other volunteers receive.

In coordinating the meetings and work between the HPH and the public health volunteers in the area, the head of the hospital first determines the project and its activities, including the schedule, and then announces the programs to the volunteer leader of each village. The leader then informs the volunteers in his or her village and coordinates with the village chief for the public announcement of the activities and their schedule to the villagers. Sometimes the village visit by the hospital personnel can happen impromptu. Should this occur, Mor Mai will make a telephone call to the volunteer leader, who sometimes is busy or out of the area but will relay the message to the volunteers in the area so that they can prepare to receive the team from the HPH on that day.

In terms of the coordination during the village visit, Mor Mai will personally assign work to the Care Giver and each volunteer. The healthcare service recipient (the villager) is assigned only one registered professional nurse. This form of work reflects the hierarchical system or "leader" and "subordinate," which agrees with Mor Mai's perception that the volunteers in the area are rather "subordinates" under the hospital personnel:

> In the past, the volunteers viewed themselves as an organization in its own right. They didn't want the hospital personnel like us to intervene in their work. In their mind, they were independent; they were colleagues, not our subordinates. In fact, the volunteer staff originated from us. They didn't realize that this kind of thinking wouldn't do them any good. Before, I put all my efforts into them. I was generous with them. I held New Year's parties for

> them for many years. It was all just because I was thinking of them as subordinates. Until I was aware that they did not think as subordinates, I stopped holding the parties since. (Mor Mai, personal communication, February 8, 2017)

4.1.3 Flag Color Indicating Health

In addition to the activities mentioned above, there is also a health screening activity, which is conducted by the registered professional nurses leading a team of Care Givers and other volunteers responsible for the certain village for the health screening visits. If a patient, especially an elderly person or a bed-bound patient, is found, the residence will be given a red flag. If a homebound patient is found, the residence will be given an orange flag. These colored flags indicate the health condition of the residents. Mor Mai said that the team will help care for the patients until a green flag is given, indicating that the patients can now rely on and care for themselves:

> We are aiming to raise the condition to the yellow flag and then helping take care of the patient until they get a green flag. That means they can walk and take care of their own self. Then we have them attend a school for elderly care. This is how the cycle goes on. (Mor Mai, personal communication, February 8, 2017)

To illustrate this, Mor Mai mentioned “Yai Lon” (Grandma Lon), who is an elderly person Mor Mai assigned into the “Alone” group, meaning that the persons in this group are living by themselves or with their children and have to help themselves in day-to-day living. In the case of Yai Lon, she was assigned a red flag from a fall she suffered and then was taken care of by the team until currently she is able to help herself.

From a conversation with Yai Lon’s neighbors, it was found that she moved to live with her relative in another village after she was treated by Mor Mai’s team. The author of this research study then went to the village that Yai Lon had moved to and found her staying in a two-story house with her niece. Yai Lon’s niece said that

Yai Lon had no children so she, as a niece, took Yai Lon in. On the day she picked Yai Lon up, Yai Lon had already suffered a fall resulting in a hip fracture and was not able to walk. Nong Phai District Hospital did not recommend surgery because of her old age. Currently, she has become a bedbound patient and has been staying with her niece for over a year.

4.1.4 Meet Once a Month

There is also the case of "Yai Dam" (Grandma Dam), who lives alone with her primary-school-age nephew. Yai Dam is suffering from diabetes, causing a problem with her vision and the ability to walk. The volunteer then has to help take care of her by bringing her the monthly elderly fund from the sub-district administrative office. The volunteer also takes the opportunity to pay her a monthly visit and performs a health check-up. During the most recent visit, the volunteer also brought her some food because she is visually impaired and, as a result, was unable to cook by herself. When the author went to talk to her, Yai Dam said that, even though her eyesight was poor, she was still able to see and perform several basic daily activities. However, her main problem was experiencing aches, preventing her from walking comfortably. However, she could still climb up and down the stairs, and on the day of the conversation, she had just caught a fish in the pond behind her home for her and her neighbors' next meal. Presently, she is retired but supports herself by regularly fishing and picking vegetables near home for her meals. She also sometimes receives monetary support from her son, who is working in another province. When she gets sick, Yai Dam related, she usually asks her neighbor to take her to a private clinic in the area instead of the HPH, even though there is no charge for her. She gave the reason that the symptom she usually has is aching and, in her opinion, can only be treated by an "injection." Since the Ban Klang HPH only administers medications without an injection, this explains why she chooses to go to the private hospital for the muscle injection, and when asked about the public health volunteer from the HPH, she replied as follows:

> I seldom see her. She hardly comes here. She asked someone else to bring me my money (the elderly fund). It has been a long while now that I last saw her. (Yai Dam, personal communication, February 10, 2017)

4.2 Case Study: Khlong Sala Urban Community Healthcare Center, Phetchabun

The Khlong Sala Urban Community Healthcare Center is a health service establishment under the administration of Phetchabun Hospital. The Phetchabun Municipality donated one of their buildings to the Phetchabun Hospital to repurpose the building into the Khlong Sala Urban Community Healthcare Center in order to reduce the congestion within the Phetchabun Hospital and to provide equal and more convenient healthcare access to all the demographic groups of people in the area. The role of the urban community health center is also health promotion and basic disease prevention for the people in the area of the municipality, which is a proactive measurement with participation from both public health volunteers and the private sector, e.g. private pharmacies. The work is being led by a family medicine practitioner named Mor Duangdao, who stated the following concerning her responsibility:

> I am responsible for 23 HPHs in this area, in which they are divided into four zones. There is a nurse coordinating all four zones, with me being the head of all the zones. There is also another doctor helping me in the area of chronic diseases. I am taking care of the administration mostly. Our staff are assigned 5-6 HPHs across all zones, making the zones interconnected. We rely on this as the connecting point. When we laid down the system, we need to have connecting points. Each HPH has its own team and connects further down to the community level. This is how our network is like. (Mor Duangdao, personal communication, August 8, 2016)

In terms of patient care, a physician explained that there is a team of specialized physicians handling patient care for every age group, from the prenatal

period to the elderly period, and working at the health center according to their schedules as Mor Sirichai, one of the physicians in FCT team stated that:

> There are five doctors in our team taking care of the patients at the health center. Each of us is responsible for each five age groups and in their specialization. For my part, I'm taking care of chronic diseases, which mostly occur among the working age and elderly. There is another doctor – a pediatrician. She is caring for mothers and children." (Mor Sirichai, personal communication, August 8, 2016)

Additionally, there are also teams of specialized physicians depending on the specific operation, which consist of a registered professional nurse as the team leader and other professionals. The specialized teams can work independently in caring for patients in the community. Such teams are a screening team and a home visit team, for example.

Mor Duangdao informed that the primary problem in providing healthcare to a large area like this municipality is the shortage of family medicine practitioners and primary care personnel. She places importance on having an adequate number of family medicine practitioners because they are trained to care for families and understand the community; therefore, they can be the middlemen connecting both dimensions, that is, the community and the hospital base. It is necessary however to receive support from other sectors.

The public health volunteers, the civil sector, have the same role and work operations as those mentioned in the case study: the Ban Klang HPH. In addition to the civil sector, pharmacies represent the private sector in supporting the operations of the Khlong Sala Urban Community Healthcare Center. In the beginning, there was only one pharmacy in the area of the municipality participating with the municipal government. Mor Duangdao views this as a great help to offset the inadequacy of the number of staff members because the pharmacy has a potential to provide healthcare access to the people, where many of whom, when they are sick, choose to purchase medications on their own instead of visiting a physician at the healthcare center as she said:

> There are certain groups of people who choose not to visit a hospital. They choose to go to someone else, not hospital. Somebody trust in their pharmacy, and there are a variety of medicines they can choose from, unlike the medicines prescribed by the doctor. When they go to the pharmacy, they feel like going shopping. This is the behavior of a certain group that the pharmacy can come in and fulfill their desire. (Mor Duangdao, personal communication, August 8, 2016)

And her colleague also added:

> The private sector that can help in our operations is the Quality Pharmacy, which can refill the patient's prescription, without having them to see the doctor for a new prescription again. However, when the time is due, the pharmacy must send the patient to the doctor as scheduled. (Mor Sirichai, personal communication, August 8, 2016)

The pharmacy that participates in the healthcare services with the community health center is Ruean Bhesaj, which is the Quality Pharmacy and there is always a pharmacist—the owner—stationed during the hours of operation. The pharmacist owner talked about how she first joined the government's program, that the Community Pharmacy Association (Thailand) invited her to participate in the project of the model of pharmacies at Naresuan University. The program, which was one of the activities under the contract with the National Health Security Office (District 2), involved training in health screening and various kinds of diseases, including sexually-transmitted diseases. After the training, the pharmacist owner contacted the provincial office of public health in order to coordinate and follow up with the NHSO program. However, the officials at the provincial office were not aware of the program; therefore, Ruean Bhesaj decided to take the initiative by coordinating with various provincial government agencies, including the officials at the Khlong Sala Urban Community Healthcare Center.

4.2.1 Activities of the Pharmacy

The activities of the pharmacy regarding healthcare services in coordination with the government sector include educating the people in health promotion and disease prevention by means of community visits, providing knowledge in medicine usage through schools and temples in the community, and health screening.

The activities first took place near the marketplace of the community, then later at a temple, with the permission of the abbots. This allows the pharmacy to educate the people in the community in self-care and to introduce the health screening services at the pharmacy. The screening services performed at the pharmacy include the observation of symptoms, a questionnaire regarding behaviors and daily activities, and health-related measurements, such as blood pressure, weight, and waist measurement. The patient's data are entered into a form prepared by the NHSO. If there is any sign of symptoms or health risks, the patient is then referred to the Khlong Sala Urban Community Healthcare Center for further medical examination. The patient will be informed, at the pharmacy, of the necessity of the medical examination, and the preventive care services, which are free of charge.

4.2.2 Activities of the Public Health Volunteers

The services by the Khlong Sala Urban Community Healthcare Center are also conducted by the public health volunteers, consisting of village volunteers and any interested persons. The activities of the volunteers are described below.

Every Tuesday morning, there are patients with chronic diseases scheduled for an examination, and they arrive early in the morning. To prepare for this, they are supposed to fast in the evening prior to the scheduled appointment because blood collection is required. Because of the overnight fasting and the long wait time, some of the patients clearly show fatigue and even faint while waiting to be called. Understanding the problem, their fellow patients have set up a breakfast fund, donated by patients and staff, for the volunteers to prepare breakfast, for example rice porridge, for the patients after their blood collection. After the breakfast fund gained wider interest, any patient, not limited to those scheduled to have the blood collection, is allowed to receive the breakfast.

Furthermore, some of the volunteers at the community healthcare center are the patients themselves. They are those that visit the healthcare center regularly that are familiar with the staff and the process. They realize that, because of the inadequate staff size, the service process has become quite inconvenient and slow for the patients, especially the newcomers and those that are still not familiar with the process. In order to improve the process, these regular patients volunteer to help with the welcome process, such as managing the queues and giving basic advice on the procedures. This activity is quite different from that processed by Public Healthcare Service Center No. 45, Bangkok Metropolitan Administration, to be discussed later.

According to an interview with a volunteer, the volunteer is living not far from the health center and regularly makes a visit for a medical examination. She is very familiar with the process of the healthcare center; therefore, she volunteers to help at the healthcare center during her free time without being compensated.

The public health volunteers in the area of Phetchabun Municipality also play a role in the healthcare services at the urban community healthcare center. These volunteers help with the blood collection, blood pressure, weight, and height measurements. They usually arrive before the hours of operation because there are patients already waiting for their scheduled appointment on that day. The volunteers have been trained in phlebotomy and are confident about the quality level that they can perform. In addition, the patients are willing to let the volunteers help them with the phlebotomy, even though they are volunteers, not medical personnel, because the patients are already personally familiar with it. Like the patient-volunteer mentioned above, the public health volunteers are not compensated for these extra services.

4.3 Case Study: Participation of Pharmacies in Bangkok

With the information received from the Community Pharmacy Association (Thailand), it has been found that, besides the Ruean Bhesaj Pharmacy in Phetchabun Municipality, there is also the Mahanakhon Pharmacy in Bangkok, which participates in the government's program for healthcare service provision.

Located in the Rom Klao Community, Lad Krabang District, Bangkok, Mahanakhon Parmacy has been open for two years and has been coordinating with

Public Healthcare Service Center No. 45, Bangkok Metropolitan Administration, for about a year. The owner, who is also a pharmacist, talked about how the pharmacy got involved with the work with the service center and that the pharmacy has been conducting an internship program for many years. In order to make sure that the interns have pharmacy work to do, the pharmacist owner contacts the service center about the readiness of the pharmacy, which is also located near the service center, to provide healthcare service in coordination with the Bangkok Metropolitan Administration. The pharmacy then first starts providing health information for people that are referred by the service center. The pharmacist owner explained the process below:

> We began with an education program, to be held every Wednesday, for anyone who was interested. The process is like this. There are about a hundred diabetic patients scheduled to receive the medications at the service center every month. They will come in the morning for the blood collection, after that wait for the doctor and their medicines. So we set up a waiting room for them, and while they are waiting for their medicines, we educate them with anything they need to know. They then collect the medicines and go home. (the owner of Mahanakhon Pharmacy, personal communication, July 13, 2016)

Later on, the pharmacy conducted patient home visits with the professionals and officials from the service center. The home visits provide education for the public health volunteers in the area and also for the people in the community and schools, which is already the responsibility of the service center. The individuals involved are not paid for this home visit service by the pharmacy.

The pharmacy's cooperation with the service center has been well-received and accepted by the people receiving the services and the officials at the service center. The service recipients agree that they receive more information and have become better educated with the help of the team of pharmacists from the pharmacy. Regarding the service center officials, they view the pharmacy's involvement as a new dimension of proactive pharmacy participation and as an important role in helping the operation of the service center as one of the official said:

> Regarding the participation of the private pharmacy, due to the overwhelming work, it is very difficult for the government to operate by itself. There is a need that the private sector to help in the work. Today, the service center is handling too many patients and having a lot of activities in the community. Having the private pharmacy that is qualified in the public healthcare really helps lessen the burden of the officials at the service center very much. (a social worker at the public Healthcare Service Center No. 45, personal communication, July 25, 2016)

Even though such additional work and services that the pharmacy provides are not compensated by the service center, the personnel at the service center are trying to help by recommending and referring other government projects that pay compensation to the pharmacy in return.

Nevertheless, the participation of the Mahanakhon Pharmacy in community healthcare service with the government still poses a limitation in terms of the hours of operation of the pharmacy and the amount of time spent on the activities of the service center. Because the Mahanakhon Pharmacy is a Quality Pharmacy, there must be a pharmacist stationed during the entire hours of operation. Therefore, the pharmacist owner must choose between doing the volunteer work with the government or taking care of her own business. Every time the owner makes a visit to the community or provides education for the community or at the service center, the pharmacy needs to be closed for the day, leading to loss of income and thus affecting the business operation.

CHAPTER 5

STUDY RESULTS

The field study of the work of the Family Care Team from the Khlong Sala Urban Community Healthcare Center, which is responsible for the healthcare in Phetchabun Municipality, and from Ban Klang Health Promoting Hospital, which is responsible for the healthcare in Wang Tha Dee Sub-district, Nong Phai District, Phetchabun, and additional information on the pharmacies in the service area of Public Healthcare Service Center No. 45, which is responsible for the healthcare in the Rom Klao community, Lad Krabang District, Bangkok, was conducted using the methods of observation of the team operations and interviews with the following personnel listed below.

1) Central government officials in charge of policymaking
   - National Health Security Office 2 persons
   - Ministry of Public Health 2 persons
2) Government officials working on the Family Care Team
   - Public Healthcare Service Center No. 45 3 persons (pharmacist, social worker, and health scholar)
   - Khlong Sala Urban Community Healthcare Center 5 persons (lead physician, operational physician, registered professional nurse, pharmacist, and physical therapist)
   - Ban Klang Health Promoting Hospital 2 persons
3) Private pharmacies participating in the Family Care Team
   - Area of Public Healthcare Service Center No. 45 1 person
   - Area of Khlong Sala Urban Community Healthcare Center 1 person
4) People sector participating in the Family Care Team
   - Area of Public Healthcare Service Center No. 45 3 persons
   - Area of Khlong Sala Urban Community Healthcare Center 7 persons
   - Area of Ban Klang Health Promoting Hospital 3 persons

   Total 29 persons

The study results have been compiled into topics as follows:

1) Spatial data
2) What is the Family Care Team? Meaning, source, structure, and analysis
3) Analysis of elements of operations
4) Mechanism and activities
5) Analysis of factors leading to participation
6) Problems, difficulties, and limitations

5.1 Spatial Data

Public Healthcare Service Center No. 45 is located at 361 Moo 4, Kheha Rom Klao Road, Khlong Song Ton Nun Sub-district, Lad Krabang District, Bangkok, having a land area of 3 rai (4800 sq. m. or about 1.2 acres). Its geographical area of responsibility includes Lad Krabang District, Khlong Song Ton Nun Sub-district, Khlong Sam Prawet Sub-district, covering the population under the health security system of 35,309 households or 36,238 families. The total population under the responsibility is 79,842 persons, with 38,008 males and 41,834 females. In the area, there are 27 incorporated and 47 unincorporated communities.

Khlong Sala Urban Community Healthcare Center is located at 529 Phra Phuttabat Road, Nai Mueang Sub-district, Mueang District, Phetchabun, having a land area of 2 ngan (800 sq. m.). Its geographical area of responsibility includes Phetchabun Municipality, covering the population under the health security system of 6,710 households, subdivided into 17 communities with a total population of 26,761 persons (personnel of the social medicine workgroup, interview).

Ban Klang Health Promoting Hospital is located in Ban Klang Sub-district, Nong Phai District, Phetchabun, adjacent to Mueang District. Its responsibility includes the population under the health security system of 4,000 households.

This research study selected these three different locations in order to have variations and completeness of the participants regarding the co-production of public healthcare services. In the area of responsibility of Ban Klang Sub-district Hospital in Nong Phai District, which is adjacent to Mueang District, the operation reflects the

work structure that incorporates the public health volunteers as the representatives of the people or community sector, who are able to coordinate with the government sector very well. During the first phase, the study focused on the co-production of the private pharmacies in conjunction with the government sector, and the initial information was obtained from the recommendation from officials at the National Health Security Office and the Community Pharmacy Association (Thailand). This initial information revealed that there were very few pharmacies participating in the co-production at the time of the study; therefore, a pharmacy was selected in each of the following two areas: the area of Public Healthcare Service Center No. 45 and the area of Mueang Khlong Sala Urban Community Health Center.

5.2 What is the Family Care Team? Meaning, Source, Structure, and Analysis

In today's world, populations are growing exponentially, and demographics are now containing higher proportions of the elderly, and the urban areas are also fast expanding into suburban and rural areas. This leads to an increase in the number of patients and health risks. Therefore, the public healthcare service is one of the most important and essential public services where the government is responsible for the people. The government must constantly and proactively adapt its strategy in order to efficiently provide service both in terms of quality and equal access.

One of the proactive healthcare strategies is to aim for healthy public in general; and when people are sick, they can care for themselves or their family members under the care of the public healthcare personnel without having to visit the hospital. This leads to the reduction of wasted time and monetary costs. In the case of symptoms that may point toward chronic diseases, there is continuity in the service provision where the patient can be seamlessly transferred from the primary care unit to a higher level healthcare institute. For those that would need a longer period of recuperation or become bedbound, they can be cared for at home efficiently.

For such a system to work, there needs to be a structure that supports multiple levels of healthcare, and the levels should reinforce one another. There must be a healthcare unit close and readily available to everybody; that is the primary care unit,

in which individuals and their families are the important participants as well as the healthcare personnel and the local community. The primary care unit is an important fundamental component in creating a sustainable health security system on the basis of the potential of individuals and families to participate in healthcare with the support of professionals and the local community. As a result, a mechanism has been devised for the health system at the district level as the Family Care Team, which is believed to be a policy that will lead to the healthy well-being of the people. This policy promotes the essential care among the people by providing education on self-care and equal accessibility to healthcare services.

From the information collected via the document study, seminar attendance, and interviews, it was found that the policy-level government agency defines the Family Care Team as a health administration with the goal of reaching out to every household via a comprehensive and equal accessibility to primary care service. Regardless whether the residents are living in urban or rural areas, resources must be allocated equally and efficiently. Healthcare personnel at all levels must collaborate as a team, from the community, sub-district, and district to the provincial levels. The health officials at the Ban Klang Health Promoting Hospital (HPH) will act as the head of the family by providing consultation, arrangement of home visits, and coordination of patient transfer with personnel from the community hospital, the central hospital, or the general hospital. The work is also participated in by public health volunteers and the local administrative organization. Altogether, it can be seen that this new form of co-participation in developing the quality of life of patients and families not only emphasizes the improvement of healthcare quality but also the promotion of the holistic healthcare in every dimension.

Overall, the policy-level government agency provides the meaning of the Family Care Team as the work of a team of professionals for people's healthcare within the assigned area of responsibility in each community in order to provide healthcare access for everybody in all areas, including the urban and rural areas. Moreover, the Community Based Healthcare Research and Development Institute provides a further meaning for the Family Care Team by adding the concept of the work that requires mutual understanding among the professionals with the community development as a goal.

In addition, the personnel from the public and private sectors that are involved with the Family Care Team define the Family Care Team, in conjunction with that given by the policy-level government agency, as stated below:

> The Family Care Team can be easily explained as a team of doctors assigned for the healthcare in each community. In fact, each public healthcare service center already sends out professionals to conduct home visits in case there is any problem (with the patient). Presently, this form of operation is collectively called Family Care Team, which is a work participated by many different professions, such as doctors, nurses, social workers, pharmacists, dentists, physical therapists, and psychologists. In other words, it is actually the work of the multidisciplinary team that has already been existing. (an official of the Public Healthcare Service Center No. 45, personal communication, July 25, 2016)
>
> The Family Care Team, to my understanding, is the primary care service for the patient by a team working with the government personnel. It is a proactive operation with diverse activities and accessibility for the community. (the pharmacist and owner of Mahanakhon Pharmacy, personal communication, July 13, 2016)

According to the definitions of the Family Care Team given by the policy-level government officials and the operating personnel, it can be said that Family Care Team is a team consisting of healthcare personnel—physicians, nurses, social workers, pharmacists, dentists, physical therapists, and psychologists—working together to provide healthcare services to people at the health center in the neighborhood, the hospital, or even at the patient's home. The Family Care Team also includes public health volunteers, the local administrative organization, the community, the public sector, and those involved in healthcare in all age groups and in both urban and rural areas. Altogether, all personnel in the Family Care Team help create holistic healthcare in every dimension, with the common goal of tackling problems in physical and mental health and, at the same time, promoting preventive care and health knowledge. The Family Care Team also coordinates with external

sectors outside the healthcare sector in order to develop and improve the quality of life of the people in the community with greater understanding.

However, a public health volunteer stated that her present work is called the primary care team, working in conjunction with health professionals and which is responsible for assisting with the healthcare of the people in their community, including health screening and providing health education. They also coordinate the work between the government and the community.

The work of the public health volunteer agrees with the claim by a policy-level government official that the Family Care Team is not a new model. It has already been a service provided by the Ministry of Public Health under the primary care service as the first tier of healthcare service for citizens in all age groups. This primary care service includes coordination, transfer, and connection to specialized physicians or healthcare personnel in other areas, if needed. Later, the primary care team is participated in by a multidisciplinary team, which includes government officials and volunteers that represent the public sector, and help people achieve better understanding of the program; this has been renamed the Family Care Team by the office of Prof. Dr. Ratchata Ratchatanawin, the Minister of Public Health.

The Family Care Team operates continuously and has currently developed into the primary care cluster (PCC), which emphasizes the work of primary care with the teamwork of professionals and sub-district personnel. Importantly, the holistic care organized by the Family Care Team requires an understanding of the work between the professionals and the service recipients and also requires an awareness of the expertise that each profession can offer. The operations within the entire process then will become seamless and complement one another. The ultimate goals of the Family Care Team are to fill the needs and relieve the suffering of the people by having all responsible healthcare personnel work together to achieve physical, mental, and social well-being in the dimension appropriate to the people, not the dimension that fits the professionals. Because health conditions belong to each individual, the team of professionals is present only to support and promote healthcare; therefore, each individual is the person that determines and makes the decision on the level of healthcare to be given; the public healthcare personnel can only promote, inspire, and offer the choices of healthcare services.

The budget for the operation of the Family Care Team, which is considered to be under the work of the primary care system, comes from two sources as follows: 1) the outpatient budget from the National Health Security Fund and 2) the health prevention and disease prevention budget allocated to the service unit at each hospital. These two budget sources are annually appropriated per population at the rate of 800 baht per year, and additional funding is also received from the local administrative organization in each area.

The Family Care Team consists of multidisciplinary physicians and other healthcare personnel, including public health volunteers, the local administrative organization, the community, and the public sector, in caring for and performing the health promotion of the people in the community. In every household, there is a Family Care Team assigned to provide health support and at-home advice. The assigned Family Care Team also closely coordinates with the health services regarding secondary and tertiary care, if needed. In this way, everybody in the community will continuously receive all-dimensioned healthcare, including treatment, health promotion, and preventive care in a timely manner. The first phase after the inception of the Family Care Team stresses the care for three population groups: the bedbound elderly, the disabled, and terminally-ill patients. The Family Care Team's goal and ultimate outcome are to create a new dimension of health development and health service delivery toward having everybody in every family contribute to health-building behavior, risk factor management, and self-care.

At the same time, people are assured that, in the case of sickness, they will receive quality healthcare services and treatment at the health service center near them. The operations of the Family Care Team must be appropriate for the context of each community, whose members can choose the services they prefer. The personnel in the Family Care Team must understand the situation and condition of the community they are assigned to; therefore, the mechanisms of the cooperation between the team and the people must be in tandem in order to learn from each other and to be able to adjust the services appropriate to the community. It is obvious that, if those outside the healthcare system do not willingly cooperate, health development cannot achieve its goals because health conditions ultimately belong to the individuals, as stated above.

With all the points mentioned above, the roles and responsibilities of the Family Care Team can be summarized as follows:

1) The health promotion and reduction of health risk factors among all age groups

2) Treatment and dependability during the time of sickness, especially chronic disease care, elderly care, and population groups in fragile states and that are dependent on others, such as disabled, bedbound patients, terminally-ill patients, and children with special needs that require long-term care

3) Treatment, healing, and recuperation

4) Healthcare consultation and access for the people to receive advice from the physician

5) Handling of patient transfer via coordination with a higher tier of healthcare service and follow-up until the patient is cured

6) Education for the community for understanding one's own health and promotion of healthcare

7) Preparation of information on the health status of each individual in the family

In terms of the operating structure, from the field study of the Family Care Teams in the areas of the Public Healthcare Service Center No. 45, Bangkok Metropolitan Administration and the Khlong Sala Urban Community Healthcare Center, Phetchabun, and the attendance in related seminars, it was found that the Family Care Team has different operating structures depending on the context of each area, such as rural areas, town areas, and the Bangkok metropolitan area, as described below.

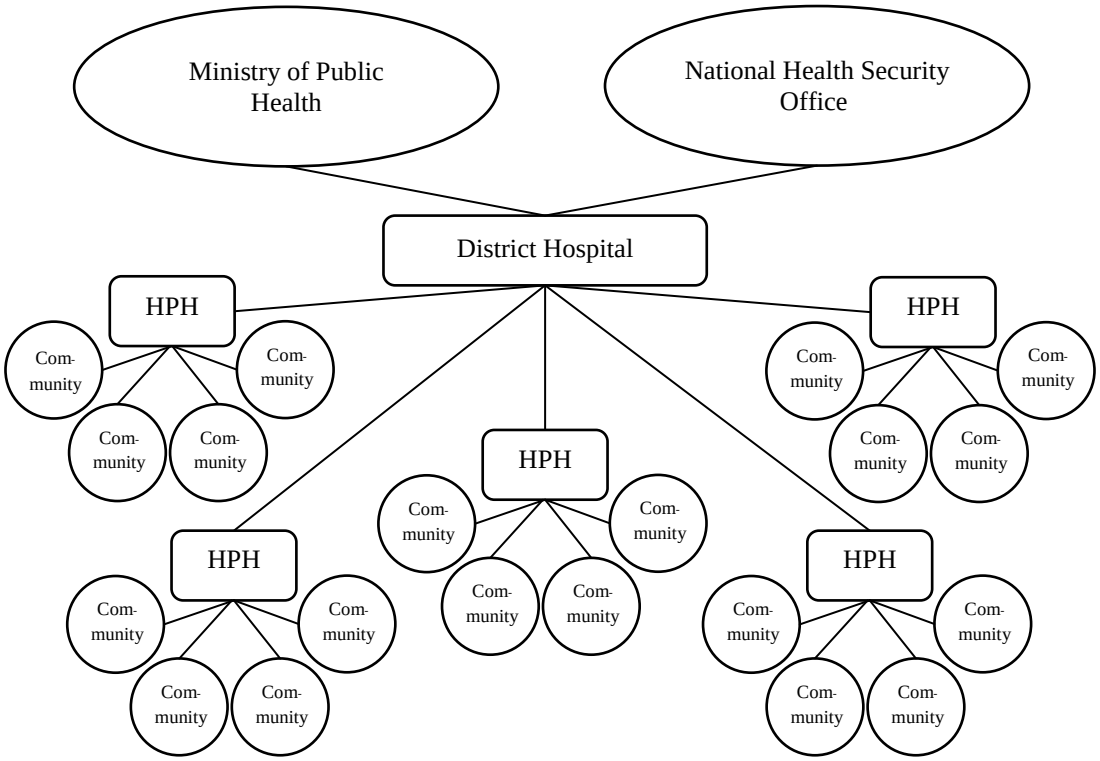

Figure 5.1 Structure of Service in Rural Areas

In Figure 5.1 above, it can be seen that the structure of the Family Care Team in a rural area can be divided into three levels: the district level, the sub-district level, and the community level. The district level, which is under the responsibility of the district hospital, consists of a team of medical physicians, specialized physicians, general practitioners, dentists, pharmacists, medical nurse practitioners, registered professional nurses, physical therapists, social workers, psychologists, and officials at the District Public Health Office. The district-level team provides guidance and technical and medical support in terms of the potential for clinical development at the sub-district-level and for community-level teams. Additionally, they are supposed to coordinate regarding patient transfer and follow-ups with the health services that the patient receives at the service centers at all levels.

In order to ensure that healthcare services are distributed to all areas within the district, the Ban Klang Health Promoting Hospital has been established in each sub-district as the main agency for primary care provision. A physician advisor or a lead physician from the district hospital will act as an advisor and handle patient transfer,

if necessary. The healthcare personnel of the sub-district hospital are then divided into teams assigned to several communities within the sub-district. Each team is usually responsible for a population of 1,250-2,500 and, to provide comprehensive healthcare for the people in the community, the care is provided by Family Care Team, which is a multidisciplinary team at the sub-district hospital, and a health team comprised of the people in the community, such as public health volunteers, nursing volunteers, general volunteers, the local administrative organization, the sub-district chief, village chiefs, and other people.

Regarding the structure of the service in the town area, the lead physician in the social medicine workgroup, which is responsible for the primary care provision in Phetchabun Municipality, stated the following:

> The dimension of service of the hospital like Phetchabun Hospital is most secondary care. For the primary care, we already have a center responsible in the area of the municipality. The private sector participating with us at the moment is those within the municipality only. On the other hand, the sub-district hospitals are responsible for their own sub-district. (Mor Doungdao, personal communication, August 8, 2016)

With the information from the interview above and from the field study at the Mueang Khlong Sala Urban Community Health Center, Phetchabun, it can be said that the structure of service in town areas is somewhat different from that of the rural areas. The department of social medicine at Phetchabun Hospital acts as a district-level unit, consisting of a social medicine physician as a team leader and a multidisciplinary team to coordinate with the local administrative organization, including the private sector and people in the area, in implementing the primary care service for all populations and households in the municipality area.

Furthermore, the urban community health center acts as a sub-district-level unit, providing healthcare for all age groups starting from the prenatal period and including education in disease prevention and patient transfer to the Phetchabun Hospital, if necessary. Currently, there are four town community health centers within the Phetchabun municipality. At the present, Mueang Khlong Sala Urban Community

Health Center is the first location whose service has been upgraded by the Phetchabun municipality. With the support from Phetchabun Hospital in allocating a team of physicians and multidisciplinary personnel, the health center can now provide preventive care, health screening, health check-ups, and healthcare education for the communities in the municipality. The health center, open from 8:30 to 16:30, helps to reduce the volume of patients at the hospital and accelerates the time of service for the patients. The structure of service in the urban area is illustrated in Figure 5.2 below.

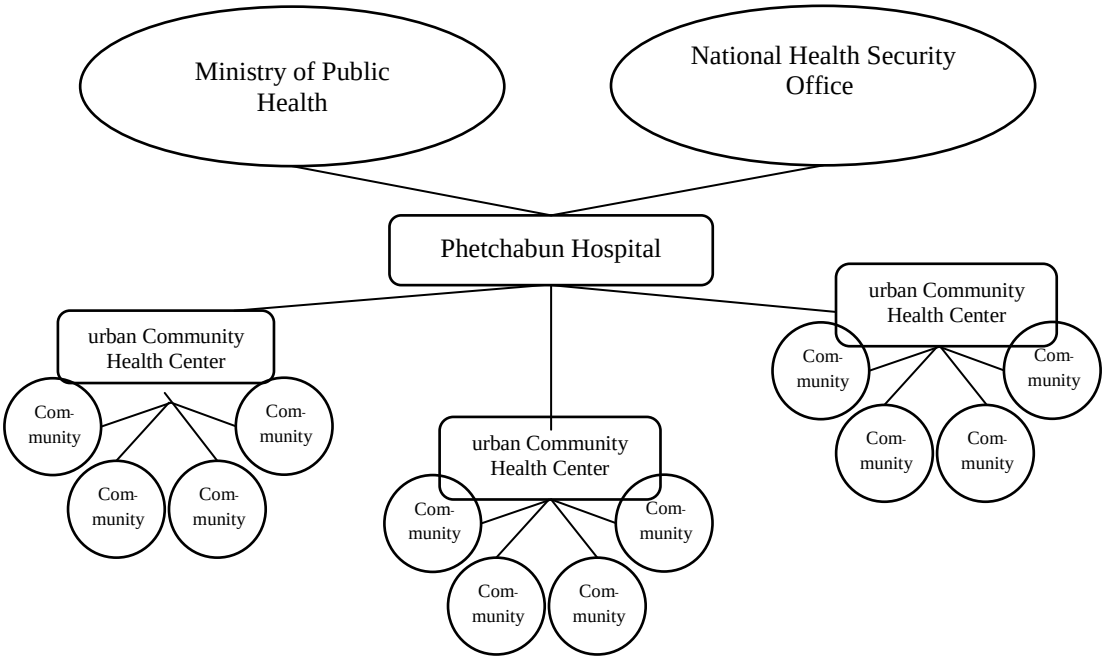

Figure 5.2 Structure of Service in a Urban Areas

On the other hand, even though the Bangkok metropolitan area could be treated like a town area, as mentioned above, the structure of service is quite different due to the autonomous nature of the Bangkok Metropolitan Administration (BMA). The healthcare service in the Bangkok metropolitan area is co-hosted by BMA's Health Department, whose responsibilities include "promoting and providing quality healthcare service and efficient public health centers, preventing diseases and promoting public health awareness. It also upholds public health laws and other related ones, researching and developing public health service system, food sanitation,

health vocation and environmental sanitation. Moreover, it is the central agency of publicizing knowledge and transferring technology of health promotion, disease prevention, environment control in buildings and communities as wall [*sic*] as behavior of healthcare" (Source: http://www.bangkok.go.th/health).

The Health Department assigns personnel for all 68 public health service centers throughout the Bangkok metropolitan area. The personnel are responsible for "providing comprehensive healthcare service both within and outside of the public health service center in all four dimensions: care and treatment, disease control and prevention, health promotion, and recuperation, including development of healthcare provision system and other related duties" (3rd Public Health Committee Conference, 19 March 2009). In comparison, these 68 public health service centers, with the cooperation of team of volunteers at the community level, are nearly equivalent to the Ban Klang Health Promoting Hospital in the rural areas. The structure of service in the Bangkok metropolitan area is illustrated in Figure 5.3 below.

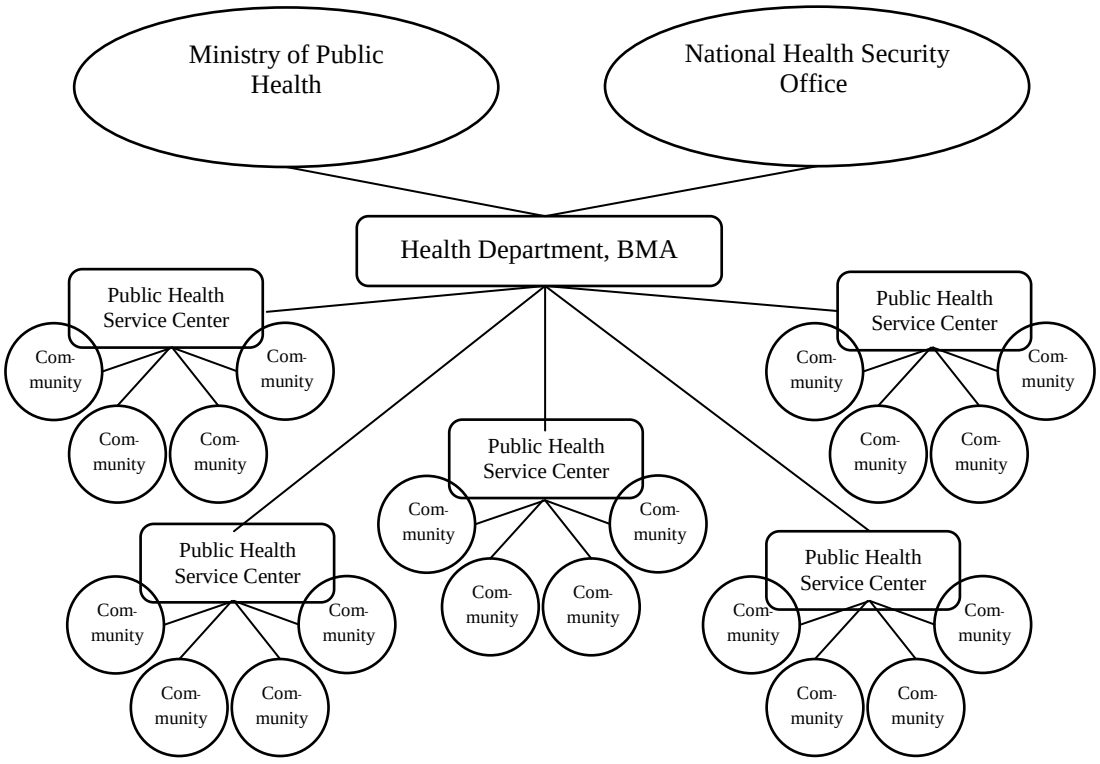

Figure 5.3 Structure of Service in the Bangkok Metropolitan Area

In summary, the structures of the Family Care Team, regardless of whether it is in a rural area, a town area, or even in the Bangkok metropolitan area, are very much similar; that is, there are layers of operations from a specific area and then upward to the district and provincial levels. The operation in each area is independent from others, as described by the interview below:

> Each sub-district hospital is responsible for its own area but still connects to others. However, each is free to persuade anyone to join the operation, depending on the relation with the communities. Therefore, the form of operation is not necessarily the same. It is highly independent. No rule. No rigid form. (Mor Doungdao, personal communication, August 8, 2016)

At the district level, the team consists of physicians and multidisciplinary personnel, such as specialized physicians, general practitioners, dentists, pharmacists, medical nurse practitioners, registered professional nurses, physical therapists, social workers, psychologists, and officials at the District Public Health Office; they provide guidance and technical and medical support for clinical development at the sub-district-level and for the community-level teams. The district-level also coordinates patient transfer and follow-ups regarding the health services that the patient expects to receive at the service centers in all levels.

At the sub-district level, the team consists of public health personnel from the primary care unit, which is termed differently depending on the area, such as the Ban Klang Health Promoting Hospital (HPH), the community physician center, the town community health center, the municipality public health service center, and the Cozy Community Clinic. The sub-district-level team is led by a registered professional nurse and includes medical nurse practitioners, public health scholars, public health community officials, public health administrative personnel, dental care personnel, and other public health officials. The personnel on the team act as family doctors taking care of the health problems in the area of treatment and coordination of patient transfer that is beyond the capability of the team. At the same time, the team also provides services for health promotion and disease prevention for community members with coordination with other local government organizations in order to

address social, environmental, and economic problems leading to the improvement of the quality of life and self-reliance of families in the community.

At the community level, the team consists of the public sector in the area, such as public health volunteers, local administrative organizations, the sub-district chief, the village chiefs, general volunteers, nurses, heads of families, all together helping patients in the communities and their families in self-care or treatment as if the patients were their own family members. The community-level team coordinates with the medical and public health personnel when the patient visits the sub-district hospital or community hospital. Additionally, the team also helps to improve the quality of life in social, environment, and economic aspects, which agrees with the information described by the Community Based Healthcare Research and Development Institute below:

> In terms of the community area, the local government is already doing the job, and there is an attempt to bring in the private and people sectors to help. We have lessons learned from Lopburi that we were collaborating with the private sector in several districts. The goal of the collaboration is for the people to have the healthy well-being with the district's health system being the central mechanism of the integration within the context of the area. (Dr. Supattra Srivanitchakorn, the Community Based Healthcare Research and Development Institute, personal communication, July 21, 2016)

According to the structures explained above, the operation of the Family Care Team is summarized in the Figure 5.4 below.

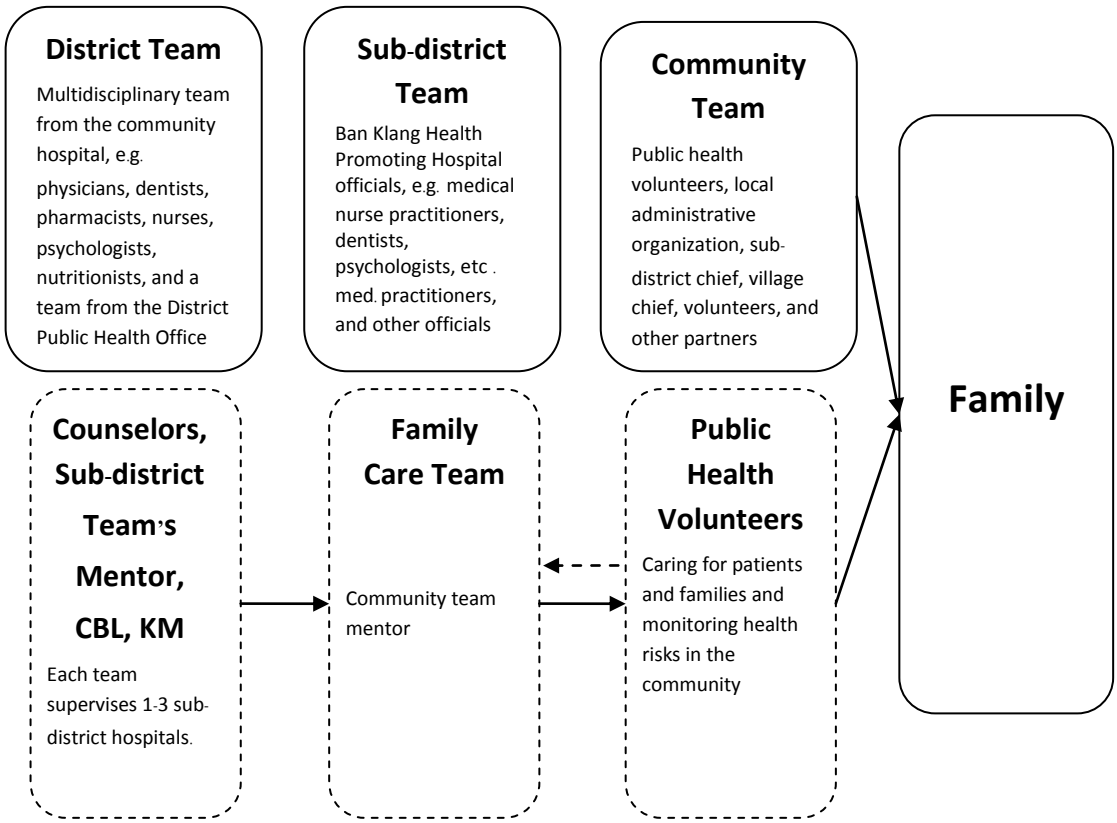

Figure 5.4 The Operation of the Family Care Team

The objectives of the Family Care Team are to build confidence, trust, and relations among the team members, both between the public health officials and between government officials and the public sector. Since the main operation of the Family Care Team is to work closely with the people in providing healthcare for each household, the goal is not just to take care of individuals in the event of sickness but also to have the people gain confidence and trust in, and familiarity with, the service provider, whom the majority of people call "doctor," regardless of whether they are nurses, pharmacists, or other professionals.

The confidence, trust, and familiarity mentioned above will lead to confidence in healthy habit formation, health risk mitigation, and self-care. If a person is sick, he or she must be confident that he or she will be able to receive quality and timely healthcare services from a member of the Family Care Team at the nearby health service center, without having to visit a major hospital. This will help reduce

congestion in the major hospital. However, if necessary, the patient can still be conveniently transferred to the next tier of healthcare service with the help of the Family Care Team; and during his or her recuperation at home, a member of the Family Care Team is assigned to provide home visits and care, including physical therapy, medication advice, and home maintenance in order to make sure of an appropriate environment for the patient. In other words, the Family Care Team will be supportive until the last day of life.

5.3 Analysis of Elements of Operations

The Family Care Team consists of multidisciplinary health officials that can promptly respond to complex health needs, many of which overlap each other in terms of physical, mental, and environmental dimensions. It is therefore crucial to have members of the multidisciplinary team exchange their opinions and thoughts. Different points of view from different professions can, in fact, help everyone on the team understand the core problem of the health of the people. In addition, there must be the collaboration with the local organizations, the public sector, and the private sector so that the Family Care Team can quickly access the problem within the community and work out a solution in a timely manner. For further clarification, the National Health Security Office, the policy-level government agency, describes the elements of the Family Care Team as the government officials in charge of primary care services, e.g. physicians, nurses, physical therapists, social workers, pharmacists, and volunteers (public health volunteers and general volunteers) as below:

> Originally, elements of the health team are only physicians and nurses, but PCC is an attempt to bring in multidisciplinary personnel, including the local administration in the area. And there is also an attempt to bring in the private sector to participate in the management, marketing, and the CSR with the government and the community. (Dr. Supattra Srivanitchakorn, the Community Based Healthcare Research and Development Institute, personal communication, July 21, 2016)

According to the information received from the central government agency, it can be concluded that the elements of the Family Care Team are the government‘s public health personnel responsible for primary care, e.g. physicians, nurses, pharmacists, and social workers, with cooperation from the public sector, e.g. volunteers, and also the private organization in the area. This information is consistent with that received from the field personnel in the areas of Bangkok metropolitan’s Public Healthcare Service Center No. 45 and the Phetchabun‘s Mueang Khlong Sala Urban Community Health Center, who explained the elements and operations of the Family Care Team as follows:

> For each case of patient, there are steps beginning from the team meeting to identify the problem and whether the patient needs a special care. In the case of a bedbound patient, there will be a physician and a physical therapist directly responsible for them. For the physical therapy, each therapist is assigned communities within the sub-district to work in. There is in-home observation to make sure that the patient’s environment is properly set up before they are sent back home for a recuperation. For those homes not ready for the patient to go back, we do get help from a public health volunteer or the community leader. Also, the team is to educate and make recommendations to the patient’s relative with how to care for the patient, such as mucus suction, blended food preparation, wound treatment, and physical therapy, including arm, leg movements and joint exercise, so that the relatives can completely care for the patient at home. There will also be weekly home visits during the period immediately after the patient is first back home, and then less frequently when the patient is getting better. The visits are to observe the patient’s symptoms and evaluate the relatives to see whether they can take care of the patient as if the patient is staying at the hospital. (A physical therapist, personal communication, July 25, 2016)

According to the interviews with the aforementioned informants, the elements of the Family Care Team can be described as follows.

1) Physicians from the Ministry of Public Health

The Family Care Team consists of a variety of health personnel, where the most important and indispensable members are physicians, especially the family medical physicians, because they can understand the broader array of healthcare practices and not just consider the sickness at hand; they also take into account other personal aspects into the diagnosis. In addition, a health problem of one person almost always relates to the problems or habits of others in the same family. Therefore, providing healthcare for a patient is not necessarily just for the treatment of a sickness of an individual but also for the healthy well-being of the family in parallel.

Furthermore, the physicians on the Family Care Team, who are providing primary care, do not just provide medical care but also play an important role in health promotion, disease prevention, and recuperation by proactively working within the community and acting as advisors to other members of the Family Care Team.

2) Registered Professional Nurses from the Ministry of Public Health

According to the interviews and field study of the operations of the Family Care Team in the areas of the Public Healthcare Service Center No. 45, Bangkok; Mueang Khlong Sala Urban Community Health Center, Phetchabun; and Ban Klang Health Promoting Hospital, Phetchabun, it was found that in all three areas there are registered professional nurses acting as the main coordination point for the operations of the Family Care Team. The responsibilities include administrative duties, off-site services and activities, the management of the health and social data of all households in the area of responsibility, physician support, and the evaluation of the patient and family, as explained by the informants below:

> In addition to the specialized physicians, we also have a specific purpose team, leading by a nurse, assigned for a task, such as a screening team and a home visit team. (Mor Sirichai, a physician at Mueang Khlong Sala Urban Community Health Center, persona; communication, August 8, 2016)

> There are various operations performed by the Center. Several teams of professional nurses are formed as a home visit team, an education team. Our Center at Rom Klao, Lad Krabang, is a large center, having several smaller sub-centers under us. There is also a team monitoring health at schools and industrial factories in the area. (The pharmacist and owner of Mahanakhon Pharmacy, personal communication, July 13, 2016)

Moreover, the nurses also coordinate with the multidisciplinary team in providing the people with appropriate healthcare. For example, if a patient is found to have a problem with medication usage during a home visit, the nurse will coordinate with the pharmacist within the same Family Care Team to help the patient. For each operation, there are established procedures, beginning with a team meeting in order to identify the problem of each patient and his or her needs for special care, and the nurse then distributes the tasks to appropriate team members on a case-by-case basis.

3) Physical Therapists from the Ministry of Public Health

The case of a bedbound patient is directly under the responsibility of a physician and a physical therapist. In order to ensure accessibility for all patients, each physical therapist in the Family Care Team is assigned to work in one or more communities within the sub-district. The work includes an inspection of the patient's home for readiness before the patient is sent back home for recuperation. If the residence is not ready, the team works with the public health volunteer and the community leader in order to raise the condition of the residence to suit the patient's needs for the recuperation. In addition to the home inspection, the physical therapist is also responsible for training, educating, and giving recommendations to the patient's relatives in how to care for the patient, such as mucus suction, blended food preparation, wound treatment, basic physical therapy, including arm and leg movements and joint exercise. In this way, the patient's relatives can effectively and comprehensively care for the patient. After the patient is sent back home, there will be weekly home visits for some time, and less frequent when the patient gets better, in order to observe the patient's symptoms and to evaluate the relative to see whether he or she can care for the patient at the same level or close to the level that the hospital can achieve for the patient.

According to the field study, physical therapists are one of the most important members of the multidisciplinary team in providing services and caring for patients. They provide treatment and rehabilitation, especially those related to movements on the part of children, the elderly, and the disabled. The physical therapists perform therapy both inside the service center and during the home visits, and the activities include advice regarding self-care, exercise scheduling, and transportation needs for the health service center for disabled or immobilized patients. Moreover, physical therapists also play a role in screening patients that are at risk of a disease related to movement, such as diagnosis of foot problems in patients with diabetes and testing the physical capabilities of the elderly. Another role of the physical therapists for the community is to train public health volunteers, general volunteers, and patients' families in various procedures, such as how to help move the patient properly and safely.

However, in terms of the operation of the Family Care Team at Ban Klang Health Promoting Hospital, the professional physical therapists are not readily available. Instead, the work in physical therapy is performed by the public health volunteers, who are certified in traditional Thai massage by the Ministry of Public Health. However, they cannot perform diagnosis or make decisions by themselves; they must first be authorized by the head of the sub-district hospital.

4) Psychologists and Social Workers from the Ministry of Public Health

According to the information provided by the policy-level and operation-level personnel, psychologists are members of Family Care Team's multidisciplinary team, and are tasked to provide counseling and mental rehabilitation for people at risk, such as those with chronic disease, the disabled, and drug addicts. The field study found that psychologists play an important role in conducting community meetings in the area, especially the drug rehabilitation sessions for youths, which requires a good deal of psychological knowledge and sophistication. Moreover, psychologists and social workers are essential in coordinating with the people in need of welfare and home repair.

5) Pharmacists from the Ministry of Public Health

As seen in the interviews with the policy-level and operation-level personnel, pharmacists are important members of the multidisciplinary team under the

service provided by the Family Care Team. The pharmacist's tasks include medicine administration and medication dispensation to patients in the health service center. Other tasks are also to review and evaluate medication usage, screen the patients, identify problems with medication, educate regarding medication usage, and perform home visits in order to prevent any danger of erroneous or excessive medication usage by the people.

However, for the operation of the Family Care Team at Ban Klang Health Promoting Hospital, the registered professional nurse, who is the head of the sub-district hospital, performs medication dispensation instead of the pharmacist. The medication is first prescribed by the physician at the secondary and/or tertiary care health institute and then filled for the sub-district hospital head by the public health personnel or the regular volunteer at the sub-district hospital.

6) Public Health Volunteers

The public health volunteer has been a form of participation of the people in caring for their own health and that of their family and the community through training by public health officials from the Ministry of Public Health since 2007.

A public health volunteer is a person selected by his or her village or community and trained in the standard course for a public health volunteer established by the central committee. A public health volunteer's role is leadership in promoting changes toward healthy behavior. This also includes the dissemination of public health news and information, health benefits, campaigns for basic knowledge, updates of laws and regulations from the Ministry of Public Health, and upcoming activities for health awareness and preventive care in accordance with the health environment of the community. The public health volunteer coordinates with officials from the Ministry of Public Health and the local administrative organization and also participates in self-training and conferences with agencies. The duties of the public health volunteer are described as follows.

(1) To be an intermediary between government officials and the people in the village, including making appointments for villagers to receive healthcare service; being informed of health news, e.g. current epidemics and outbreaks in the area, and health events and activities; dissemination of any urgent

information and actions from the government agencies to the local public health personnel; and logging activities in the public health volunteer's log book to be submitted to the sub-district hospital

(2) To be a health counselor and educator for community members and leaders of the family. The topics include how to contact and receive services from the local health service center, medication usage and basic health maintenance, immunization, hygiene, supporting environment, importance of clean water and nutritious food, prevention of contamination, non-contagious and contagious disease control, health of women and babies, family planning, dental care, mental health, prevention of HIV/AIDS, accident and disaster avoidance, effects of pollution, safe and unsafe working conditions and environments, consumer protections and rights, essential medicines for every household, herbal medicine, traditional Thai and other alternative medicine, etc.

(3) To be a public health provider to the community members. The health services provided include patient transfer and follow-ups from the higher-tier health service centers, contraceptive pill and condom dispensation with approval from the health official, first aid and treatment, e.g. fresh wound care, joint fracture and dislocation, etc.

(4) To be stationed at the community primary healthcare center. The activities at the center are:

(4.1) Preparing a news bulletin board for the village

(4.2) Educating and conducting health activities relevant to the needs of the community

(4.3) Providing necessary primary healthcare services

(5) To monitor and prevent the health problems in the village. The preventive care activities include monitoring the weight of children to detect malnutrition or iodine deficiency, periodically following up with and providing immunization and vaccination to pregnant women and children, and controlling transmissible diseases, especially the elimination of mosquito habitats.

(6) To lead in management and planning for the solution of a problem and community development using the budget supported by the Ministry of Public Health and other sources of funds

(7) To spearhead the initiatives with the community members and other social development groups in the areas of the health development of the community and improvement of the quality of life via basic needs

(8) To oversee the health benefits available to the village members and to lead the coordination with the community leader and the sub-district administrative office to stimulate the continuous planning and operations of the health development in the village

The number of public health volunteers in a village or a community on average is one public health volunteer per 8-15 households in the rural areas, one per 20-30 households in the town or city areas, and one per 8-15 households in the suburban areas. Consequently, a village or a community may have different numbers of public health volunteers depending on the number of households. In general, a village usually has 10-20 public health volunteers.

A regulation of the Ministry of Public Health on the eligibility of a public health volunteer (2011) specifies the qualifications of a person to be qualified and trained as a public health volunteer as follows: 1) must be 18 years or older; 2) must be a registered resident of the village/community applied to; 3) must be literate; 4) must be willing to voluntarily help with health operations; 5) must have the intention participate in health operations or have had experience in doing so and have the desire to develop one's own community; 6) must adhere to ethics and morality and be trusted by fellow members of the village/community; 7) must be physically and mentally healthy and have good personal hygiene; and 8) must be available to perform the role of a public health volunteer.

The information received from the interviews below agrees that the public health volunteer is a part of the Family Care Team, having responsibility for operations and coordination at the community level, as Mor Doungdao pointed out:

> In the said operating network, there also includes the public health volunteers, whose network came from the potential of the community. Anybody wants to help us; we let them do in any way they are capable. The public health volunteers do help us in providing services, such as helping in blood collection. (Mor Doungdao, personal communication, August 8, 2016)

Further, Dr. Supattra Srivanitchakorn, the Community Based Healthcare Research and Development Institute, also added the following:

> To work together under the common goal, each member is using their specialty from each profession, each discipline, including nurses and public health volunteers. Each has their own role. If we understand everyone's role, we can make them complement each other; this is how we can work together. (Dr. Supattra Srivanitchakorn, the Community Based Healthcare Research and Development Institute, personal communication, July 21, 2016)

The public health volunteers that work at Public Healthcare Service Center No. 45 and at the Khlong Sala Urban Community Healthcare Center consistently explained that the duties of the public health volunteers regarding healthcare included blood pressure measurements, disease screening, constant monitoring of the environment of the community for disease prevention, and monthly reporting of the health information and data to the sub-district service center, as one of them explained that

> Our main duties in the community healthcare include screening for disease and providing education. The sub-district hospital would tell us what to do and when. Some of the tasks would be, for example, blood collection, blood pressure measure, and mother and children care, according to the household report of the number of pregnancy in the community we are responsible for, especially if there is any teen pregnancy or any pregnant mother who has not seen a doctor for the prenatal care, so we recommend them to visit a doctor at the sub-district hospital. During the flood season, we also give advice in controlling the mosquito habitats. So we do give both recommendations. (Health volunteer, Khlong Sala Urban Community Healthcare Center, personal communication, August 10, 2016)

In addition, it was found from the interviews conducted above that the public health volunteers working at the Khlong Sala Urban Community Healthcare

Center, the Ban Klang Health Promoting Hospital, and Public Healthcare Service Center No. 45, receive a monthly compensation equal to 600 baht per month; however, those working at Public Healthcare Service Center No. 45 receive an additional 140 baht per day for any day that they work at a community health center, whose weekly schedule is assigned by the volunteers themselves. The volunteers are also tasked with the preparation of health reports to be submitted to the service center in their area.

7) Pharmacists from Pharmacies

According to the field study, it was found that the pharmacy in the community is another sector participating with the government in healthcare provision for the people. The policy-level and operation-level personnel and the pharmacists interviewed for this study all remarked that the healthcare operation in the community is proactive work with the cooperation of the private sector, such as pharmacies and food service establishments, in providing healthcare to the people, especially the potential of pharmacies to work with the public sector in preventive healthcare tasks, such as health screening, as Mor Duangdao stated in the following:

> Sometimes they (pharmacies) came across a new case or a case that is not fully screened or someone who was not aware that they were having a disease or had never seen any doctor or those with no access to an adequate level of healthcare. A diabetes patient, for example, would need to have an annual check-up on their eyes, feet, blood, and so on. If they went to an out-of-network pharmacy, they would not receive such services. The pharmacy would then send this group of patients to us (hospital). Nowadays, we build connections (with the pharmacies) via documentation and in-person coordination, that is, by way of conversation or LINE messaging app. For example, we have a pharmacist from a private pharmacy coordinate with us. He would come in to take a look at our data and exchange information. He even helped with medicine filing the other day. (Mor Duangdao, personal communication, August 8, 2016)

One of the activities that pharmacists are participating in on the Family Care Team is to monitor and give advice regarding the usage of medication, especially during home visits. Along with a team of nurses and social workers from the service center, the pharmacists provide care in terms of medication usage among the patients with chronic disease and among individuals and their family. The areas of concern are self-medication, incorrect usage of prescribed medicines, side effects and unexpected symptoms, insufficient or excessive dosages, repeated usage of dangerous drugs, ineffective and expired drugs, duplicate medications, and even unconsumed drugs. The pharmacists also provide knowledge of diseases and prevention, correct medication usage, the problems of dangerous drugs that are widely distributed in the community, unreasonable use of drugs, the danger of the unsupervised and excessive use of drugs that can lead to death.

In order to provide regular services, an activity schedule for drug education is determined by the pharmacist at the health service center. The weekly activities are assigned for different days of the week, such as activities for the elderly group every Tuesday and for diabetes patients every Wednesday. However, pharmacists are free to design the type of activities, such as a classroom or exercise.

The participation of private pharmacies in the Family Care Team has helped lessen the burden of the government and, at the same time, increased the accessibility of healthcare services by wider groups of the population. Private pharmacies also help to control the outbreak of diseases and reduce government expenditures in the treatment of non-contagious or chronic diseases, such as diabetes, high blood pressure, or high cholesterol, whose trend is reflected by a consistently-increasing number of patients. If such diseases are not diagnosed or properly and continuously treated, there could occur complications, thus worsening the patient's condition. Specifically, the activities provided by pharmacists are disease screening, inquire into the patient's medical history, observation of signs and symptoms, and observation of the patient's medication usage.

If any health risk is detected or the patient is unaware of having a disease and has never seen a physician, the pharmacist can take immediate action by referring the patient to the health service center and also informing the patient of the need to see the physician and that this is a no-cost service. Therefore, the screening of

patients with health risks, especially those with a contagious disease that has to be reported to a government official, and patient referral for immediate treatment, are highly effective healthcare activities, which can also reduce any risk of outbreaks. The private pharmacies, which are commonly available in the community and often the first unit people turn to for preliminary service when they get sick, become a service unit with a high potential for disease screening and patient referral to the appropriate heath service center.

According to the interviews with the operation-level personnel at Public Healthcare Service Center No. 45 and the Khlong Sala Urban Community Healthcare Center, there is one private pharmacy in each area that participates in the Family Care Team, and both are similar in the sense that they are Quality Pharmacies and are located not far from the health service center. Both pharmacy owners are female, and were 35 and 37 years of age at the time of the study, and both pharmacies are members of the Community Pharmacy Association (Thailand) and have had a contract with the National Health Security Office. However, the difference between these two pharmacies is in the form of their activities with the Family Care Team, as explained below.

The private pharmacy in the area of the Khlong Sala Urban Community Healthcare Center, Ruenya Bhesaj, plays a role in screening, explaining the patient's rights to him or her, and transferring the risk group to the Khlong Sala Urban Community Healthcare Center in order to provide access to the government services. Regarding the procedures, first, a customer visits the pharmacy to purchase medicine. The pharmacist screens the patient with a preliminary interview regarding symptoms, habits of health and hygiene, and the related environment. If the patient is found to have a health risk and has not visited any health service center, the pharmacist will collect information on the patient on a patient referral form and inform the patient of his or her right to access the primary care at no cost. A recommendation is then made for the patient to visit a physician at the Khlong Sala Urban Community Healthcare Center.

Later, the pharmacist will follow up with the health center and personally make a phone call to the patient. It was found that most patients visited the physician with the referral form per the pharmacist's recommendation. Some of them

however did not elect to receive the service from the health center and did not pick up the phone. Some even chose not to visit the pharmacy and lost the contact. In addition to the service provided at the pharmacy, the pharmacist owner also helps with the medication dispensation at the health center. The pharmacist stated that, since she had to visit the health center to verify the patient referral and to prepare the patient registration to be used in the pharmacy, she was able to see the problem at the health center—that there was an insufficient number of personnel to dispense the medication, causing patient backlog and long wait time. Consequently, she offered to help with the medication dispensation, apart from her time at the pharmacy, since she had been a certified pharmacist and was knowledgeable and could assist at the health center.

On the other hand, the private pharmacy in the area of Public Healthcare Service Center No. 45, Mahanakhon Pharmacy, was found to conduct various activities with the Family Care Team, such as providing education both at the service center and in the community in the area of medication usage, healthcare, and disease information. In addition, there were also home visits by the nurses from the service center in order to provide care and to monitor any medication problems, e.g. duplicate medications, expired drugs, and incorrect medication usage as the pharmacist and owner of Mahanakhon Pharmacy stated that:

> The activity assigned to the participating pharmacy is to provide education in healthcare and to make a recommendation in behavior adjustment. An evaluation is then collected from the patients attending the classes, which are mostly well-received by the attendees. There are also recommendations from the patients of additional topics they want us to cover. (the pharmacist and owner of Mahanakhon Pharmacy, personal communication, July 13, 2016)

Nevertheless, it was also found that neither participating pharmacy received any monetary compensation from the government as Mor Daungdao stated that:

> In working with us (Phetchabun Hospital), the pharmacy just lets us know which information they need for the preparation of the report to be submitted to NHSO. We can furnish the requested information. For our part, we simply care for the patients according to our procedures, but for the connection and help we receive from the pharmacy, it has nothing to do with money or any kind of compensation. (Mor Duangdao, personal communication, August 8, 2016

It sounds similar to what the pharmacist mentioned that;

> The work was very exhausting, and we didn't receive any money…because the higher-up folks did not even acknowledge our work. (the owner of Mahanakhon Pharmacy, personal communication, July 13, 2016)

The "higher-up folks" not recognizing the work of the private pharmacy is indeed consistent with the interviews with the policy-level officials, who that did not mention the private pharmacy as a part of the Family Care Team.

However, for the Ban Klang Health Promoting Hospital, it was found that there was no private pharmacy participating with the government on the Family Care Team.

5.4 Mechanism and Activities

According to the document study, the field study observing the work of Family Care Team, and the in-depth interviews with officials and personnel, the Family Care Team is a proactive healthcare system for the people. Instead of handling only the patients requesting the health service, the Family Care Team proactively reaches out to the people by ensuring healthy well-being with a minimal level of unnecessary sickness. Even in the event of being ill, each person can administer care for him/herself or his or her family member under the assistance of public health personnel and other community members without having to visit a hospital unnecessarily, thus ultimately reducing wasted time and costs.

At the same time, if professional healthcare is needed, the Family Care Team can also provide the services efficiently, conveniently, and in a timely manner, especially in the events of an emergency and a chronic condition requiring continuous care. The team can handle patient transfer from the primary tier to secondary and even higher tiers seamlessly. There is also a system to provide care at the family level in the case of long-term recuperation without the need for hospital admission, a bedbound patient, and a patient that cannot be easily moved, therefore, avoiding the inconvenience of a commute to the hospital, especially for those in the rural areas. A Ministry of Public Health official explained the Family Care Team as follows:

> The Family Care Team is a mechanism comparable to the home delivery service in the private sector, but with more features and abilities in terms of not having to wait for the request and then reacting in the event of sickness. However, we are proactively working to create healthy well-being and, in the event of an emergency, we can act like a rapid deployment unit, which is fully connected and able to seamlessly transfer patients to the next level of healthcare. (Office of the Permanent Secretary, Ministry of Public Health, 2015)

According to the information received, the mechanism of public health service can be illustrated as in Figure 5.5 below.

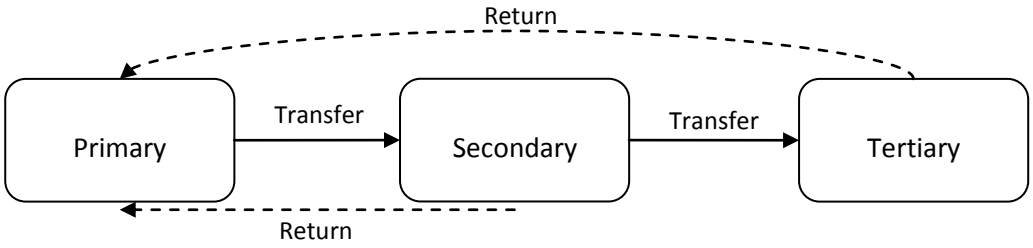

Figure 5.5 Mechanism of Public Health Service

Figure 5.5 explains that the service provided by the Family Care Team is a primary care service, which is a service provided by the health units close to the

people, home or workplace, distributed to cover all areas of the country. It is healthcare participated in by health personnel and the local community. If there is a case of a chronic disease or the need for a patient transfer, the Family Care Team will coordinate with the higher-tiered health unit and handle the care until it is beyond the capability of the primary care unit. The patient is transferred to the secondary and tertiary care units, which are the district-level and province-level hospitals, respectively, depending on the complexity of the case. There is also a patient return system to send the patient back to the primary care, which will provide continuous care or a periodic follow-up at the community or the family. When focusing on the study of primary care service, which is a proactive measure, the system can illustrated as in Figure 5.6 below.

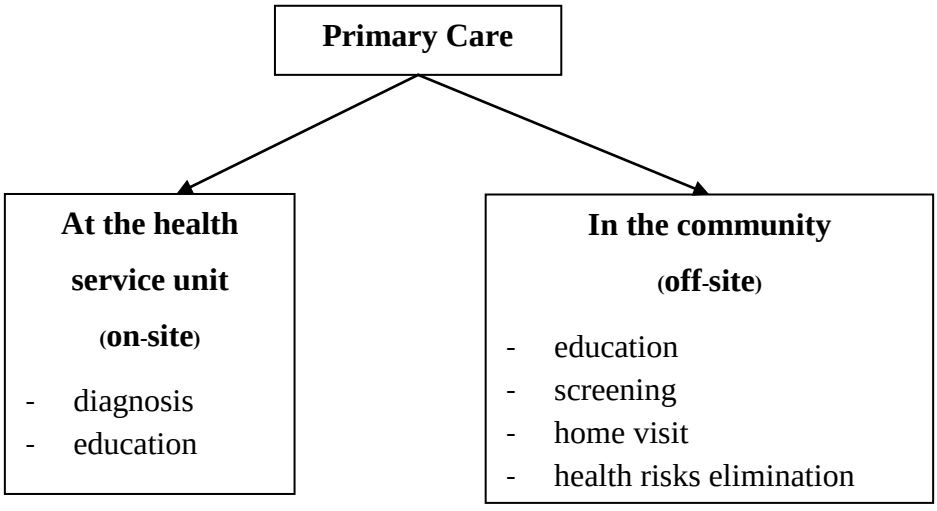

Figure 5.6 Mechanism of Primary Care Serviced by Family Care Team

Regarding the proactive measures of primary care given by the Family Care Team, the service is provided both at a service center and off-site in the community. In terms of the service center, it has different names depending on the administrative area: Town Community Health Center, Public Health Service Center, or the Ban Klang Health Promoting Hospital. Despite these different names, the services provided by these centers are mostly similar; that is, the on-site services emphasize the diagnosis by physicians and health personnel, while the off-site services stress

proactive measures, such as home visits. The details of the services in each area are explained as follows

5.4.1 On-site Services

The services provided by Public Healthcare Service Center No. 45 and Khlong Sala Urban Community Healthcare Center are similar in the way that the diagnosis is provided on-site by health personnel from the government, led by a family medicine physician as the main servicer and public health volunteers, other volunteers, and a private pharmacy co-participating with the government. However, at the Ban Klang Health Promoting Hospital, registered professional nurses provide the diagnosis and medication services, while there are only public health volunteers co-participating with the sub-district hospital.

1) Diagnosis Service at the Public Healthcare Service Center No. 45

Through the diagnosis service at Public Healthcare Service Center No. 45, it was found that the people that participate in helping provide the service at the center are mostly community leaders. They are usually patients' club leaders, who help coordinate between the service center and the club members in updating members on the information received from the service center and, at the same time, advising the service center of the requests from the members. The field study found that the service recipients are those that determine the learning topics for the service center to prepare the educational bulletin boards within the center. The service center personnel then coordinate with the pharmacy to arrange for educational activities on the requested topics while the patients are waiting for medication.

Regarding the diagnostic procedures, the service center follows the normal procedures, which begin with blood collection to measure sugar level, then weight measurements, blood pressure measurements, and finally waiting for the physician. After the physician's examination, the patient will wait for the medication pick-up, during which time the pharmacist from the private pharmacy will provide knowledge regarding disease information and healthcare via learning media, including exercises and hands-on activities so that the patients can learn to use these lessons at home. The pharmacist is free to determine the type of activity to conduct; there is no need for the supervision of the service center personnel.

However, according to the interview with a service center worker, it was found that, before the pharmacist and interns from the private pharmacy joined the program, the service center personnel already conducted such educational activities. However, with help of the pharmacy staff, this allows the service center personnel to handle more patients, thus improving the quality of service.

2) Diagnosis Service at Khlong Sala Urban Community Healthcare Center

Like the Public Healthcare Service Center No. 45, Khlong Sala Urban Community Healthcare Center emphasizes the provision of diagnostic services; however, it was found that public health volunteers and other volunteers also participate in the activities at the health center as described below.

Tuesday morning of every week is when chronic disease patients are scheduled for a check-up. They arrive early in the morning and have been on a fast since the prior evening to prepare for the scheduled blood collection. Consequently, some of them become somewhat fatigued and nearly faint while waiting to be called by the physician. Understanding the problem very well from their own experience, like mentioned before, a group of patients then sets up a breakfast program to serve rice porridge for their fellow patients after the blood collection. The breakfast program is totally funded by donations and operated by volunteers from the community. Currently, the breakfast program has further extended the service to all patients regardless of whether they are scheduled for the blood collection service or not.

In addition, it was also found that there are a group of volunteers, who were already regular patients and were well familiar with the process and personnel at the center, helping at the health center themselves. These patients saw that there were not sufficient personnel to handle the volume of the patients, causing inconvenience and long wait times for them. Additionally, new patients were unaware of the procedures of how to contact the personnel and receive the service. Therefore, a group of patients offered to help as welcome staff for fellow patients. They managed the queuing and gave basic advice on how to properly receive the service at the health center. This volunteer work is what makes the operation at Khlong Sala Urban Community Healthcare Center different from that of Public Healthcare Service Center No. 45.

According to an interview with a volunteer, most of the volunteers mentioned above are people that live not too far from the health center, have been coming regularly for check-ups, and are familiar with the operating procedures. They are willing to use their free time in the morning to help at the health center without receiving any compensation.

In addition to the general volunteers above, public health volunteers also play an important role in the diagnosis service provision at the Khlong Sala Urban Community Healthcare Center. In order to help the professional health personnel, the public health volunteers are tasked with the blood collection, blood pressure measurement, weight measurement, and height measurement of patients. A public health volunteer stated in an interview that he would normally arrive at the health center before the opening hours because some patients arrived early for the blood collection.

Supplementary to the work of the public health volunteers and the general volunteers at Khlong Sala Urban Community Healthcare Center, a pharmacist that is the owner of a private pharmacy in the area also assists with the medication dispensation for the patients at the health center. Basically, the health center employs only one full-time pharmacist causing long wait times for patients to obtain their prescription. Therefore, already trained and knowledgeable in medication, the pharmacist owner of the private pharmacy would come in daily to co-participate with the medication service at the health center during the afternoon. The full-time pharmacist admitted that, with the help of the private pharmacy in the afternoon, this allowed her to be able to conduct more health activities off-site.

3) Diagnosis Service at Ban Klang Health Promoting Hospital

For the service provided by Ban Klang Health Promoting Hospital, a registered professional nurse acts as the lead responsible for the administration of the co-participation of other officials and public health volunteers. The qualified public health volunteer must already be trained as a Care Giver before he or she can perform the blood pressure measurement, phlebotomy, and weight and height measurements. Then a registered nurse analyzes the blood test results and informs the patient of any advice, care suggestions, and medication to be dispensed, which has been prescribed by the physician at the secondary or tertiary hospital during the patient’s earlier visit.

If there is a change in the symptoms or the blood test results, the nurse will refer the patient to the secondary or tertiary hospital for a physician visit. In addition, the registered nurse is also tasked with medical practices, such as wound treatment and injection, and examination of the patient to determine which type of care the patient needs and then informs the public health volunteer to continue the care.

5.4.2 Off-site Services

Off-site services are primarily conducted in the communities under the responsibility of the service center. The services at the three service centers in the research study are mostly similar to other service centers. They include education, home visits to ensure the proper environment and eliminate health risks, care regarding medication usage, physical therapy, mental health consultation, and health monitoring. The services and activities are described below.

1) Education to the Community

One of the duties of Family Care Team is to educate people regarding health knowledge. In the three case studies, it was found that two service centers had been conducting educational activities in the community, such as holding educational sessions at Buddhist temples and schools in the area on the knowledge topics suitable to the target audiences. The research study also found that education was an activity that allowed the co-participation of the public, private, and people sectors. The educational activities can be described in each area as follows.

(1) Educational Activities by Public Healthcare Service Center No. 45

The field observation of the work of Family Care Team at Public Healthcare Service Center No. 45 found that there were education services conducted both at the service center and off-site in the community with the pharmacist from the private pharmacy in the area cooperating as a part of Family Care Team.

The interviews with a service center official and the co-participating pharmacist were consistent, indicating that the education service at the service center was a session given while patients are waiting for their medications. The session is conducted by the pharmacist owner and interns from the pharmacy in the form of a knowledge session and an exercise. The weekly schedule of educational activities is determined by the full-time pharmacist stationed at the service center. The activities vary according to the days of the week in order to target different patient groups, such

as Tuesday for the elderly and Wednesday for diabetes patients. However, the pharmacist owner of the private pharmacy is free to design the activities under the given topic of the day, e.g. a knowledge session or an exercise, as she stated in the following:

> Every Wednesday, we have a program for the club for diabetes patients. If we couldn't make it, the official there would just cover the general topic. We offered to become a limb for them (in providing further services), telling them that we are a team of pharmacists. We contacted the full-time pharmacist at the center, who is a government official, and she gave us details of what to do. But she was not fully sure (of our capability) yet, and she wanted us to show her of what we could do first. So we had our interns to do the education session, starting from a session with the club every Wednesday. The process was like this. There were a hundred or so diabetes patients, who were scheduled to receive their medicines every month. They would come in the morning for the blood collection. After that they were supposed to wait for the doctor, then for the medicines. So we set up a room for the education session while they were waiting for the medicines. Then they got their medicines and went home. (The pharmacist and owner of Mahanakhon Pharmacy, personal communication, July 13, 2016)

She also added the following concerning the activities of the private pharmacy:

> The activities we let the (private) pharmacy participate in is to give education on healthcare and behavioral change suggestions. We evaluated the result from the attendee's inputs, which every time we received compliments from the patients and also some suggestions on what topics they wanted to receive. So they were the responses from the service recipients, and the patients were the one who determine the topics to be covered. And we got the pharmacist from the pharmacy to help us with the educational activities, including talks and knowledge boards. (the pharmacist and owner of Mahanakhon Pharmacy, personal communication, July 13, 2016)

The topic of the education session is indirectly proposed by the patients, who are members of a club in which the patients with the same condition join. The members inform their club leader of their request, then the club leader coordinates with the service center, which, in turn, notifies the participating pharmacist in order to prepare the content and learning media.

At first the pharmacy prepares the learning materials and media at its own expense, but as time went by, the service center officials began to contribute office supplies that were already available at the service center, as she stated in the following:

> The officials were trying to help when we brought our interns to conduct the education session. Before, we needed to prepare the learning materials by ourselves. Paper, color printouts, laminated cards. We did them all. We brought them ourselves. But now they are trying to help. They told us what we could requisition and the amount. And we could use the printer at the center because they said it was for the work for the center. That's all they could help. They said, because they were a government agency, there was a lot of red tape if we were to do a requisition. (The pharmacist and owner of Mahanakhon Pharmacy, personal communication, July 13, 2016)

In addition to the weekly education session at the service center, Family Care Team also has to conduct activities off-site in the community area. The service center arranges a van and asks the pharmacist and the interns to join the officials in visits to the community.

> There are also educational activities at Rom Klao Community in the area of our responsibility. We have to ride a van with a team of officials from the center to give knowledge in the community, in addition to what we do at the center. (The pharmacist and owner of Mahanakhon Pharmacy, personal communication, July 13, 2016)

The pharmacist owner added that the knowledge session conducted in the community also aims to educate the public health volunteers so that they can transfer the knowledge to the community members.

(2) Educational Activities by Khlong Sala Urban Community Healthcare Center, Phetchabun

The Khlong Sala Urban Community Healthcare Center conducts educational activities in the community via a specific purpose team, consisting of the government's health personnel. The activities are organized with other units in the community, such as Buddhist temples and schools. The topic covered is supposed to be relevant to the current events and season, especially when there is an outbreak. The activities mainly aim to educate and train the public health volunteers in order to have them, in turn, educate the people in the community. The public health volunteer stated that the topic depended on the health situation at that time. For example, if there was an epidemic or a disease caution, they would then receive training on that disease.

In addition, the pharmacist from the participating private pharmacy also reaches out to the community to provide education in health and hygiene. However, the activity is somewhat independent from that of Khlong Sala Urban Community Healthcare Center. However, the pharmacist is still required to submit a report to the health center and the municipality regarding every educational activity the pharmacist conducts in the community.

(3) Educational Activities by Ban Klang Health Promoting Hospital

The role of educating the community of the Ban Klang Health Promoting Hospital mostly belongs to the registered nurse, who is the head of the sub-district hospital. The educational activities are both conducted both at the sub-district hospital and at schools, including a school for the elderly care, which is a collaboration between the municipality and the sub-district hospital. The educational activity at the school for elderly care takes place every Friday for the elderly in the community, allowing them to learn and take part in the activities together. The public health volunteers do not officially participate in the educational activities, but they do in the form of a monthly meeting with the community members or as health counselors for the neighbors.

2) Patient's Home Visits

Another important activity by Family Care Team is the patient's home visit for the purpose of observation of the living conditions and their environment for any health risks that need to be eliminated. The visit also encompasses the monitoring of medication usage, physical therapy, and mental health consultations. The aim of the visit is to provide healthcare services in the patient's area, in addition to the services provided at the hospital. It is a proactive measure to help the patient attain a better living condition. The patients selected for the home visits are mainly those that have a chronic disease or are bedbound, such as patients that have had a stroke or are in the last stage of cancer. The visit is expected to help the patients with adequate off-site service and good care and happiness during the last days of life. The patients visited by Family Care Team could be outpatients, inpatients, or those that have been transferred back home from the hospital, each of which is explained below.

(1) The Patient Returning from the Secondary and Tertiary Care

When a patient is admitted to a secondary or tertiary care hospital, i.e. a district-level or province-level hospital, respectively, the hospital will notify the primary care unit that the patient belongs to. The Family Care Team stationed at the primary care unit then registers the patient's information along with data on the other patients in order to prepare for the team meeting to identify the problems and needs of each individual, especially if any special care is needed, and to assign the personnel, including the participating partners and volunteers, to each individual according to their needs. In the case of a bedbound patient, a team of a physician and a physical therapist will be assigned and directly responsible for the patient. The Family Care Team then determines the dates of the periodic home visits, normally scheduled for an afternoon on a certain day of the week. After the patient is transferred back from the higher-tier unit to the primary care unit, a physician and health personnel examine the patient to ensure that the his or her condition is suitable for at-home recuperation and care, including educating the patient of any necessary self-care actions. At the same time, Family Care Team plans for a care process appropriate to the living conditions and environment at the patient's home. If any problem is found, the public health volunteers and community leaders will coordinate in getting the home environment ready for the patient to return, e.g. home repairs and improvements. The preparation

also includes education for the patient's relatives on the proper care procedures at home, such as mucus suction, blended food preparation, wound treatment, and basic physical therapy, in order to ensure that the patient's relative can effectively and comprehensively care for the patient. After the patient is sent back home, there will be weekly home visits for some time. In addition, a pharmacist will also visit the patient at home to monitor the patient's medication usage.

(2) The Patient Whose Case was Notified by the Area Public Health Volunteer

Other patient groups that Family Care Team considers making home visits to are the disabled, the bedbound, the elderly, or the patients that cannot be easily moved. In order to identify these patients, the public health volunteers survey their village or community and report anyone that falls into this group to the service center. If a patient is found, a team led by a registered nurse will investigate the case and provide preliminary service, if necessary. The team later consults with a physician to identify the actual problem and to assign a specific purpose team to handle the situation on a case-by-case basis. Moreover, there is also a team led by a pharmacist making visits in the community to monitor and advise regarding medication usage and storage. The home visits for this type of case are divided into three stages as follows.

Before the home visit – This is the most important stage of all three. There needs to be a clear objective and careful and detailed planning. The human workforce, tools and equipment, and essential data of the patient, his or her family, and even the surrounding area must be readily prepared. Prior to each visit, the patient or a household member must be informed of the time of the visit via a phone call.

During the home visit – The visiting the family care team personnel must be able to solve the problem effectively and adjust the strategy in accordance with situational changes.

After the home visit – A record of the recent visit must be furnished to be used for further planning.

For the home visits conducted by the family care team from Public Healthcare Service Center No. 45, the pharmacist owner of the private pharmacy in the area and her interns also join the service center officials in the home visits, and they are allowed the opportunity to fully work in the area in which they are capable. The service center worker agreed with the pharmacist, as described below:

> They started seeing our potential, so they let us do the home visits sometimes. They trusted us and let us access the patient's data on the OPD Card because the patient's data is supposed to be confidential. (The pharmacist and owner of Mahanakhon Pharmacy, personal communication, July 13, 2016)
>
> About the activity that we let the pharmacy help us, we first looked at their potential. They were one of the professionals and had the capability to service the patient. So I had them join us for the home visits. (The pharmacist and owner of Mahanakhon Pharmacy, personal communication, July 13, 2016)

The assignment of the pharmacist to participate in the service is under the responsibility of the full-time pharmacist at the service center because it can be directly authorized at the full-time pharmacist's discretion.

> The tasks we assigned them (the private pharmacy) is under our responsibility. Since it doesn't involve any use of budget, I don't have to obtain an authorization from anyone else. (The pharmacist and owner of Mahanakhon Pharmacy, personal communication, July 13, 2016)

In the area of Public Healthcare Service Center No. 45, the pharmacist owner performs the home visits along with a team of nurses and social workers from the service center to monitor the medication usage among the chronic disease patients and their family members. The areas of concern are self-medication, incorrect usage of prescribed medicines, side effects and unexpected symptoms, insufficient or excessive dosages, repeated usage of dangerous drugs, ineffective and expired drugs, duplicate medications, and even unconsumed drugs. In addition, the private pharmacy team also provides education in basic healthcare, knowledge of illness, disease, and its prevention, correct medication usage, problems of dangerous drugs that are widely distributed in the community, unreasonable use of drugs, and the danger of unsupervised and excessive use of TV-advertised, over-the-counter drugs that can lead to death.

Regarding the operation of Ban Klang Health Promoting Hospital, the head of the hospital determines the date, time, and the area of the home visit activities by arranging with the public health volunteers in that area so that they all can pay a visit to the patient's home together. Most of the time, the visiting team consists of the head of the hospital, the public health volunteers that are Care Givers, and the local public health volunteers. The team usually pays visits to the bedbound elderly that cannot go to the hospital in person. Prior to each visit, the head of the hospital is informed of the patient by the public health volunteer that is looking after the patient's area, and then prepares the necessities, which are donated by the public health volunteers and the community members, for the patient.

3) Patient Screening

The patient screening is one of the activities conducted by Public Healthcare Service Center No. 45 and the town community health center in the area of their responsibility. The public health volunteers are the main driving force, co-participating with the government, in this activity in order to lessen the burden of the government sector and to widen the healthcare service access to broader population groups. Moreover, the activity also helps to control the outbreak of disease and to decrease the government's expenditures in treatments of non-contagious or chronic diseases, such as diabetes, high blood pressure, and high cholesterol, whose trend is reflected by a consistently-increasing number of patients. If such diseases are not diagnosed and properly and continuously treated, there could occur complications, thus worsening the patient's condition.

According to the interviews with the informants at both service centers, the mechanisms of the operation are very similar. That is, the patient screening activity is a community-level service by each public health volunteer to care for the family members in the assigned households. The service of patient screening includes various measurements of the patient's weight, height, blood pressure, and blood sugar level.

Regarding the operation, the service center determines the date and time of the screening activity in each community and relays the information to the public health volunteers in the area, who would announce to the community members beforehand and, at the same time, persuade as many people as possible to participate

in the screening. Furthermore, the public health volunteer also reminds the participants to fast during the evening before the scheduled date, as one of the volunteers stated:

> Before the screening, I would inform and make appointments with the members of the ten households I'm responsible for. I coordinated with all these households. I told them early, about a month beforehand. Let's say, we are going to do it tomorrow. Tonight I have to go tell them not to eat or drink. I have to remind them right at their doorsteps. We (volunteers) are taking care of people from one home to another. (The public health volunteer at an urban community health center, personal communication, August 10, 2016)

However, though the screening activity was found to be conducted in the community off-site for both service centers mentioned above, the Khlong Sala Urban Community Healthcare Center is the only center that has a private pharmacy participate in the screening activity and patient transfer. The private pharmacy also publicizes the screening activity so that the community members can receive the service at no cost.

The pharmacist owner of the private pharmacy stated that the pharmacy has to conduct its own planning and public announcement in order to publicize the screening activity to the communities in the area. They also have interns display signage and advertisement boards to promote the activity in the marketplace area and around the Mueang District. The promotion activity is normally performed at 7:30 in the morning, before the business hours, to persuade passersby to visit the pharmacy to receive the screening service free of charge by just showing their national I.D. card. The screening service at the pharmacy includes diabetes, blood pressure, and obesity screening, smoking cessation recommendations, and knowledge of the effectiveness and proper use of condoms and birth control pills. The screening service is solely operated and entirely paid for by the pharmacy and must be reported to the provincial office of public health.

Later, the promotion activity was broadened from the marketplace area to Buddhist temples, with the permission of the abbots. This allows the pharmacy to

educate the people in the community in self-care and introduces the screening service at the pharmacy before referring the patient, if found, to the Khlong Sala Urban Community Healthcare Center.

In order to refer a patient or a customer with health risks, the pharmacy uses a referral form to initiate the patient referral process with the community health center. However, in 2015, there was a problem with a missing referral form due to a misunderstanding by the pharmacy, resulting in the patient being transferred to the provincial hospital instead of the Khlong Sala Urban Community Healthcare Center, which is responsible for the primary care in the area. For the screening process, there is a screening form furnished by the pharmacy whose information includes the patient's personal information and medical history, preliminary symptoms, and medication usage. If a health risk or a symptom indicating a chronic disease is found but is unknown to the patient or the patient has never visited a physician, the pharmacy will immediately refer the patient to the community health center and notify the patient of the necessity of the physician visit, which is free of charge.

Therefore, the screening and referral services provided by the private pharmacy is an effective measure for detecting any health risks and referring the patient in a timely manner, especially given the fact that there are pharmacies conveniently located throughout the community and they are the first units that most people choose to visit in an event of sickness. Pharmacies are highly capable of screening screen the people in the community for diseases and health risks and referring those at risk to the appropriate health unit, as explained in the interview below.

> Some groups of people do not go to the hospital. They choose to go to someone else who is not a hospital. Some are confident in the drugstore, which has a variety of products they can choose from. It's not like they are told what to get; they feel like they have a choice. Some people even feel like they are shopping when at the pharmacy. So this is a behavior of some people, which the pharmacy can fill the void for this. (Mor Duangdao, personal communication, August 8, 2016)

4) Health Problem Monitoring

According to the interviews with the operation-level personnel from the government, private, and public sectors, the public health volunteers have the main role of monitoring the health problems in the community, as evidenced in the areas of all three service center. The policy and guidelines for any particular issue to monitor are passed down by the service center, such as dengue fever monitoring by surveying and eradicating mosquito habitats. The work also encompasses new and re-emerging epidemics, where the service center will regularly conduct a meeting with the public health volunteers to inform people of the diseases and how to recognize them, thus increasing the disease surveillance in the community.

However, in the area of the Khlong Sala Urban Community Healthcare Center, the private pharmacy also takes on the health monitoring role. When there is an outbreak or re-emerging epidemics, the pharmacist closely observes the customers by the product they are purchasing or with an inquiry in the symptoms they are having. If there is any symptom in accordance with the current outbreak, the pharmacist will then urgently refer the customer to the community health center and notify the customer of his or her rights to receive the healthcare service along with issuing a referral form for the community health center. In this way, the private pharmacy can proactively curb the spread of the outbreak in the area as Nong Ple, the pharmacist and owner of Ruenya Bhesaj in the area of the Khlong Sala Urban Community Healthcare Center stated:

> There once was a customer with severe coughing. When I asked him further about the symptoms and the lifestyle, I thought it was very likely to be tuberculosis. So I immediately issued a referral form and got a motorcycle taxi in the front to take him to the community health center. (Nong Ple, personal communication, August 8, 2016)

With the above information, the integrated process of the family care team in health service provision both on-site and off-site can be analyzed, as illustrated in Figure 5.7 below.

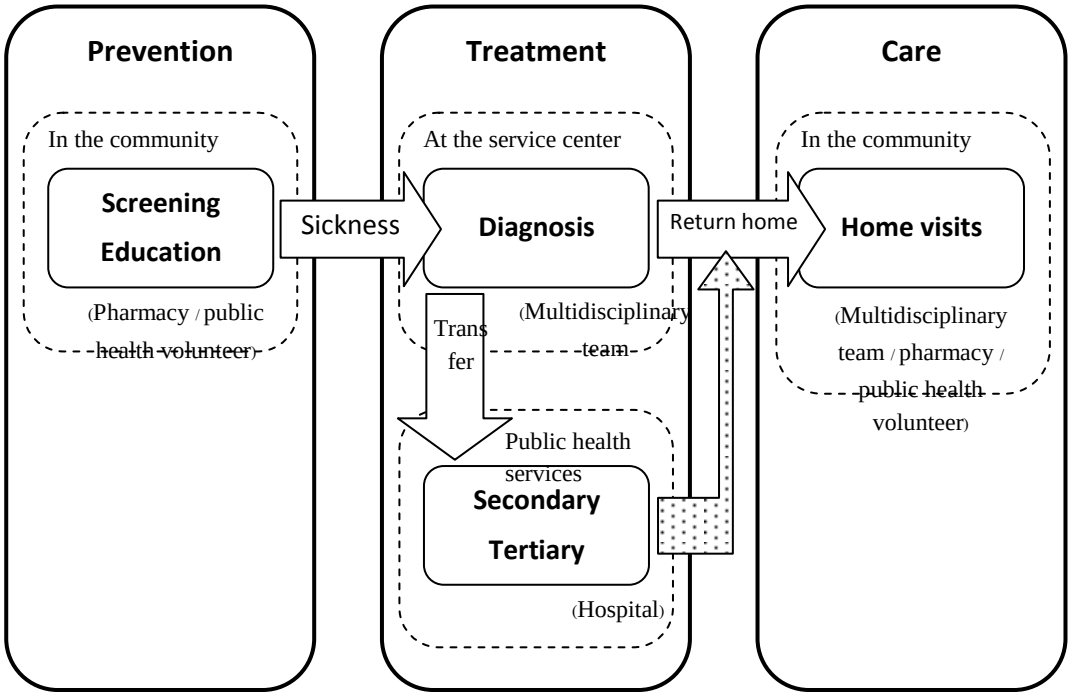

Figure 5.7 Operation Process of Family Care Team

The Family Care Team is led and managed by a family physician because of his or her medical and community aptitude and the need to coordinate between the community and the hospital. Therefore, a family medicine physician is best suited to lead the team. However, under the current situation where there are not sufficient family medicine physicians to cover all areas, it has since become a challenge for the personnel on the family care team to provide primary care, which requires closeness to the community at the heart of the operation. Therefore, collaboration from other health personnel in the area is equally important.

Having a primary care team assigning work for several different areas indeed supports the work of physicians at the hospital and allows the health personnel to be able to care for the populations thoroughly in all areas. Presently, the team is called the family care team because it is a team that provides care for the families in each community. The family care team works as a multidisciplinary team—physicians, nurses, social workers, pharmacists, dentists, physical therapists, and psychologists—conducting various activities, including health promotion, disease

prevention, and patient care. Each team within the groups of Family Care Teams is independent from others and is allocated the work depending on the responsibility and skills needed in each case. For example, when a team of nurses conducts a home visit and finds that the patient has a problem using the medicine, the team of pharmacists is then assigned to take over the case in the area of medication usage. In each community, a team of nurses acts as the preliminary support and, if there is a problem, it is supposed to report the case to the lead physician, as can be seen in the following interview statement.

> A patient received insulin to self-administer at home for months. We had to go take a look at how they kept the medicine and how they administered themselves. Did they do it correctly? It is our job to go to their home to teach them how to do it, and we then evaluate their medication usage. (the pharmacist and owner of Mahanakhon Pharmacy, personal communication, July 13, 2016)

The work of the family care team first begins at the primary care unit in the area. Each team is responsible for 1,250-2,500 people. The family care team is tasked with healthcare in terms of promoting health and being dependable in the event of illness. The roles of the family care team include promoting health, providing health education and recommendations, reducing health risks for all ages from the prenatal period, ensuring a suitable environment to minimize disease risks, e.g. elimination of mosquito habitats, providing care in the event of illness, providing chronic disease and elderly care, and providing care for the population group in a fragile state and dependent on others, e.g. the disabled, bedbound patients, terminally-ill patients, and children with special needs. The team emphasizes the proactive measures of home visits for bedbound and chronic disease patients and health activities in the community. The general public can easily and conveniently reach the personnel in the family care team via cellphone calls and the LINE messaging application, and the team also has the capability to coordinate with the larger hospital to seamlessly transfer the patient, if needed.

Patients visited by the family care team are outpatients, inpatients, and those who are transferred back home from the hospital. The work process starts when the family care team receives a list of patients in the area of the hospitals, then registers the names, and conducts a team meeting in order to identify the problems and needs of each patient in order to see if special care is necessary. In the case of a bedbound patient, a physician and a physical therapist directly handle the case. Then the team determines the dates of visits, which are routinely in the afternoon. After the completion of a check-up and activities at the primary care unit, the team plans for scheduled visits and determines the appropriate condition for each patient. Before the patient is ultimately sent home, the residence and environment of the patient are also surveyed to ensure that they are suitable for the patient's recuperation at home. If any problem with the residence or the environment is found, the team coordinates with the area public health volunteers or the community leader to assist in the repairs and improvements. In the meantime, the team also advises the patient and his or her relatives on proper care procedures during the recuperation period at home, such as mucus suction, blended food preparation, wound treatment, basic physical therapy, including arm and leg movements, and joint exercise, in order to ensure that the patient's relative can effectively and comprehensively care for the patient. In addition, a pharmacist will also visit the patient at home to monitor the patient's medication usage.

According to the interviews with the operation-level personnel in the government, private, and people sectors, it can be stated that the mechanisms of the operations mentioned above all have common traits as follows:

1) The Closeness and Familiarity are the Foundation of the Work

The role and work mechanism of the family care team, which is primarily stationed at the health service center in the area, enable the personnel on the team to work closely with the people that make a visit for the health service. One of the reasons is that the health service center is located conveniently in the proximity of most neighborhoods in the community and provides the primary care, which is the first choice for many people in the event of illness. For some patients, especially those with chronic disease and the elderly, they are scheduled to visit a physician regularly. Moreover, the channels of communication with the health service center are readily

available, leading to the personnel of the health service center and the people being familiar and close to each other.

Some patients that are scheduled to periodically visit a physician have become very familiar with the process of the work of the personnel and, consequently, recognize one of the problems, which is that there are insufficient personnel when compared to the number of visitors each day. For example, in the case of the service provided by the town community health center, both the personnel and the volunteers mentioned that volunteers come to help out at the health service center every day. One of the volunteers, who is also a patient receiving service at the center, stated in an interview that fellow volunteers, who regularly visited and that are familiar with the work of the service center, recognized the inconvenience while waiting for the service and then offered to help the service center personnel by first assisting in welcoming the new visitors, leading to assistance in other activities, such as public relations and queue management.

In addition, the volunteers also proposed ideas for improvement of the service, such as breakfast service for patients that were required to be on a fast during the prior evening because of their blood collection. The breakfast service is entirely funded by the patients' donations. According to the observation study, the patient/volunteers are not compensated for this voluntary work, as mentioned before. However, in the area of Public Healthcare Service Center No. 45, there is no volunteer assisting in the work at the service center, but the community leaders in the area that have been assigned to lead the patient clubs are tasked with coordinating between the service center personnel and the patients of the club.

Regarding the work of the public health volunteers, the interviews with the volunteers revealed that the mechanisms of the operations at each of the three service centers are similar. That is, it is a community-level service to care for the households assigned to each public health volunteer. The activities include patient screening, environment monitoring, health problem reporting, and first aid service and education. According to the field study, the work of the public health volunteers requires closeness and familiarity between the volunteers, the service center personnel, and the community members, and also among the public health volunteers themselves, as explained in the following interviews:

> Each public health volunteer is responsible for at least 10 households. People living in the neighborhood are like close relatives. They are taking care of each other. In other words, if anyone gets sick, everyone is aware of it. (a public health volunteer, urban community healthcare center, personal communication, August 10, 2016)
>
> We will be taking care of the community and reporting the health and general status of the community to the sub-district hospital. They will have a form for us to complete. If there is any problem, we can just make a phone call to them because we normally have a direct communication with them. (a public health volunteer, urban community health center, personal communication, August 10, 2016)

In addition to the volunteer work at the service center, another important activity by the family care team is the home visit, whose main purpose is to provide health services off-site of the hospital and in the community area itself. It is a proactive measure, which the family care team believes will help the patients and their caregivers have a better quality of life. The home visits are mostly conducted at the homes of chronic disease patients or the bedbound with the aim of providing them with adequate off-site service and good care and happiness during the last days of life. The patients visited by the family care team could be outpatients, inpatients, and those that are transferred back home from the hospital. As a result, the home visit service fosters a relationship between the service providers and service recipients, leading to closeness and familiarity in the community akin to the bonds among relatives and family members.

Beyond the relationship between the family care team personnel and the service recipients, who are the community members, the study found that it led to the participation of the private pharmacy, which is in the private sector. The pharmacist owner of the private pharmacy traced back to the beginning, saying that the pharmacy had a service contract with the National Health Security Office (NHSO); therefore, the pharmacist owner had to coordinate with the personnel at the health service center in the area and realized that the health service center had been overwhelmed with a large number of patients and paperwork, resulting in a long wait time. Consequently,

the pharmacist then volunteered to provide the resources of the private pharmacy to help lessen the burden of the health service center as Nong Ple, the pharmacist and the owner of Ruenya Bhesaj stated in the following:

> When we were working with the NHSO, we were supposed to submit the patient referral forms to the NHSO at the end of each year so we had to go to the sub-district hospital regularly, and I usually went to talk to the pharmacist at the medicine room. Sometimes she was there working by herself. So I tried to go there around 2pm. It was the time that our pharmacy was not usually busy. It took me only minutes on the motorcycle. I helped them out so they could service the patients more quickly, or sometimes I arranged the medicines on the shelves. I was just helping. (Nong Ple, personal communication, August 8, 2016)

The close coordination between the government officials and the pharmacist allows both parties to recognize the problems together. It is one of the reasons why the private pharmacy is willing to collaborate with the government, as Nong Ple indicated in the following:

> We were lucky to get to know the pharmacist at the sub-district hospital who were willing to create for the better and understood our objectives, which were the same as hers. The patient referral system today makes us able to keep track of who does go or does not go to the hospital according to the referral forms. (Nong Ple, personal communication, August 8, 2016)

Moreover, the decision to participate in the family care team was also from recognizing the lead physician's dedication and commitment to working for the community and her attempt to improve the working process of her team to effectively solve the problems in the community. Her dedication to healthcare work coincided with that of the pharmacist, whose goal is to achieve better health conditions for the communication, as she stated below:

> An official in the LINE group who had been coordinating with the pharmacy added the Doctor (the lead physician) into the group. So I introduced myself as a pharmacy. The Doctor said ‘That’s good,’ and invited us to come to talk with her about the health development in the community. (Nong Ple, personal communication, August 8, 2016)

As can be seen, the work of the family care team is a close working and coordination between the government officials and service recipients, who are the community members, and also with the pharmacy, which represents the private sector. This creates a mutual relationship between all three sectors and allows all parties to recognize and understand the problems together, leading to the trust in healthcare and treatment and the collaboration among all sectors. This close relationship is not only between the government officials and the community but also among the working health personnel. Therefore, it can be said that the heart of the work of the family care team is to work closely with the people until it can be entrusted by the people because the people, as service recipients, feel a bond with the service providers—nurses, pharmacists, and other professionals. The trust, confidence, and familiarity of the people toward the family care team will lead to sincere collaboration in building healthy behaviors, eliminating health risks, and effectively performing self-care. Furthermore, the close relationship of the co-production by the people and the family care team also leads to mutual goals toward building an excellent health system in the community and reducing the congestion of patients in the hospital.

2) Reliance on Each Other

According to an interview with the physician of the family care team, the problems of public health in the past could not be dealt with by only the public health personnel alone because each patient had to face problems caused by many factors related to all aspects of the quality of life, e.g. economy, security of living and wealth, and sanitation at home and its surroundings.

Therefore, the solutions to the problems require the participation of all sectors, and one of the solutions is the formation of the family care team, which, in order to respond to the immediate problems at hand, brings together officials and personnel from all possible sectors and levels, especially those outside the health

sector, e.g. officials from the local administrative organization and municipality, religious leaders, educators, pharmacists, community leaders, and even neighbors in the community. In some areas, there is only one physician available, and handling a populated area with only one person is a very daunting and overwhelming task, making it nearly impossible to understand the actual problems in the community; therefore, the government personnel, especially the family care team, need to rely on the community leaders, religious leaders, educators, and personnel from other agencies in order to truly recognize the problems and to be able to care for populations of all groups and locations.

At the same time, the community and personnel in other disciplines require the expertise in health and medicine from a team of physicians in caring for people in the community and addressing the problems related to the health of an individual. The collaboration of multidisciplinary personnel is essential in achieving common goals. For example, in areas with a lot of drug problems, the personnel of the health service center cannot directly approach this population group; therefore, there is a need to get help from the educators and neighbors in the community, including the public health volunteers, to coordinate with the health personnel to access the target group. On the other hand, the educators and neighbors that are aware of the drug abuse problems cannot provide proper care and treatment, thus requiring the expertise of physicians and health personnel, who regularly work closely with and are trusted by the people in the community that any personal information will be kept confidential because most of the drug abuse and addiction cases are among youths.

In addition, the reliance among multiple parties can also be found in the relation between the private pharmacy and the health service center in the area. The interviews with the operation-level government officials at two health service centers revealed that the private pharmacy becoming a part of the family care team without any monetary compensation greatly helps to lessen the burden of the government officials, as can be seen in the following passage:

> A pharmacist came to us, and we had them as an in-network pharmacy so that our operation could become well-structured. Normally, there was only one pharmacist official at the center, limiting the amount of activities we could do. But when the private pharmacy joined us, we got more manpower from the interns at the pharmacy, allowing us to handle more patients and organize different types of activities, such as the home visit, which is very important. For example, we dispensed insulin to a patient to self-administer at home, so we had to make home visits to evaluate how they used, how they kept the medicine, and how they administered themselves. (the pharmacist official at the Public Healthcare Service Center No. 45, personal communication, July 13, 2016)

The study found that the pharmacist from the private pharmacy from each area participates with the family care team differently, as described below.

The activities conducted by the private pharmacy that participates in the work of Public Healthcare Service Center No. 45 include home visits and educational sessions. The pharmacist and interns of the private pharmacy joining a team of nurses and social workers help with providing advice on medication usage by chronic disease patients. The education sessions are held weekly at the service center to provide health knowledge in the form of talks and knowledge boards, whose topics are determined by the interest of the patients. The work of the private pharmacy is evaluated by the attendees of the sessions, and has been received positively most of the time, along with the suggestion of topics to be covered in future sessions.

The activities conducted by the private pharmacy that participates in the work of the Khlong Sala Urban Community Healthcare Center are mainly the assistance with medication dispensation at the health center, health screening, and the referral process of patients or those with disease risks to the health center.

The assistance provided by both private pharmacies in these two areas is the co-participation with the family care team without any compensation. However, instead of monetary compensation, the pharmacies do receive recognition and acceptance from the community in return. Because of the competitive nature within the pharmacy industry, each pharmacy must find a strategy to attract more customers.

The participation with the family care team presents both pharmacies with an opportunity to promote their businesses and allows the community to recognize and become familiar with them. The private pharmacy in the area of Public Healthcare Service Center No. 45 indicated that the personnel at the service center and on the family care team have been referring some customers to the pharmacy. Moreover, the service center also refers cases under contract with other agencies, which are paid per case, as indirect compensation for joining the family care team, as explained in the interviews below:

> The work was very exhausting, and we did not receive any money. But the center was trying to help us by sending their patients to us. There are non-essential drugs that the center does not give out, so they told the patients to buy those drugs from us. They are helping us on their own. It's like they want to do something in return for our work because the higher-up folks did not even acknowledge our work. We all are helping each other. In the Quit Smoking Project, for example, they were kind of sympathetic to us because they knew we had to close our store to go help them. So they recommended us go there to hold education sessions and freely take on the case from any attendees because the case from the Quit Smoking Project was compensated case by case. (The pharmacist and owner of Mahanakorn Pharmacy, personal communication, July 13, 2016)

> It is a policy of Health Department, Bangkok Metropolitan Administration, that there should be an official in the pharmacy department coordinating with the in-network pharmacy in the community in sharing information with each other. We never had a pharmacist help us like this before. We only shared some of the patient's information. But for the in-network pharmacy like this, we referred some of the cases from other agencies, which paid some administrative fees, to them to take care of because they didn't get anything in return when they came in to work with us. We did the same with the in-network pharmacy we had worked with before, but they didn't work proactively like this one." (the pharmacist official at the Public Healthcare Service Center No. 45, personal communication, July 13, 2016)

The private pharmacy co-producing with the family care team at the Khlong Sala Urban Community Healthcare Center, Phetchabun already participates in the health screening service under a contract with the National Health Security Office which complements the work of the family care team per the procedures described as follows. When a customer visits the pharmacy, the pharmacist inquires about the symptoms and health history according to the health inquiry form furnished by the pharmacy. The pharmacy later uses the inquiry form developed by the NHSO. If any patient is found to have health risks or to be sick but never has been under the medical care, the pharmacist issues a referral form and informs the patient of the patient's rights under the Health Security Act. Finally, the pharmacist recommends the patient to visit the Khlong Sala Urban Community Healthcare Center for further diagnosis and treatments.

In the beginning, there was a problem with the missing referral forms because there was no official at the health center collecting the forms and sending them back to the pharmacy. The pharmacy needed the returned forms with the signature of the physician to attach to the annual report to be submitted to the NHSO in order to receive compensation per the contract with the NHSO. The referral activities also help the health center achieve the goal of reaching out to the population in the area as much as possible, as Mor Duangdao explained in the following:

> By creating a network with the pharmacy, we can also connect to the NHSO, and NHSO already believes that the pharmacy can complement the health services. In working with the pharmacy, we are not looking at the money. We have no idea what projects or other agencies the pharmacist is currently working with and getting money from where. It's up to them. But by working with us, if they need any information required for the NHSO report, they can let us know. We can do it. We still operate and take care of patients as we normally do. About being in our network, it has nothing to with money. We just would like to have a pharmacy to get more patients for us – to send the case to us. If they find a new case or a case that hasn't been fully screened or the patient who is unaware that he or she is sick – some of them have never been to any doctor – or even those who did not have an access to the standard

> medical care, such as diabetes patients – they need to have a check-up for their eyes, feet, and blood every year – these people who only visited the pharmacy out there would not receive these services, then the pharmacy would send them here to us. (Mor Doungdao, personal communication, August 8, 2016)

In return, the pharmacy receives signed referral forms from the health center to be compiled as part of the annual report for the NHSO, as Mor Duangdao also added below:

> Today we are connecting via documents and personal coordination, that is, conversation or LINE messaging app. For example, the pharmacist from the pharmacy who is currently working with us would come here to take a look at our data and also share their data with our pharmacy. It's only information sharing; there is no exchange in other resources or compensations. (Mor Doungdao, personal communication, August 8, 2016)

According to the information received from the private pharmacy and the operation-level government official in the area of the Khlong Sala Urban Community Healthcare Center above, it can be stated that both parties rely on each other in working together and, at the same time, compensate each other.

The reliance on each other and mutual compensation can also be found in the work in the community by the public health volunteers on the family care team, as indicated in the interview below:

> While rounding on patients, sometimes a patient asked me to come over. She said she was feeling dizzy. So I took out my blood pressure monitor and took a reading. It's more convenient to have one on my own, no need to borrow from the central repository. The cost is only a little more than a thousand baht." (a public health volunteer, the Public Healthcare Service Center No. 45, personal communication, July 25, 2016)

The work of the family care team together with the government officials allows the government to reach out to the community easily and to be able to encompass wider areas, allowing the government to recognize the problems in each area without delay and to prevent or address those problems quickly and precisely. In each community, the public health volunteers play an important role by closely monitoring the health-related condition and situation in the community. They are to inform the officials at the health service center in their areas and to prepare a situation report to the health service center, including information on the activities conducted and any problems in the community, such as the status of the mosquito habitats and the number of people in each group, especially the bedbound, disabled, those with pregnancies, and postnatal. In the meantime, the general public also relies on the public health volunteers in the event of illness.

From the point of view of the public health volunteers, they are proud of the opportunity to help the government in monitoring the health of people in the community, in addition to the compensation as regulated by law, even if it is a small amount. More importantly, what they receive in return, besides the small compensation, is the trust from their fellow community members and health knowledge from the training from the agencies of the Ministry of Public Health on healthcare and measures for disease prevention and control.

3) Freedom of Working of Government Officials

The freedom of the work of government officials was seen during the field study, as Mor Sirichai, one of the physicians at Khlong Sala Urban Community HealthCare Center , explained below.

> In our work, there is a physician as a team manager. Then there are several specific purpose teams led by a nurse. Each team works independently from one another. If any problem is found, we will have a discussion about that. (Mor Sirichai, personal communication, August 8, 2016)

The Family Care Team is essentially a multidisciplinary team, where each member has a role and duty according to his or her profession and is assigned the

work according to aptitude and expertise. For example, the pharmacist on the team is assigned to medication usage, and a physical therapist is assigned to care for the patient that needs physical recovery. The participation in the family care team is entirely voluntary, and the team members are free to invite any professionals or form a network appropriate to their assignment without any prior authorization, as an official pointed out below:

> For the activities we let the private pharmacy help, we first looked at their potential. The pharmacist was already a profession and had a capability to help with our service. So we invited them to join our home visit activities. The tasks we assigned them is under our responsibility. Since it doesn't involve any use of budget, I don't have to obtain an authorization from anyone else. (the pharmacist official at the Public Healthcare Service Center No. 45, personal communication, July 13, 2016)
>
> The service center itself has the liberty to invite anyone, depending on the relationship with others in the community. Therefore, the shape and form of the team at each place could be different. There is no fixed rule. Because there is no money involved, so we are free to form a network from the relationship each has. It's up to each personnel at the center to get anyone to join. It's highly independent. No form. They get to work independently. (Mor Doungdao, personal communication, August 8, 2016)

Therefore, it can be concluded that the chance for personnel from other sectors, besides the government officials, to participate in the family care team can occur when the government officials have freedom in their work because they can freely invite or assign the work to the private or public sectors as appropriate, within the scope and relevant knowledge of the service provision.

The work of Ban Klang Health Promoting Hospital can be said to be the same as the above. That is, the head of the sub-district hospital is free to administer and proceed with projects as needed, such as the administration of budgets and human resource appropriation. In addition, the task can also be assigned to public health volunteers if possible.

4) The Existence of Knowledge Base that is Relevant and Appropriate to the Service Provision

Public health service provision requires specialized knowledge and social-related knowledge as explained below.

Physician/social medicine physician—In addition to medical expertise and knowledge, skill in community psychology is also required in order to understand the needs of the community; and in order to effectively manage the public health service in the community, the physician must also be able to lead the team with an aptitude in administration and communication. The social medical physician is best fit for this role because of his or her knowledge of different medical disciplines, thus being able to properly delegate responsibility to take care of different population groups according to their medical needs.

Multidisciplinary team—In addition to specialized knowledge, skills in management and community psychology are also required in order to provide effective services to the community.

Public health volunteer—Although the public health volunteer is not professionally certified in public healthcare, the qualification process is still under the regulation of the Ministry of Public Health. An applicant must go through training in health and social knowledge, including having a volunteer attitude . The trainings are conducted by the public health personnel in the area with lessons appropriate to the condition and situation of the community. The trainings also cover both theoretical and practical knowledge regarding the service provided at the local health service center and are evaluated by measuring the performance of the newly-trained public health volunteers. The health knowledge provided in the trainings can be divided into two categories as follows.

(1) Basic knowledge (mandatory) consists of the basic operations that all public health volunteers should be able to perform. This knowledge is related to the main health problems of the country and involves management of the prevention of and solution to health problems. The subjects are the following: 1) the roles of public health volunteers, 2) the rights of public health volunteers, 3) the transfer of knowledge and the relay of messages to the village/community, 4) discovery, analysis, and solution finding regarding local health problems, 5) personal

hygiene, 6) health promotion, health monitoring, and prevention of health problems, 7) diagnosis and first aid, 8) recovery and recuperation, 9) patient transfer to the health service center, 10) activities, operations, and equipment direction at the community primary healthcare center, and 11) cooperation with the community leaders and the local administrative organization toward health development in the local area.

(2) Specific knowledge covers the health problems in the area and the various policies of the work in health and other developments in each area that can affect the health of the populations. The provincial health department can customize the topics as appropriate to the health conditions in the area and other related factors.

An individual must be qualified, thoroughly trained, and evaluated for aptitude in both basic and specific knowledge as determined by the provincial government. Upon completion, a certificate and an identification card are issued as proof of certification and qualification for being a public health volunteer. The Ministry of Public Health specifies validity for 2 years, when, after the expiration, the certificate and identification card can be renewed upon the consideration of the person's performance with the public and in the organizations in the village/community.

The interviews with public health volunteers revealed that the public health volunteers are basically tasked with patient care, blood pressure measure, medication dispensation, blood collection, screening, and coordination between the health service center and the community as mentioned before. In the town area, the public health volunteers also help at the health service center. In some areas, a rotation is used for the scheduling of the public health volunteers to be stationed at the center, depending on their free time on any given day of the week. Some volunteers are also willing to help at the center every day and have become familiar not only with the households they are responsible for but also those in the entire municipality. Moreover, the activities at the center that the volunteers are helping with are determined by the officials at the center monthly.

However, the compensation for the public health volunteer's assistance at the health service center varies by area. In the Bangkok metropolitan area, the volunteer is paid 140 baht in addition to the standard compensation of 600 baht in

exchange for the monthly report submitted to the health service center. In addition to the monetary compensation, most public health volunteers feel that the volunteer work is worth it and is rewarding in the sense that they have an opportunity to take care of their neighbors, get in touch and become familiar with fellow community members, and spend their free time for a good cause. However, some still admit that the monetary compensation is still necessary, and some would not continue if the public health volunteer work were not compensated for.

Regarding medical equipment, the public health volunteer can borrow it from the central repository at the health service center, but most choose to buy their own for the sake of convenience; and in terms of the operation, the work is divided into zones for each public health volunteer, and a volunteer needs to visit the assigned area at least once every two weeks to greet the neighbors and observe the living conditions, such as waterlogged areas or puddles that can become mosquito habitats. The volunteer must actively monitor any health risks in the area and promptly notify the personnel of the health service center.

5.5 Analysis of Factors Leading to the Participation with Family Care Team

To study the factors leading to the participation with the Family Care Team, which is a collaboration between the government officials, the private pharmacy, and the public sector—the public health volunteers and the community leaders—it can be analyzed by each sector as follows.

5.5.1 The Public Sector

The document study and interviews with the policy-level and operation-level government officials revealed that the factors that necessitate the public sector to encourage other sectors to participate in primary care provision, which emphasizes preliminary treatment and the promotion of health education among the people in the area, are as follows.

5.5.1.1 To Align with the Prime Minister's Policy in Accordance with the Constitution and the National Economic and Social Development Plan

Since the transitional period in the Kingdom of Thailand from the absolute monarchy to a constitutional monarchy on 24 June 1932, the Constitution of the Kingdom of Thailand has been proclaimed as the basis for the laws governing the country, and there have been 19 charters or constitutions from the Temporary Charter for the Administration of Siam Act 1932 to the most recent Constitution of the Kingdom of Thailand (Interim) 2014. Public health is one of the most important areas of the government, and sections regarding public health are clearly established in recent constitutions. For example, the Constitution of Kingdom of Thailand 1997 established Chapter 3: the rights and liberties of the Thai people, Section 9: the rights to receive the public healthcare and welfare and Chapter 5: the fundamental responsibilities of the state, Section 4: policies in religion, public health, education, and culture. Moreover, the Constitution of the Kingdom of Thailand 2007 also established the public health policies in the same chapters as those of the Constitution of Kingdom of Thailand 1997 and, in order to address the health situations at that time, added the following clauses (The comparison between the Constitution of the Kingdom of Thailand 1997 and 2007 with change summaries, 2014).

(1) To guarantee by the state to all the population access to the public healthcare system and the protection of constitutional rights to comprehensive and effective public healthcare.

(2) To increase the protection of children and youths in the security of surviving and all-around physical, mental, and intelligence development, to be mainly participated in by the children and youths. The children, youths, women, and family members shall be protected from violence and have the right to full recovery from any violence. Any intervention and limitation of the rights are prohibited in order to guarantee that all families receive proper care and full protection under the law.

(3) To increase the rights of the elderly with insufficient income to make a living. Appropriate benefits and assistance to public services shall be received from the state.

(4) To increase the rights of people with disabilities to public access and assistance from the state. These rights also encompass persons with mental disability because mental disability is a chronic condition that needs to be treated just as physical disability. The state is to be unequivocal in the guarantee of the rights of people with both physical and mental disabilities.

(5) To increase the rights of people that are homeless and that have a low income to appropriate assistance from the state.

(6) To raise new principles in public healthcare and culture and to amend the existing principles to make them clearer. The state is to advocate parenting and primary education with the participation of the private sector and the community in the health development and servicing. The provider is to perform the task with professional standards and ethics. All of the population is to be protected by law in the development of the standardized education at all levels and forms in order to properly prepare for current economic and social changes. The state is to promote the distribution of power, thus allowing local administrative organizations, communities, religious organizations, and private organizations participate in education and trainings in order to raise the education standards and equality in alignment with the fundamental responsibilities of the state. In addition, the state is to promote and encourage the integrity and unity within the nation.

The current Constitution established the public health reform under Article 27 in order to serve the people effectively and promptly under the constitutional monarchy. The current Prime Minister, General Prayut Chan-o-cha, realized the importance of the public health reform, which stresses the a holistic model of the population's healthy well-being and the healthcare service system that openly allows the people to be able to choose the public or private health services.

The main goal of the nation's health development plan is the fairness of healthcare service for the entire population and health security to reduce inequality in access to the government's healthcare, including overhauling the system and mechanisms that are not yet comprehensive in providing coverage to everyone nationwide. Therefore, the current government has announced a policy to raise the quality of the healthcare service and well-being of the population under the provision that all of the population shall be able to receive at a standard level of healthcare

services under the Health Security Act at a minimum level, regardless of income level, profession, location, gender, or age. The health information data shall be integrated under one health security system, and the health management system shall be developed to place higher importance on health prevention than illness treatment. The health administration mechanism shall begin at the community level rather than being centered in the central government. The employment of the health personnel shall be reexamined to ensure that the workforce and incentives are sufficient. The health personnel and resources shall be distributed fairly and appropriately in each local area. The collaboration between the government and the private sector in the development of a medical and healthcare system shall be encouraged, especially in the area of the prevention of teenage pregnancy, and the discussion of medical and ethical issues of surrogacy, organ transplantation, and stem cell research, through clearly-defined measurements and laws. (Address of General Prayut Chan-o-cha to the National Legislative Assembly of Thailand, 2014)

Furthermore, the Eleventh National Economic and Social Development Plan (2012), which follows King Bhumibol Adulyadej's Sufficiency Economy Philosophy (SEP), aims at the practical movements that can result in holistic and integrated development in all sectors and at all levels with the model of "putting people at the center of development." There will be integration between all dimensions, including people, society, economy, environment, and politics, in order to prepare for changes at the level of the individual, family, community, society, and nation. There is a strategic development plan with the goal of creating social justice and equality in service accessibility in many aspects, including health coverage for all population groups.

(7) To align with the Prime Minister's address to the National Legislative Assembly and the Eleventh National Economic and Social Development Plan, the Ministry of Public Health, therefore, announced the policy of the Family Care Team operation as a result of the ten accelerated initiatives of the Ministry of Public Health as follows (Ratchata-Somsak announcing 10 initiatives for people's care on first day in office, 2014).

(8) To continue, as the first priority, the public health development programs under the Royal Initiative Projects and the projects in honor of the royalty for the highest benefits of the people.

(9) To develop a health service system to provide access to high-quality service for everybody in the nation, to efficiently utilize resources, and to become a sustainable system. To accelerate urgent medical care provision under the "no-cost everywhere, every plan" policy.

(10) To promote healthy living and quality of life for all Thai citizens of all ages from infancy to the elderly with safe diets and injury control.

(11) To strengthen public policies on health, which is comprised the cooperation between sectors.

(12) To improve the efficiency in the management of health personnel. To support the training of personnel to adequately meet industry needs.

(13) To achieve the stability of the system of medicine, vaccines, medical supplies, and medical technology.

(14) To control contagious diseases and health-threatening situations. To proceed with the national preparation plan to prevent and address re-emerging diseases under the "One Health" principle. To consider the admission of new vaccines and technology into the health security system, such as HPV vaccines to prevent cervical cancer, rotavirus vaccines to prevent diarrhea in infants and young children, and mixed vaccines.

(15) To adopt the development of global health and develop Thailand as the regional center of balanced and sustainable health.

(16) To promote complete health research by actively driving for a bill to establish a health research institute.

(17) To develop and promote good governance within the Ministry of Public Health and other health agencies in the government.

5.5.1.2 To Address Complex Health Problems

Today's health problems have become very complex and are interconnected with problems of the economy, society, the environment, and living conditions, e.g. the problem of safety of life and property, the problem of residence, and the problem of accessibility to the public services. Therefore, in order to address these problems, it is necessary for Family Care Team to strive for the improvement in the quality of life in the aspects of society, living, and health, especially with the cooperation from of all other sectors, including other government agencies, the private sector, and the people.

5.5.1.3 To Access the People to the Greatest Extent

Mor Duangdao explained the reason of letting the private pharmacy to join the service as follows;

> The reason we allowed the private pharmacy to join us was not only that we had few doctors, but the number of our primary care officials were also not sufficient. And the insufficient officials were not the only problem. That is, the pharmacy could definitely help us. From working with them for a few months, we could see that there were some groups of people do not go to the hospital. They choose to go to someone else who is not a hospital. Some are confident in the drugstore, which has a variety of products they can choose from. It's not like they are told what to get; they feel like they have a choice. Some people even feel like they are shopping when at the pharmacy. So this is a behavior of some people, which the pharmacy can fill the void for this. (Mor Duangdao, personal communication, 8 August 2016)

5.5.1.4 To Lessen the Burden and Allow the Government Personnel to Care for all Patients and Conduct More Activities

One of the officials mentioned that to have the pharmacy join the service is help lessen their burden as follows;

> Having the pharmacy to join us, it's because the government cannot work alone by itself. We need to have the private sector to work with us. Nowadays, the service center has to handle a lot of patients and has a lot of activities with the community. Having the pharmacist, who is qualified as a health professional, to help us can greatly lessen the burden of the officials. (a social worker at the Public Healthcare Service Center No. 45, personal communication, July 25, 2016)

The Pharmacist officials of the Public Healthcare Service Center No. 45 also added that;

> Normally, there is only one pharmacist stationed at the center, limiting the number of activities in the community we can do. When the pharmacy joined us, we got more manpower from the interns from the pharmacy, allowing us to thoroughly take care of the patients and do various kinds of activities with the community. For example, the home visit is one of the important activities. When we gave the insulin to a patient to self-administer, we had to visit them to evaluate how they used, how they kept, how they administered the medicine at home. (the pharmacist official at the Public Healthcare Service Center No. 45, personal communication, July 13, 2016)

However, an informant from the Community Based Healthcare Research and Development Institute suggested that the collaboration with the private sector should be of a specific purpose and have a specific duration. The activity should also be well-defined with the emphasis of integrated collaboration, as follows;

> (The activity) should be a type of an integrated collaboration rather than being an ad-hoc. (Interview with Dr. Supattra Srivanitchakorn, the Community Based Healthcare Research and Development Institute, 21 July 2016)

5.5.2 The Public Sector

The interviews with the public health volunteers at Public Healthcare Service Center No. 45 and the Khlong Sala Urban Community Healthcare Center, who are the public sector participating in Family Care Team, revealed that the factors that lead to the participation are the following;

5.5.2.1 Volunteer Mindset for the Community

The public health volunteers in both areas were found to take pride in being able to assist their fellow community members, as one of them mentioned below, especially with the thought of wanting to see their family members and neighbors being well and having a healthy lifestyle. It can be stated that one of the factors in participating in Family Care Team is the action led by the volunteer mindset.

> I did it because I really wanted our community members to be healthy and have a good living. I'm proud of this. When we got something done, in my feeling, though it seems to be little, but the health of the community is getting better. And there is a merit to do that, too. (a public health volunteer at the urban community healthcare center, August 10, 2016)

5.5.2.2 Acceptance and Praise from the Community

According to the interviews with the public health volunteers in both areas another factor that helps with the health servicing in the community is to build a relationship with other community members, as one of them explained below;

> We get to build a relationship in the community. From a person unknown to us, now we have to take care of the health of the whole community. (a public health volunteer at the urban community healthcare center, August 10, 2016)

5.5.2.3 "Privilege"

According to the field study, even though some of the public health volunteers mentioned that they do not receive compensation appropriate to the workload they have to do in helping with Family Care Team, they do receive a so-called "privilege" from the government officials in exchange, e.g. access to health information and news from the government before the community, training with government officials, out-of-town trips to off-site training and study, and announcement of government projects and initiatives so that the volunteers can participate before others.

5.5.2.4 Free Time for a Good Cause

Having free time is another factor in terms of participating in Family Care Team, according to the interviews with the public health volunteers. They would usually have a conversation with neighbors whenever they were free; therefore, becoming a public health volunteer only builds upon what they have been doing and they have an opportunity to have a health-related conversation and recommend having health check-ups to neighbors and others.

5.5.2.5 Compensation

The work of public health volunteers includes patient care, various health-related measurements, and environment monitoring for any health risks in the community. The work is compensated by the Ministry of Public Health as a monthly payment of 600 baht with the requirement that the volunteer must compile community health data and submit a monthly report to the affiliated health service center. The report basically contains a list of activities conducted by the volunteers in the community, information on the health environment and health risk status, such as the state of mosquito larvae, and statistics on each patient group—the total number of assigned patients, the bedbound, the disabled, pregnant women, and postnatal mothers. The monthly compensation was found to be a factor for the volunteers to participate in Family Care Team, as one of them admitted that;

> Frankly, I prefer higher payment. The current payment is little because we are really working, and the pay of 600 baht a month is not enough. Is 600 baht too little? It is. But we still do (the volunteer work). (a public health volunteer at the urban community healthcare center, August 10, 2016)

Although the payment is not the main factor in participating in the health activities in the community, some public health volunteers admitted that they would consider discontinuing if they were not compensated as follows;

> We are willing to help with our heart, but if they (government) do not give me money, I couldn't keep doing it anymore. If you go ask anyone, they will stop doing this, too, if they are not getting paid. (a public health volunteer at the urban community healthcare center, August 10, 2016)

5.5.3 The Private Sector

In addition to other professions in the community—religious leaders and educators—and officials from other government agencies that take part in the work of Family Care Team, there a pharmacist from a private pharmacy also joined the program. Because of the increasing number of patients and number of activities that

need to be conducted in the community, the government officials have become overwhelmed with the workload and cannot provide care in a timely manner. It is obvious that the public sector alone cannot handle this situation by itself; therefore, a capable private sector is required to help with the health services. The pharmacy is one of the private entities that participate in Family Care Team. The pharmacist at the private pharmacy is a health professional with capabilities to lessen the burden on the government's health service center. In addition, it can help the government reach out to more people, especially those that choose to go to the pharmacy rather than the hospital. As a result, the collaboration between the public and private sectors has proven to be beneficial in providing healthcare for the people.

From the field study and interviews with the pharmacists participating in Family Care Team, the factors that lead to the participation are as follows.

5.5.3.1 Raising the Professional Level

Even though the pharmacy will lose some business opportunities by having to close the store in order to participate in the activities with Family Care Team, the study found that the pharmacy is willing to conduct the activities in the community without receiving any payment or any form of monetary compensation in return. The pharmacist owner of the pharmacy reasoned that the contribution to the government's public health work helps to bolster the professional image of the pharmacy.

The pharmacist's decision to participate in Family Care Team stemmed from the realization that there were not sufficient government personnel to handle the patients and health problems in the area and that the pharmacist was also a health professional with the capability to help the community. In addition to the pharmacy-related work, the pharmacist had also been working under a contract with the NHSO, allowing her to understand the mechanism and activities of the primary care service provision. Moreover, the pharmacy had been accepting college students for an internship program every year; therefore, by assisting in Family Care Team, the interns would then have more opportunities to gain real-world experience through the activities in the community as the pharmacist and owner of Mahanakhon Pharmacy stated as follows;

> The pharmacy has been having an internship program every year, and I need to have tasks for the interns. I am normally at the store by myself, so I have the interns help with the storefront. Then I went to the service center to see if there were any tasks we could do. I told them that we were from the nearby pharmacy, and there were Pharm.D. interns coming to help. So, if there was anything we could do, just let us know. And there were so many tasks there at the service center. (the pharmacist and owner of Mahanakorn Pharmacy, personal communication, July 13, 2016)
>
> We were helping (the service center) because we had the interns come to train with us. I wanted them to do the real tasks and gained some experience from us so that we received an acceptance from their schools that the interns were sent here and got a chance to do the real work. (the pharmacist and owner of Mahanakorn Pharmacy, personal communication, July 13, 2016)

5.5.3.2 Public Relation and Marketing Opportunities

According to the interviews with the pharmacies in both areas, they agreed that one of the factors for participating with the government is the public relations opportunities through the activities that have taken place in the community, the pharmacies have become widely known among the community members as the pharmacist mentioned below;

> I believe that the activities we helped the service center made us become well-known and trusted by the community. During the recent months, other pharmacies didn't sell well probably because of a downturn in the economy, but our sales still remained the same because we had a good relationship between the center, the pharmacy, and the community. (the pharmacist and owner of Mahanakorn Pharmacy, personal communication, July 13, 2016)

Therefore, such familiarity with the pharmacy makes the community members think of the pharmacy as their first choice when there is a need for medication or health supplies.

5.5.3.3 Volunteer Mindset

Both pharmacies consistently stated that the participation in Family Care Team began with realization of the government personnel being insufficient and the pharmacists being able to help with serving the community; and since they had been working under a contract with the NHSO, they were already aware of the primary care process and the health service provided by the pharmacist at the service center. Therefore, with their profession capability and volunteer mindset, the pharmacists at both private pharmacies then offered to participate in Family Care Team to help both the government and the community in health service provision.

5.5.3.4 Proximity to the Public Health Service Center

The field study found that both private pharmacies were located in proximity to the public health service center, thus allowing the pharmacists to conveniently visit the service center to assist with the services and conduct the activities. Sometimes, it only takes a part of the day when the business is usually slow.

In addition, there was a factor shared by both pharmacies, which is the fact that both of them had worked with the government agency before, making them aware of the practice and problems in collaborating with the health service center.

According to the interviews with the pharmacists at the private pharmacies participating with the health service center in the area, both pharmacies already have had experience as a service unit under a contract with the NHSO under the universal healthcare coverage, where the pharmacies provided the contracted pharmacy services and received payment from the NHSO with the coordination of the Community Pharmacy Association (Thailand). The details of the activities and services are described as follows.

1) Medication Care and Dispensation According to Symptom

This is the main duty of the pharmacy under the supervision of the pharmacist. In addition to medication dispensation to patients, the pharmacist is also required to provide consultation regarding health and medication usage and direction, including caring for the healthy well-being of the people in the community. The activities under the role of dispensation according to the patient’s symptoms include:

(1) Preparation of a patient profile and service record database

(2) Treatment of common illnesses

(3) Patient referral if the case beyond the capability of the pharmacy

(4) Health screening service to discover the problem and cause of the disease with a high death rate, such as diabetes and high blood pressure, in order to reduce the risks and provide immediate care, if needed

(5) Education in health promotion, self-care, and self-medication

(6) Home visits to follow up on medication usage and problems, such as adverse drug reactions (ADR)

2) Dispensation and Prescription Review

Even though most of the prescription fillings in Thailand are performed by the hospital pharmacist, the overwhelming number of patients at the hospital, and the limitations in health personnel, have forced the government to transfer some of the services from the health service center to the private pharmacy as follows.

(1) Preparation of a patient profile and service record database

(2) Prescription reviews to reduce medication problems, such as drug allergies and duplicate medications

(3) Counseling for individual patients regarding changes in behavior and compliance with medication usage

(4) Home visits to follow up on medication usage and problems, such as the adverse drug reactions

3) Disease Screening

The screening and reporting of disease emergence and patient referral to the appropriate healthcare service are important tools in controlling the outbreak of contagious diseases. However, the emergence of non-contagious or chronic diseases, such as diabetes, high blood pressure, and high cholesterol, has become an important health problem in the nation, with a continuously increasing

number of patients. If these groups of patients are not diagnosed correctly and continuously, there could be complications, such as retinopathy, diabetic nephropathy, and coronary artery disease, which result in the much higher costs in care and treatment.

Pharmacies are locally available in different communities and are one of the first service units that many people choose to visit in the event of sickness. Consequently, the screening of patients for disease risks, from contagious diseases requiring the reporting and referral for prompt treatment to the patients who are not aware that they have chronic disease nor not yet treated by the health professional, can be done by the pharmacist at the pharmacy. Therefore, the pharmacy is a service unit with the potential to perform screening for various diseases and to refer the patient to the appropriate health service center, for both the cases of contagious and chronic diseases. The activities that the pharmacy provides for patient screening include:

(1) Preparation of a patient profile and service record database

(2) Inquiry into the patient's medical history and records, including diagnosis records, family health history, and weight and height measurements for body mass index calculation

(3) Blood pressure measurement using an automatic blood pressure monitor

(4) Blood sugar level measurement using a blood glucose meter to screen for diabetes

(5) Patient referral in the case of a patient with high blood pressure, high blood sugar level, or other states that require a physician visit

4) Health Promotion

Health promotion and disease prevention play an important role in reducing sickness and disease, which must be taken part in by all health personnel, including the pharmacy. The activities provided by the pharmacy in health promotion and disease prevention are the follow.

(1) Preparation of a patient profile and service record database

(2) Counseling for smoking cessation

(3) Counseling for individual patients regarding changes in behavior and health promotion, such as obesity, sexually-transmitted diseases, and contraception

5) Home visited for Medication Therapy Management (MTM)

The home visits for of Medication Therapy Management (MTM) is a patient care program which take into account the patient's data for continuous care. The activities provided under MTM are medical therapy reviews, preparation of an individual's medical record, medication action plans to follow up on the patient's medication usage, intervention in the event of any medication problems and referral, and documentation and follow-ups. Under the contract with the NHSO, the pharmacy provides the following activities.

(1) Home visits for of Medication Therapy Management (MTM)

(2) Home visits in the area of responsibility with the multidisciplinary team

(3) Patient referral with coordination with a physician or other health service units

(4) Planning with a physician for continuous patient follow-ups

The private pharmacy in the area of Khlong Sala Urban Community Healthcare Center stated that they developed their framework from a program by the Faculty of Pharmaceutical Sciences, Naresuan University, through the coordination of the Community Pharmacy Association (Thailand). The framework of activities includes disease screening and counseling on various diseases, such as sexually-transmitted diseases. The private pharmacy, along with seven other pharmacies in the province, attended the program, but many decided not to renew the contract with the NHSO due to several limitations. Currently, there are only three pharmacies in the area of the Mueang District under a contract with the NHSO. After understanding the details of the program from Naresuan University, the private pharmacy then contacted the provincial office of public health to work together with the government.

After the private pharmacy gained experience from working with the government under the contract with the NHSO, which was paid for on a case-by-case basis, the pharmacy realized the potential of its role as a provider of health services to the community. Along with the familiarity and courtesy of the health service center officials, the private pharmacy then decided to participate with the health service center without receiving any compensation. The service provided at the health service center was outside the scope of the contract with the NHSO.

The pharmacist owner at the pharmacy participating with Khlong Sala Urban Community Healthcare Center commented on the participation in Family Care Team, saying that it began with service under a contract with the NHSO, which was by invitation from the Community Pharmacy Association (Thailand). The contracted work required the pharmacy to contact the local health service center, thus allowing the pharmacy to understand the problems of the government in healthcare provision and finally to work together with the health service center. Presently, the pharmacy participating with Khlong Sala Urban Community Healthcare Center is still conducting activities under the contract with the NHSO, while the one in the area of Public Healthcare Service Center No. 45 has discontinued the contract due to limitations of availability at the store, which is a condition specified by the Community Pharmacy Association (Thailand) in working under the contract with the NHSO.

5.6 Problems, Difficulties, and Limitations

5.6.1 The Public Sector

5.6.1.1 Shortage of Family Medicine Physicians

In the work of Family Care Team, the physician is one of the personnel with the important role as the manager and advisor of the team. The physician must be proficient in both medical care and working with the community, which is where the family medicine physician is best suited, as explained in the interview below.

> A family medicine physician will be the leader of each Family Care Team. The movement has to be done in two dimensions. Those working with people

> are skillful in the area of community and participation, while doctors are skillful in the area of clinical or specialization in a disease, but not quite keen in the community. The family medicine physician has already been trained to take care of family and understand the community; therefore, he or she is right at the center to join the two dimensions – community and hospital-based – together. For the physicians skillful in hospital-based, they would go into the secondary and tertiary care or medical schools to become specialized experts. But in the primary care, the connection is the family medicine physician, who will utilize the clinical process and decision about the disease to develop the health of the people in the community, which is very challenging. (Mor Doungdao, personal communication,August 8, 2016)

However, the number of family medicine physicians are not adequate for the service nationwide as she added that:

> There are few family medicine physicians. In the whole system, there are only 600-700 family medicine physicians. How do we increase the number into thousands? We have to look at the process of producing physicians, which is greatly challenging. (Mor Doungdao, personal communication,August 8, 2016)

5.6.1.2 Lack of Integration

According to an interview with the policy-level personnel in the area of Khlong Sala Urban Community Healthcare Center, one of the problems of the government officials is a lack of integration within the government itself and between the government and partners as she stated;

> The work still lacks integration. The advance in communication and technology allows us to coordinate more easily and quickly. But there is still a gap – an incomplete coordination – especially the information technology, which is not yet fully utilized. (a pharmacist official at Khlong Sala Urban Community Healthcare Center, personal communication, August 10, 2016)

The problem is partially caused by the nature of the patient's personal information, which must be kept confidential per professional ethics, thus making the hospital unable to completely share the data with other agencies or sectors. The lack of such integration leads to limitations in the types of activities that allow other sectors to participate. However, an interview with an employee at Public Healthcare Service Center No. 45 did not find any problem regarding the lack of integration.

5.6.1.3 Behavior of Some Groups of Populations Causing the Service Being Unreachable

According to the interviews, the behavior of some groups of people made it impossible for the primary care service to be reachable by everybody. These groups do not use the service provided by the health service center, they do not want the screening and do not cooperate with Family Care Team, thus making them unaware of their own health, as Mor Doungdao mentioned that:

> Some groups of people do not go to the hospital. They choose to go to someone else who is not a hospital. (Mor Doungdao, personal communication, August 8, 2016)

5.6.2 The Private Sector

5.6.2.1 Laws and Regulations

The owner of Mahanakhon Pharmacy stated the limitation of providing services with officials as follows;

> One day, when I went to help with the home visit with the team, the FDA (Food and Drug Administration) came to inspect the store. It made me feel disappointed because I thought we were doing for a good cause, that is, visiting patients with the center, and we didn't get paid for that. Then FDA came, so I had to rush back. To obey the FDA regulation, we had to close the store, but I had an intern stay there. I only went out in the morning because I knew that there weren't a lot of customers in the morning. The intern could handle it because I had already trained her. But our business had to survive, too. (the pharmacist and owner of Mahanakorn Pharmacy, personal communication, July 13, 2016)

The above interview clearly stresses the regulation of the Quality Pharmacy—that a registered pharmacist must be stationed at the pharmacy during the entire business hours. For the question asking if an intern can be at the store in place of the pharmacist, the answer follows:

> No. Cannot. It has to be a Pharm.D. graduate only. Even if we are hiring another pharmacist, we have to let FDA know that we are hiring this pharmacist. So the personnel to replace me has to be on the list, which is quite inconvenient for us. We just hope that they do not come to inspect. Our business has to survive. We help the center; we didn't get paid. And then there was the project of the association (the Community Pharmacy Association). When we worked for them, we did not close the store, which was not right, so we could not join the project that we could get a compensation from NHSO. I did not want to think about it much. It's okay. (the pharmacist and owner of Mahanakorn Pharmacy, personal communication, July 13, 2016)

The regulation described above becomes a limitation and an obstacle to participation with the government because the service provided by Family Care Team is a proactive health operation, which relies on professionals to provide the service to the community, both on-site and off-site.

Such a limitation caused the pharmacy to be unable to join the activities with the government without having to close the store. On the other hand, closing the store would result in the loss of income, which was crucial because the pharmacy also had expenses, including a lease on the location. Therefore, the pharmacy must then choose between the work with the government to raise the professional level of pharmacists and profit from a business standpoint.

5.6.2.2 Loss of Income

According to the problem mentioned above, if the pharmacy chose to participate in the family care team, the pharmacy would have to close the store when joining the activities with the team in order to become a Quality Pharmacy per the requirement of the Community Pharmacy Association (Thailand), which has stated that the Quality Pharmacy must have a pharmacist at the store during all business

hours. Therefore, this became a difficulty for the pharmacist, who would like to volunteer for service to the community. If the pharmacy chose to close the store in order to participate with the government, it would then result in the loss of opportunities and income.

5.6.2.3 Difficult Access to the Government Program

To start with the program under the contract with the NHSO, which is compensated on a case-by-case basis, the pharmacy admitted that it was not aware of the procedures, the contact person, or how to begin with the coordination until they were advised that they had to begin by contacting the physician at the provincial office for permission as Nong Ple, the owner of RuenyaBhesaj has explained that:

> In getting to work with the government, the access is very difficult. The problem is, when we first started, we didn't know who to contact, who to coordinate with. Who we should start talking to? I didn't know how to write an official letter. I got sent back and forth about 4-5 times, taking me altogether 2-3 months just for the start of the coordination. (Nong Ple, personal communication, August 8, 2016)

She also added that:

> There are not a lot of pharmacies that get to work with the service center. It's not that easy. To contact them so that we could get to work with them, it took us around 6 months before they accepted us. As of now, we have been working with them for over a year. As soon as they were willing to let us help them, now we keep getting tasks from them non-stop. (Nong Ple, personal communication, August 8, 2016)

5.6.3 The Civil Sector

5.6.3.1 Access to the Service Recipients

According to the interviews with the public health volunteers, access to the service recipients was the main problem in the work in the community, as followed:

> A problem and difficulty that we found was sometimes they weren't home. We couldn't get them back home at that time, so they wouldn't be able to receive the service. We would like to collect all the data. We would like them to come for a health check-up. But for those who weren't home, they couldn't come here (to receive the service). (a public health volunteer at the urban community healthcare center, August 10, 2016)

Especially in the Phetchabun municipality, the public health volunteer stated that some households are working out of their own province, making them inaccessible by the volunteers.

5.6.3.2 Unwillingness to Cooperate

Another limitation that the public health volunteers found during their work in the community was that some community members were unwilling to cooperate, as one of them mentioned that:

> Some people did not let us collect their blood because of the fear of needles. For some people, we told them to come, but they wouldn't come. We just wanted them to come for the blood collection so we could find out if they had any problem, and, if possible, we could send them for the treatment before it was too late. But some would say no blood collection. They were afraid to find out. But not a lot of them were like that. Even if I asked them to go see a doctor, they still wouldn't go. There were afraid of doctors. No doctor. Let it be if they were to die, they said. So we didn't know what to do with them. (a public health volunteer at the urban community healthcare center, August 10, 2016)

5.6.3.3 Compensation not Appropriate to the Workload

According to the interviews, the public health volunteers viewed that the compensation was another problem because the amount of payment was not appropriate for the workload as one of them mentioned about the compensation that:

> The current payment is little because we are really working, and the pay of 600 baht a month is not enough. (a public health volunteer at the urban community healthcare center, August 10, 2016)

CHAPTER 6

DISCUSSION AND CONCLUSION

This research study on the co-production of public healthcare service in local communities: a case study of the Family Care Team has three objectives as follows: 1) to study the structure and operation of the Family Care Team, which is a network of health promotion and disease prevention services under Thai health security system; 2) to study the components of the public co-production in the management of public healthcare services for Thai local communities by the Family Care Team; and 3) to study the factors regarding the co-production of the public healthcare services for Thai local communities. The questions to be answered by this study are the following 1) to what extent have community members been a part of the health service provision in the community?; 2) what are the factors that allow the people and/or private sector to participate with the public sector in health service provision?; and 3) what are the structures, processes, and characteristics of the co-producers and what are their services and activities?

To answer these questions, the researcher conducted the field study to examine the work process of the Family Care Team servicing the areas of Wang Tha Dee Sub-district and Mueang District, Phetchabun and collected additional information from the pharmacies in the service area of Public Healthcare Service Center No. 45, Health Department, Bangkok Metropolitan Administration. This research is a qualitative research using the methods of document study and field study of seminar attendance, observation, and in-depth interviews with service providers from various sectors. The informants from the public sector consisted of officials from the central government and personnel at the health service centers. The informants from the public sector were public health volunteers and general volunteers. The private sector was represented by the pharmacist owners of the participating pharmacies. The total number of informants was 29 persons. The research study conclusions are the following.

6.1 Structure, Form, Process, and Services of the Family Care Team

Family Care Team is a multidisciplinary team providing primary care service to the people, whose work is divided into the areas responsible by each team in order to provide coverage to all locations and all population groups. The Family Care Team is participated in by government officials and people in the community with the private pharmacy representing the private sector, with the common goal of proactive healthcare before any illness. In summary, the roles and responsibilities of the Family Care Team are as follows.

1) Health promotion and reduction of health risk factors including all age groups

2) Treatment and dependability during the time of sickness, especially chronic disease care, elderly care, and the population groups in fragile states and dependent on others, such as the disabled, bedbound patients, terminally-ill patients, and children with special needs that require the long-term care

3) Treatment, healing, and recuperation

4) Healthcare consultation and access for the people to receive advice from the physician

5) Handling of patient transfer via coordination with the higher tier of healthcare service and follow-up until the patient is cured

6) Education for the community in understanding one's own health and promotion of healthcare

7) Preparation of information of the health status of each individual in a family

The structures of the Family Care Team in the community and town were similar in the sense that there were administrations at the district and sub-district levels, but with different names. Nevertheless, the funding was received from the same source, which is the Ministry of Public Health, the National Health Security Office, and Bangkok Metropolitan Administration (BMA) or the local administrative organization. The structure of the Family Care Team is illustrated in the figure below.

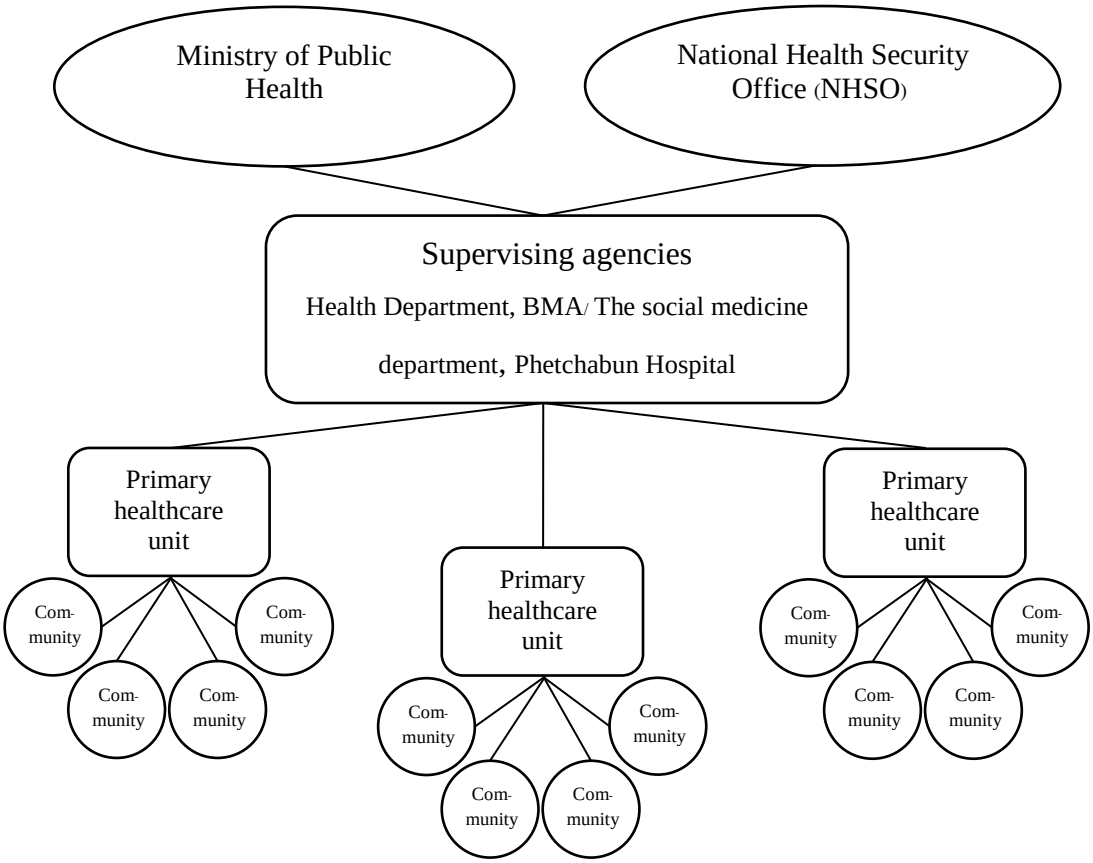

Figure 6.1 Summarized Structure of Family Care Team

It can be seen from the structure of the Family Care Team above that it is mainly the responsibility of the government to provide healthcare service to all the people. However, due to the current situation and because of limited resources, the government is having problems providing efficient healthcare service. Especially with the higher demographic ratio of elderly persons and the rapid expansion of urban dwellers, it has become clear that the government is not able to reach out to all population groups. The lack of coverage and the low quality of service have caused the people, who are the service recipients, to participate in the health management of their own community, including the private pharmacy in the area, whose pharmacist is a capable health personnel and from a profession that can efficiently participate with the government. However, the co-participation with the government is not compensated, even though some individuals are; for example, public health volunteers are paid monthly, but the payment is more toward work-related or travel expenses.

The participation of multiple sectors mentioned above agrees with the term co-production, which is defined as a service managed by a professional in the public sector, together with citizens that are the service recipients, and volunteers or community organizations in the long-term production of the service and benefits from the service willingly received, with emphasis on the voluntary participation of the people to help the government reduce production costs and efficiently deliver the public services (Brudney & England, 1983; Alford, 2002; Bovaird, 2007; Howlett et al., 2015).

When considering the form of service, it was found to follow the framework of the co-production-oriented collaborations matrix (Oraorn Poocharoen & Ting, 2013), which explains the four forms of relations between the organization, the individual, planning, and production by dividing the types of co-production into four dimensions under co-production-oriented collaboration as co-governance, co-management, co-production, and co-consultation.

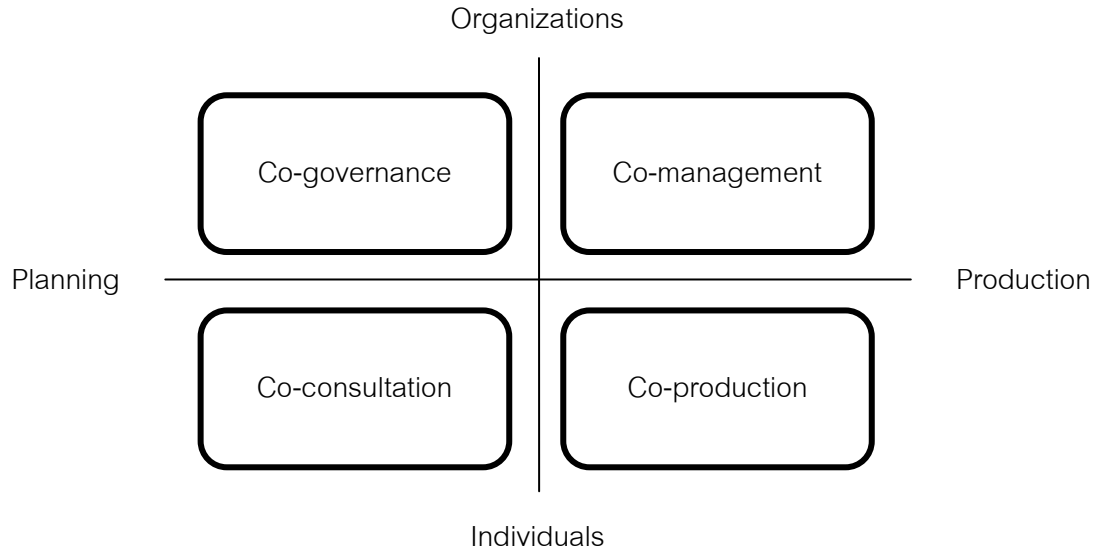

Figure 6.2 The Co-production-oriented Collaborations Matrix
Source: Oraorn Poocharoen & Ting, 2013.

According to the framework above, the Family Care Team is operated under a form of co-production, in which the people and the private pharmacy (individuals)

participate in the production of the public service only. However, they do not take part in the planning process; therefore, the co-consultation dimension was found in this study.

Therefore, it can be concluded that the work of the Family Care Team is primary care service provision in the form of co-production, with the participation of the people and private sectors in the production of the public service, which is a policymaking tool and implementation to thoroughly fulfill the needs of and to provide access by the service recipients. The process of the work and activities of Family Care Team is analyzed and summarized in the figure below.

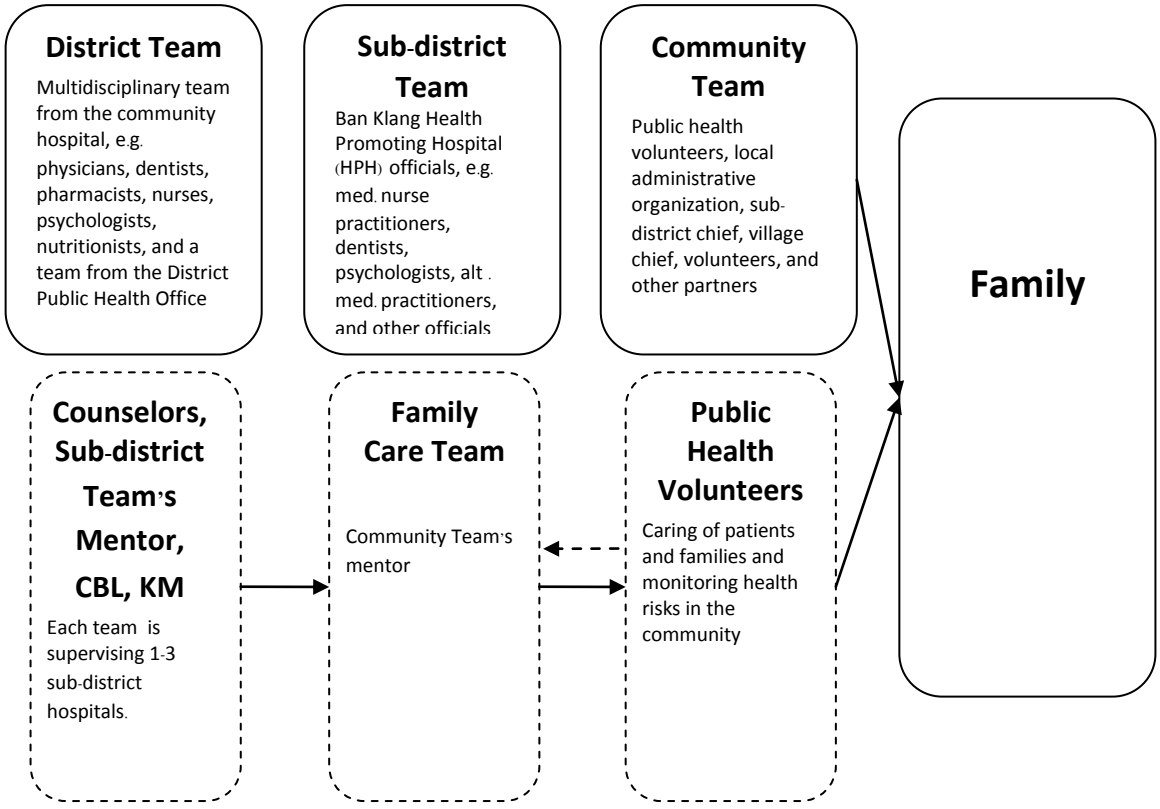

Figure 6.3 Operation Process of Family Care Team

6.2 Components of the Co-production Process of Public Health Provision in the Community

6.2.1 Components of Family Care Team

Brandsen and Honingh (2015) summarized the basic elements of co-production in terms of voluntary input, the professional, professional knowledge, and economic organization. The study found that the process of the Family Care Team incorporates all four basic elements of co-production, as explained below.

6.2.1.1 Voluntary Input

"Volunteer work" as defined by the International Labour Organization (ILO) is "the activities performed willingly and without pay" (ILO, p. 4, referenced by Brandsen & Honingh, 2015), which also includes minor compensation, such as travel expenses. It can be clearly seen that the work of the public health volunteers the Family Care Team in the health service in their community fits this definition.

In addition, the work of the general volunteers and the pharmacist at the private pharmacy participating with the Khlong Sala Urban Community Healthcare Center can also be considered as the voluntary input mentioned above due to the fact that both parties collaborate with the government without receiving any compensation.

6.2.1.2 The Professional

The results of the study are consistent with the professional component summarized by Brandsen and Honingh (2015), which cites a study by Parks explaining that the professional or expert plays an important role in the co-production in the public health service provision in the community. This study found that public health service provision is a duty of the government through professionals as the main service provider.

Usually, under the concept of co-production, the professional is the one that loses some of his or her roles and activities, which are taken away by the service recipients (Joshi & Moore, 2004). Therefore, Brandsen, and Honingh (2015) concluded that it is difficult to understand why the service provider or the professional accepts the participation of other sector in the co-production. This study was able to deduce the answer to this question, Due to the limited resources and the diverse needs

and behaviors of the populations, the service provider, i.e. the government, cannot adequately respond to all of the population groups; therefore, by letting other sectors or professions participate, public health service can then be provided to all groups and in all locations.

6.2.1.3 Professional Knowledge

In order to collaborate effectively, all parties must possess professional knowledge that is appropriate to the service at hand. Brandsen and Honingh (2015) have indicated that professional knowledge must go hand-in-hand with knowledge of the management of the relationship between professionals and the people. The two sets of knowledge can together create a learning environment.

The work of the Family Care Team includes the professional knowledge mentioned above by way of having a family physician become the main actor on the team due to his or her knowledge of medical treatments and in working together with the community. Currently, there is an insufficient number of family medical physicians assigned to all communities. In order to combat this problem, the Ministry of Public Health conducts a short-term program in family medicine practice in order to train other specialized physicians and to grant a certificate to work with the community in the meantime.

In addition, public health volunteers also need to be trained monthly in public health knowledge prior to working with the Family Care Team in the community. The topics in the training include knowledge of prevalent diseases, health observation, self-care and disease prevention, and risk monitoring in the community. Therefore, with these two conditions of the family physician and the public health volunteer, the Family Care Team possesses the component of professional knowledge appropriate for the service provision as defined by Brandsen and Honingh (2015).

6.2.1.4 Organizational Input

Brandsen and Honingh (2015) view an organization in terms of economics and sociology together, and that the work of an organization is work under a contract and having compensation; however, in terms of sociology, an organization with service provision in the form of co-production must train the participating service recipients just like an organization’s training of its own employees.

This study found that the family care team is the work of a multidisciplinary team, consisting of government officials, public health volunteers, and a private pharmacist, in public health service provision without compensation. However, each person must be trained and qualified prior to participating in the activities of the Family Care Team.

6.2.2 Additional Findings

In the primary care and healthcare service provision in the community, in addition to the basic elements defined by Brandsen and Honingh (2015), the study found an additional component in the service recipient or the patients themselves which is equally important in the co-production of public health service provision, because the service recipient or the patient is the one that understands and must be accountable for his or her own health.

Moreover, the study found that, in order to create effective co-production of health service provision, the work must have the following elements: closeness and familiarity between the service providers and recipients, reliance on each other, freedom in the work of government officials, experience working with the government, and the existence of a knowledge base that is relevant and appropriate to the service provision.

6.2.2.1 Closeness and Familiarity are the Foundation of the Work

The role and work mechanism of Family Care Team is the work where the government officials and people in the community, who are the service recipients, along with the private pharmacy, work closely with one another, enabling a relationship among them, understanding the problems, and with the people having trust in receiving the proper treatment and care, ultimately leading to the collaboration of all three sectors.

Beyond the close relationship between the government officials, the community, and the service recipients, the relationship among the health personnel themselves is equally important. Therefore, the foundation of the work of the Family Care Team is the close operation with the people, who are willing to receive the service with trust and confidence because of their familiarity with the service providers, e.g. registered nurses, pharmacists, and other professionals. Such trust,

confidence, and familiarity can lead to the trust in co-production in creating healthy behaviors, reducing health risks, and promoting self-care. More importantly, it persuades the people, who are normally the recipients, become the service providers themselves, thus being able to improve and closely monitor the health of fellow community members and, as a result, reduce the congestion at the hospital, which is one of the main goals of the Family Care Team.

6.2.2.2 Reliance on Each Other

The Family Care Team needs to rely on the work of all participating parties because the health problems found in the community cannot be handled by the government health officials alone. Each patient faces problems caused by many factors related to all aspects of the quality of life, e.g. economy, security of living and wealth, and sanitation at home and in the surroundings. Therefore, the solutions to the problems require the participation of all sectors, especially those outside the health sector, e.g. officials from the local administrative organization and municipality, religious leaders, educators, pharmacists, community leaders, and even neighbors in the community.

The study found that the Family Care Team is comprised of the participation in service provision among the government, the private pharmacy, and community members. All parties rely on one another and are mutually compensated in one form or another, especially regarding the work between the private pharmacy and the health service center. In the area of the Phetchabun municipality, the private pharmacy receives the health service center's cooperation in the form of permission to retrieve the patient's information, that is, the patients that have been referred by the pharmacy to the service center. In the area of Public Healthcare Service Center No. 45, the personnel at the service center are recommending patients with any pharmacy needs, i.e. non-essential drugs, to make a purchase at the private pharmacy. The relationship and reliance within the Family Care Team can also be seen among the public health volunteers, who are treating one another like their own relatives in caring for and monitoring the health of their fellow community members.

6.2.2.3 Freedom of Work of Government Officials

The study found that the government officials working on the Family Care Team have some freedom in their work using their own aptitudes and expertise in servicing the people individually, and they can freely invite or assign work to the

private or people sectors as appropriate, without having to obtain permission from their supervisor. However, before each assignment of patient care, there is a team meeting to plan out the procedures and to consult with the lead physician for a solution if there is a problem.

6.2.2.4 Experience of Working with the Government

The European Investment Bank (EIB) views public-private partnerships (PPP) as a generic term meaning that it is a relation between the public sector and the private sector with the purpose of utilizing resources and skills to manage and deliver capital assets and public services. The study found that the participation of the private pharmacy with the government was in the form of contracting out at first, where the National Health Security Office (NHSO) signs a contract with the private pharmacy to conduct the health services of disease screening and patient referral to the health service center, with compensation on a case-by-case basis and the requirement of an annual operating report to be submitted to the NHSO. This can be considered as a PPP that allows the participating pharmacy to gain some experience working with the public sector, leading to voluntary co-production in Family Care Team, without receiving any compensation.

6.2.2.5 The Existence of a Knowledge Base that is Relevant and Appropriate to the Service Provision

Public health service provision requires specialized knowledge and socially-related knowledge; therefore, the service providers—the government officials, volunteers, and the private pharmacist—must have basic health knowledge beforehand. If such knowledge is not yet possessed, the personnel must be trained and certified before being permitted to participate in the Family Care Team.

For the government sector, the officials are already health professionals; however, some personnel, e.g. social medicine physicians, still need to go through additional development training in order to be knowledgeable in working with the community. In the case of the private pharmacies, the two participating pharmacies were already the Quality Pharmacies, one of whose requirements is that they must have a registered pharmacist stationed at the store during the entire hours of operation. Further, to be certified as a Quality Pharmacy, the pharmacist must pass a quality assurance inspection of their products and health services and attend an annual training.

Regarding the public health volunteers, they have to attend the trainings before being able to provide health services to the community per the regulations of the Ministry of Public Health on public health volunteers and a monthly continuing education session in order to understand more about recent diseases and healthcare.

The analysis and synthesis of the study led to the components of the Family Care Team in the form of co-production, as illustrated in the figure below.

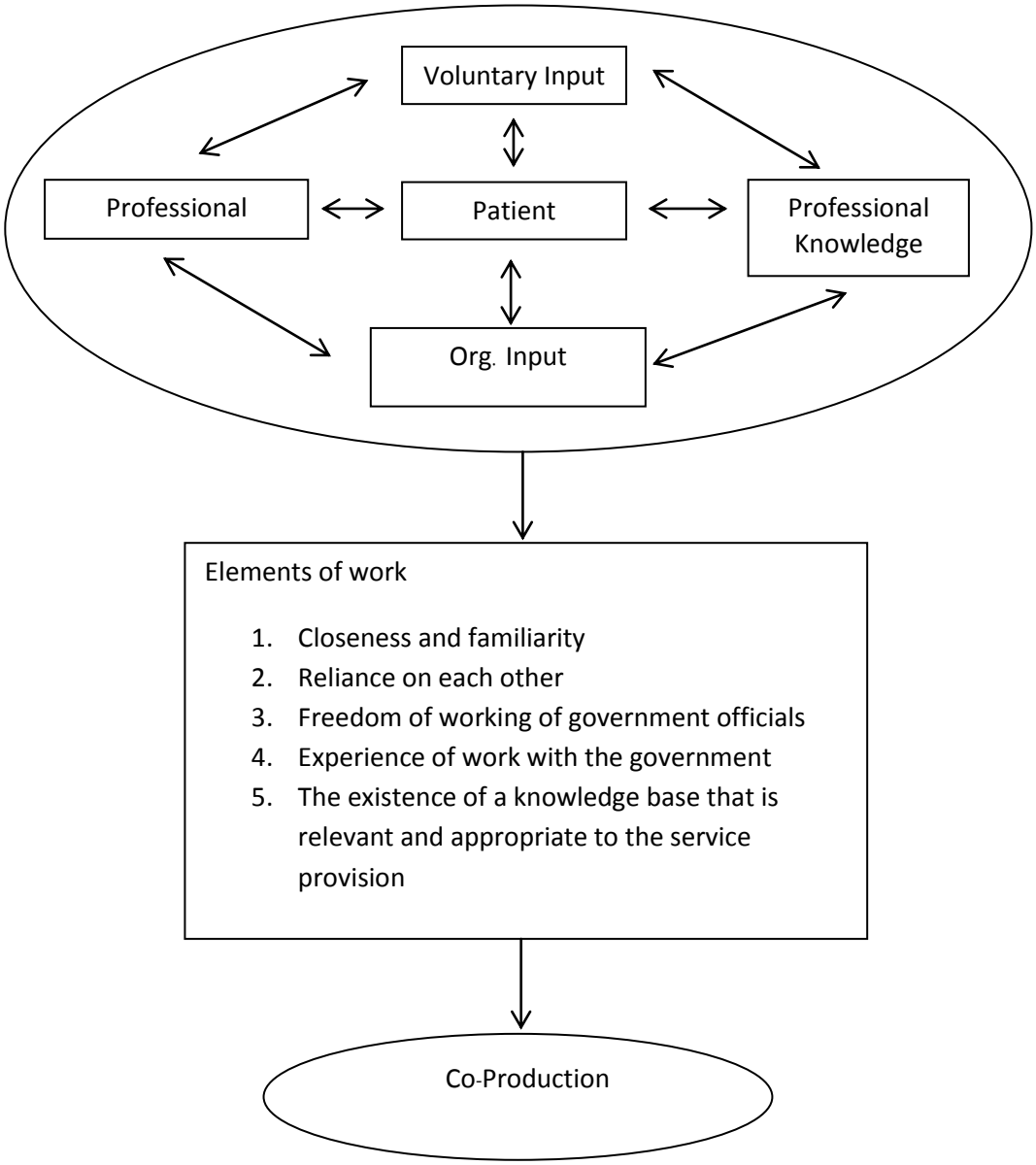

Figure 6.4 Components of the Co-production Process of Health Service Provision to the Community

From the study of the form, structure, and activities of Family Care Team above, the framework of the activities provided by the Family Care Team is as follows;

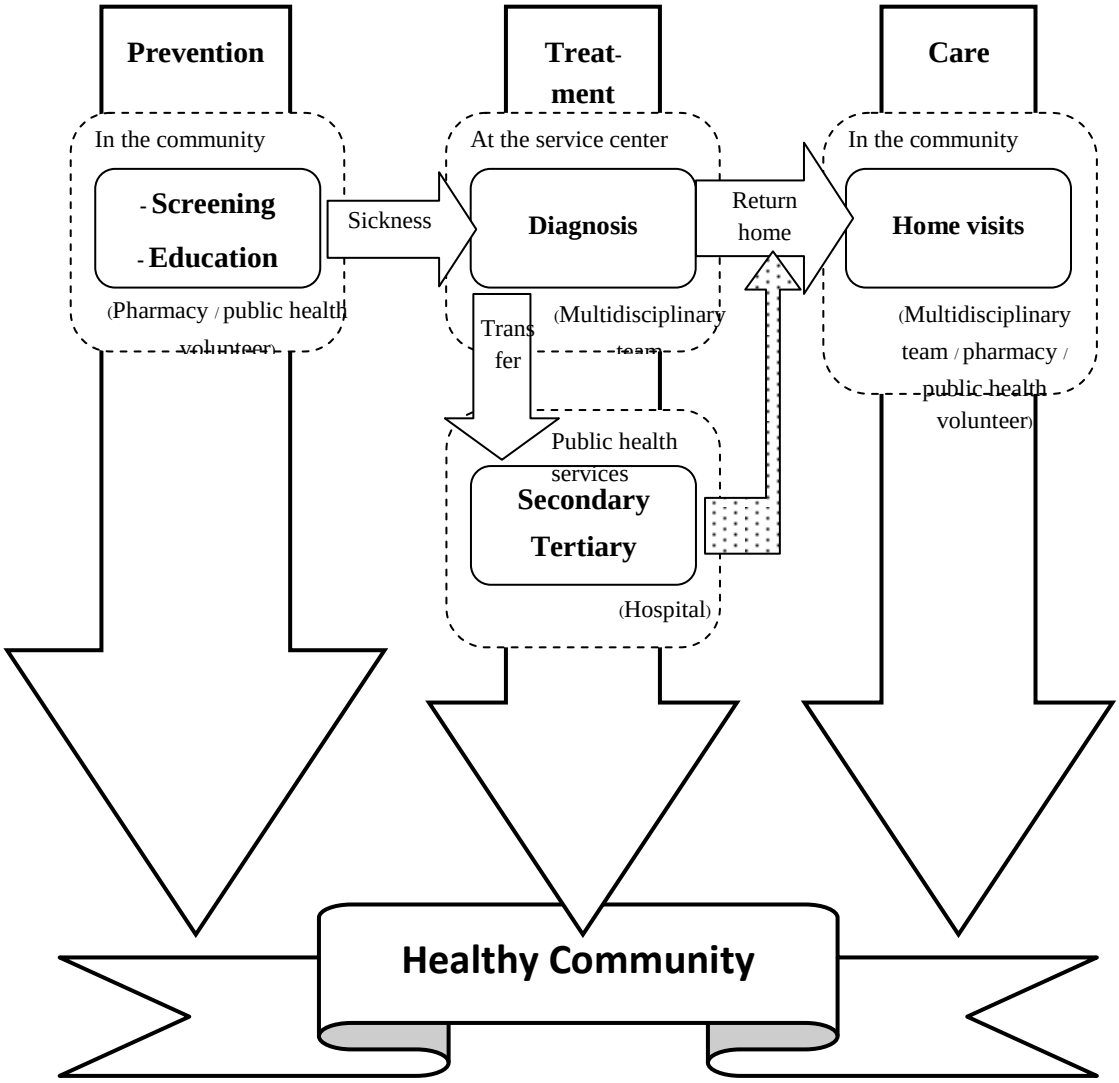

Figure 6.5 Framework of Family Care Team for Healthy Community

6.3 Factors Leading to Participation with the Family Care Team

6.3.1 The Public Sector

The factor leading to the public sector's allowing the private sector and people to participate in health service provision under the form of the Family Care Team is in

alignment with the laws established by the Constitution of Kingdom of Thailand 1997 and 2007, requiring the state to provide citizens with health security in terms of access to the public health system and the rights of the people to effective and comprehensive healthcare. The state is also required to permit the private sector and people to participate in health development and public healthcare management. The current Constitution established its public health reform under Article 27 in order to serve the people effectively and promptly under the constitutional monarchy. The current government has realized the importance of public health reform, which stresses a holistic model of the population's healthy well-being and a fair healthcare service system. As a result, the policy of the Ministry of Public Health has led to the formation of the Family Care Team as a public healthcare tool, aligning with the Constitution and the Prime Minister's address to the National Legislative Assembly.

Furthermore, another factor in the government allowing the private sector and people in the community to engage in the government's activities is the limitation of accessibility on the part of some groups to healthcare due to their health behaviors and locations. In addition, the limitations of the government's resources are also another reason that allows the private pharmacy, public health volunteers, and other volunteers to participate in health service provision.

6.3.2 The Civil Sector

The study found that the factors that have led to public health volunteers and general volunteers participating in health service provision with the government are the volunteer mindset to help their fellow community members, free time to spend for a good cause, acceptance and praise from the community, and the "privilege" from the government.

However, monetary compensation is a factor in the participation of the public health volunteers only, and, even though it is not the main reason for joining the health activities, some public health volunteers admit that they might consider not continuing with the participation if no compensation was received.

The reason for the public sector to participate with the government can be explained by Maslow's hierarchy of needs, which divides human needs into five layers as follows.

1) Physiological needs are the most basic needs for human survival (survival needs). They are, for example, air, water, food, clothing, shelter, medicine, and sexual needs.

2) Safety and security needs include personal security, safety from harms, financial safety, and health and well-being security.

3) Social needs include love, acceptance, and belonging.

4) Esteem needs are the need for appreciation and respect from others. They are the needs at a high level involving self-esteem regarding one's own knowledge, ability, and accomplishments, which need to be recognized.

5) Self-actualization needs at the top of the hierarchy refer to the need that people have to achieve their success to their full potential.

Maslow has the most basic needs, the physiological needs, at the bottom then, and as they have been fulfilled, puts the next psychological needs on the higher levels, as illustrated below.

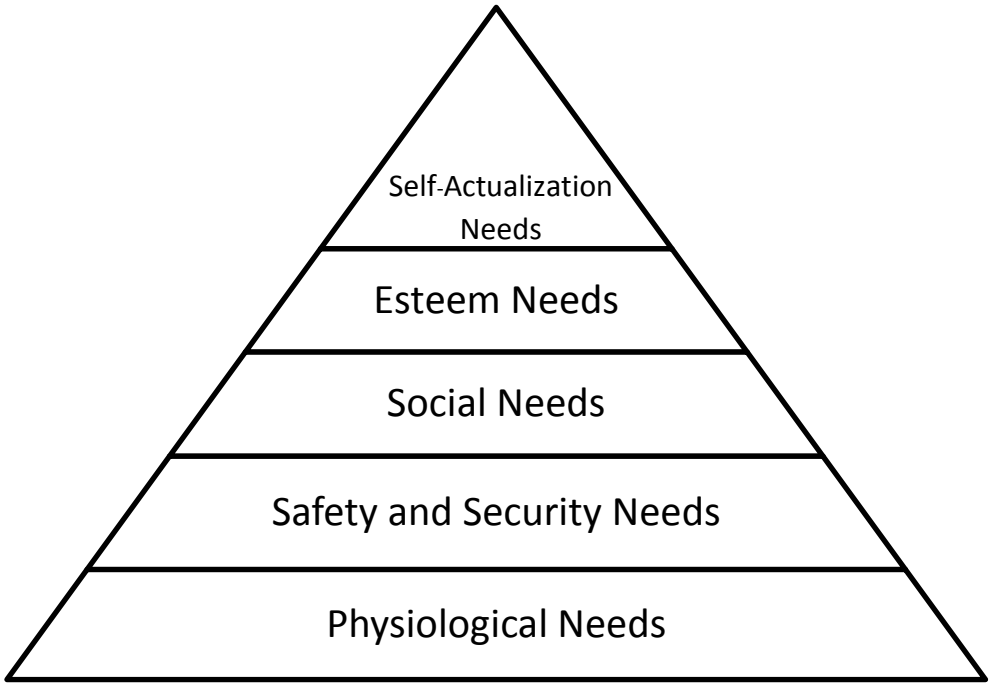

Figure 6.6 Maslow's Hierarchy of Needs

According to Maslow's theory above, the reason for the participation of the people agrees with their social needs, which are the need to become well-known and acceptance from the community. In addition, the "privilege" received via the early learning of news and information from various government projects can be considered as social needs as well.

6.3.3 The Private Sector

The study found that one of the factors of the participation of private pharmacy in working with the Family Care Team was the need of professional acceptance, which agrees with the social needs and esteem needs explained by Maslow's hierarchy of needs above. More explicitly, it is the need whereby the community accepts and praises the pharmacist as one of the health personnel that the community members can rely on regarding health cares services.

Furthermore, another reason of the private pharmacy to join the service is the volunteer mindset of the pharmacist owner, that he or she would like see that the community members are healthy, and that the location of the pharmacy is in proximity to the health service center; this is also another reason for allowing the pharmacy to be able to conveniently participate in the health activities both at the service center and in the community.

However, as stated before, even though the work is not compensated, the participation in the Family Care Team helps in the marketing promotion of the private pharmacy to become more well-known among the community members.

6.4 Limitations and Challenges

6.4.1 The Public Sector

The study found that the problems of the government in the work of the family care team are the shortage of family physicians, who are proficient in both medical care and social aptitude, lack of the integration of the operations and personnel within the team, and the behavior of some groups of populations causing the service to be unreachable.

6.4.2 The Civil Sector (Public Health Volunteers)

The study found that, in working with the government in health service provision, many public health volunteers have difficulty accessing the service recipients and a problem with the unwillingness to cooperate in health screening of some community members. In addition, the small amount of compensation could prove to be a problem for many public health volunteers and they may consider discontinuing their participation in Family Care Team.

6.4.3 The Private Sector

For the private sector, the study found that the rules required to be qualified as a Quality Pharmacy, per the Community Pharmacy Association (Thailand), are a limitation that could hinder the participation of the private pharmacy with the government. Since the health service provided by Family Care Team is a proactive measure, requiring the professional personnel to conduct health activities both on-site and off-site, the pharmacy cannot participate in such activities without closing the store during those hours, resulting in the loss of income. In terms of the business operation, the pharmacy still has operating expenses, including a lease; therefore, the pharmacy must then choose between working with the government to raise the professional level and profit from a business standpoint. If the pharmacy elects to close the store to join the activities of Family Care Team, it will result in the loss of business opportunities and income.

Furthermore, the study also found that the access to the government program proves to be highly complex and full of red tape. It is difficult to understand the government process, especially for private sector individuals, who have never experienced working with a government agency.

6.5 Critique and Synthesis of the Study Result

6.5.1 Organizational Aspect

The study of Western research in this area revealed that a paradigm shift in the public health service is taking place, from service provided by health professionals only to the patients, akin to the sale of merchandise, i.e. medicines and medical

supplies along with medical advice, to the participation of the patients and their family in caring for their own health with the professionals. The patients and professionals must go through proper training in order to ensure effective co-participation. Most of the Western research papers indicated that the co-production is conducted by two participants, where the first participant is the patient and his/her family, and the second is the professionals. However, this study found that there is a third party in the co-production in Thailand, which is the private pharmacy in each different area.

The study of the Family Care Team responsible for the area of Ban Klang Sub-district revealed that the community, the public sector, is the main participant in the co-production. In other words, representatives from each community called public health volunteers are taking the main role in coordination and as "assistants" to the professional officials.

The co-production in Western study is the work of equal participants—the public sector—based their mutual relation, and both participants have to trust in each other and are ready to accept and bear the risks of the co-management (Boviard, 2007), as illustrated by Figure 6.7.

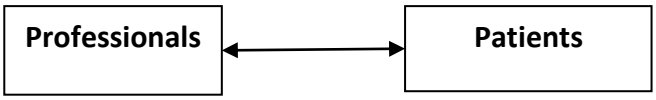

Figure 6.7 The Relationship between the Public Service Providers (professionals) and the service recipients (patients)

The people are required to go through training, and they should realize that they are the owners of their health and share the responsibility for caring for the health of their own and their family with the professionals. This will eventually lead to an efficient and sustainable healthcare system. However, in this study of the family care team, which is the co-participation between the civil sector—public health volunteers—and the private sector—the government officials—there is still the

structure of a vertical hierarchy in that the head of the sub-district hospital, who is a government official, views the co-participation with the public health volunteers as a leader/subordinate relationship. Obviously, this co-production structure is different from that in other countries, as illustrated by Figure 6.8.

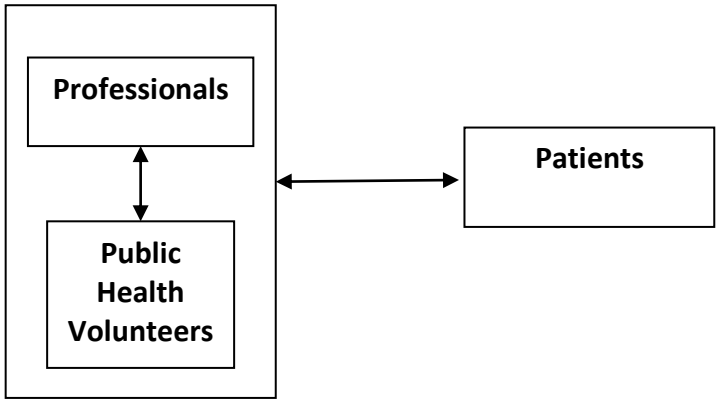

Figure 6.8 The Relationship between the Public Service Providers (professionals) and the Service Recipients (patients) with the Participation of the Civil Sector (public health volunteers)

The fact that the government officials view the civil sector as subordinates in the co-participation can be seen by the assignment of work in a hierarchical order. In the area of Ban Klang Health Promoting Hospital, the head of the sub-district hospital would assign the work to the Care Giver or the leader of the public health volunteers from each village. The leader then coordinates the assignment with the public health volunteers in the village for implementation. For each assignment, the head of the sub-district hospital would consider the appropriateness of the assignee. For example, he would assign a Care Giver to attend an out-of-area conference. On the other hand, the public health volunteers could be assigned to participate in the Big Cleaning Day at the hospital or a community visit for the elimination of mosquito habitats.

Regarding the healthcare in the area of Phetchabun municipality, in addition to the public health volunteers, there is also a private pharmacy participating in the government's health service provision. According to the field study, the work structure between the government officials and the private pharmacy is quite different

from that between the government officials and the public health volunteers in Ban Klang sub-district. Between the government officials and the private pharmacy, it was found that both participants are working together in parallel, where the professional official, the lead physician of the health service center, accepts the potential of the private pharmacy—that they have the full capability to help with the health service provision in the area. Therefore, the service center permits the pharmacy to independently conduct activities that are agreed upon. In this case, they are health screening and the referral of the patients with health risks to the Khlong Sala Urban Community Healthcare Center for an immediate care and treatment. In this structure of the co-participation, the private pharmacy can fully use its professional knowledge to provide the healthcare service without having to be assigned or having a government official to oversee its operation.

This study also found that the private pharmacy in the Bangkok metropolitan area participates with the public healthcare service center in a similar manner. That is, the service center personnel, who are the government officials, recognize the capability of the private pharmacy and are willing to share their work and activities with it in providing the health service in the community, such as disease education and prevention, both on-site and off-site.

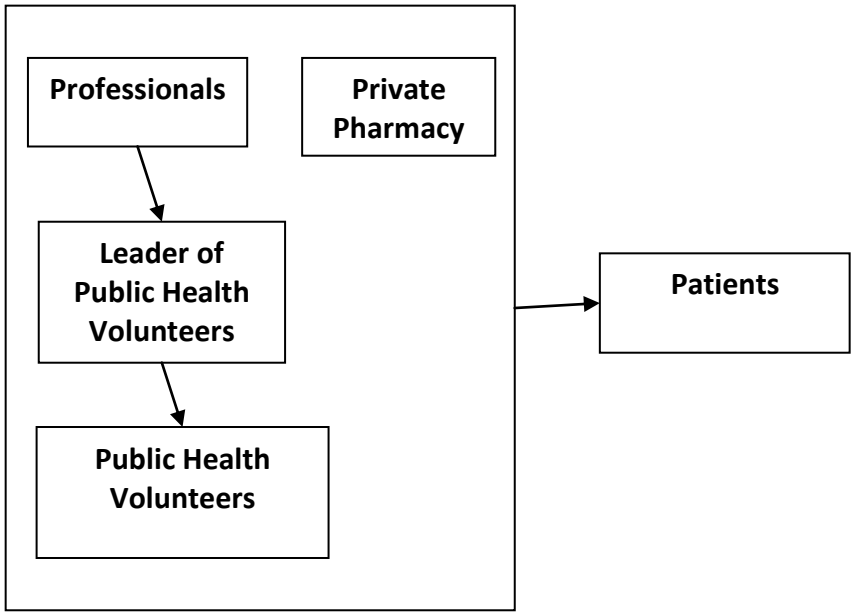

Figure 6.9 The Relationship Among all three Sectors

It can be seen in Figure 6.8 and 6.9 that the healthcare service under the Family Care Team places importance only on the role of the service providers. Though the public health volunteers and the private pharmacy are also community members, they are still considered service providers. This form of service does not emphasize the role of the patients themselves, even though they are the ones that best understand their own strengths and weaknesses as the owners of their health. Therefore, it can be said that the public health service provision in Thailand still has not moved toward the paradigm shift beyond the old form of service provision, which is viewing the service as merchandise to be delivered to the service recipient, even though there has been an attempt to increase the role of other sectors in service provision.

6.5.2 Regulation Aspect

The regulations of the Ministry of Public Health only permit the professionals to practice in medicine, such as medicine injections and incisions of abscesses. Consequently, the medical service is still mostly the responsibility of the professional personnel, and the limited boundaries of responsibility and specialized medical practices have become a limitation in the role of public health volunteers, resulting in public health volunteers being able to work as they are assigned only. Therefore, the co-production of the public health service in Thailand cannot take place in all activities of the service. Moreover, the vertical hierarchy between the professional officials and the public health volunteers, who are just the general public, can be alternatively viewed—that the officials are the sole persons responsible for the results of the patient's treatment; therefore, it becomes difficult to fully trust the public health volunteers to independently work in the health activities. Even though the public health volunteers have been trained in patient care, first aid, and disease prevention, they still lack specialized medical knowledge in treatment and diagnosis, including using of medicine. Therefore, the mutual accountability is not likely to happen in Thai public healthcare service.

6.5.3 Social Aspect

The public health volunteers are an important part of the community in helping the government care for the health of community members. The work of a

public health volunteer relies on being a good neighbor, who helps monitor the health and living condition of the members in their area of responsibility. Normally, a public health volunteer is assigned to be responsible for around 10-15 households.

However, though the public health volunteer plays an important part in supporting the work of government officials, helping with the problem of resource shortages, and coordinating between the officials and the community members, there is still a limitation is what the public health volunteers are allowed to do due to the nature of their relationship with the government officials or, specifically, the supervisor-subordinate relationship. Instead of the public health volunteer being a representative of fellow community members in overseeing and reporting the health problems and conditions in the community, the volunteer is somehow preoccupied with the assignment received from the government officials only. Even though many public health volunteers are willing to participate with the government officials through their volunteer mindset of wishing to help their neighbors gain happiness and a healthy living condition, the limited scope of work can lead to the mindset of some public health volunteers that, instead of feeling ownership of the health service they provide to the community, they are mostly satisfied with just completing the assignment and, in return, receiving monthly compensation, thus hindering their potential to become the government's equal partner in truly reaching out to the community. This mindset is comparable to that of a factory worker, whose aim is to perform his or her only task on the production line of completing a certain number of products each day. Similarly, some public health volunteers monitor only their assigned households but become negligent of the disabled that live only a few houses away but, unfortunately, outside their area of responsibility. In addition, some only make home visits to each of the assigned households, who are also neighbors, exactly once a month, per the requirement of being a public health volunteer, but, in fact, they should be able to visit, or just greet, their neighbors more frequently or even every day for those next door. It is understandable that some public health volunteers do have limited availability to work in the health service because most of them still have their own business or employment, which needs to be taken care of first. Moreover, the workloads assigned by the health professionals sometimes may cause the volunteers forget their role as the good neighbors.

Consequently, the work by public health volunteers per assignments also results in ineffective health monitoring. For example, in a campaign to eliminate mosquito habitats, in which public health volunteers were to investigate their area of responsibility and get rid of any standing water, a potential health risk of harboring mosquito larvae, they would simply make a round whenever they were assigned to do so without thinking outside the box about any sustainable solution appropriate to their community. Another example of the inefficiency in the healthcare service as a result of the relationship in the form of a vertical hierarchy is that an elderly person living alone would frequently ask her neighbor, who was not a public health volunteer, to take her to a clinic in another sub-district, which was charging a fee, simply because she believed that the injection was the only method of treating her muscle pain. Had the assigned public health volunteer visited her more frequently and become more familiar with her, the volunteer might have been able to persuade her to obtain the service at the government's health service center at no cost.

Furthermore, the overwhelming workload of the public health volunteers under the tight time frame specified by the government officials and the fact that some only participate because of the compensation often result in poor work performance. For instance, for the survey of the community members, as part of the monthly report required by each public health volunteer to submit to the Sub-district hospital in exchange for compensation, sometimes the survey data do not represent the actual information because many volunteers choose to make an assumption themselves without actually surveying the community, resulting in inaccurate or outdated information, such as the case of an elderly person that had already moved out for months, but the assigned volunteer still believed that he was still living in the same location.

6.5.4 Cultural Aspect

With the patronage system having taken root in the society of Thai people, it appears that public health volunteers respect and obey the head of the HPH as their supervisor, instead of viewing themselves at the same level as the hospital head, thus reinforcing the vertical hierarchy of the operation. This also causes favoritism among the public health volunteers. That is, if there is a vacant public health volunteer

position, the leader of the public health volunteers would invite his or her close friends or family members to fill the spot without announcing the availability within the community. Even though such favoritism has an advantage in the closer relationship and expectedly smoother coordination among the public health volunteers, it does not offer the opportunity to other community members who are willing to volunteer in helping the community in the health service provision. Sometimes these community members are not aware of the procedures for applying for a public health volunteer position. Thus, the role of the public health volunteer is then limited to a close-knit group of people in the community. Furthermore, the out-group community members also miss the opportunity to get the necessary health training as part of the public health volunteer program, which can be helpful in providing health service and monitoring to wider areas of the community.

Incidentally, the favoritism also plays a role in the bias among the public health volunteers themselves, thus separating the volunteers into two groups. One supports the work of the government officials, and the other supports the leader of the public health volunteers—the so-called "leader's group." The "their group, our group" faction causes interruptions and lack of coordination in the work of the public health volunteers, as the head of the Sub-district hospital admitted that, in the earlier work, the faction did cause problems and led to some team members becoming discouraged in participation.

Even though the title "public health volunteer" already conveys the volunteer mindset, meaning that a person is willing to work for others and the society without expecting anything in exchange, the study of the work of public health volunteers revealed that some participate as public health volunteers in order to receive the monthly compensation and other "privileges," such as acceptance from the community, support for their child's education in a degree program, and early access to government news and programs. As a result, this leads to nepotism and cronyism within the group of public health volunteers in order to build one's own "base" in the community.

6.5.5 Moral Hazard

Thailand's health service provision in the form of the Family Care Team, as described in 6.5.1, is a service provided by the service providers only. Even though the service providers include the professional government officials, the people, and the private sector, the service recipients, i.e. patients, do not take part in the health service. In other words, the patients do not realize that they are the owners of their health, and that healthcare begins with themselves. Therefore, the service of the family care team, in which all sectors co-participate to provide healthcare to the patients at their home and free of charge, could make the patients become negligent regarding their own health, resulting in bad health behaviors in the long term.

6.6 Theoretical Contributions

The analysis and synthesis of the study lead to the model of management of primary care service provision for sustainable and healthy community, as illustrated in the figure below.

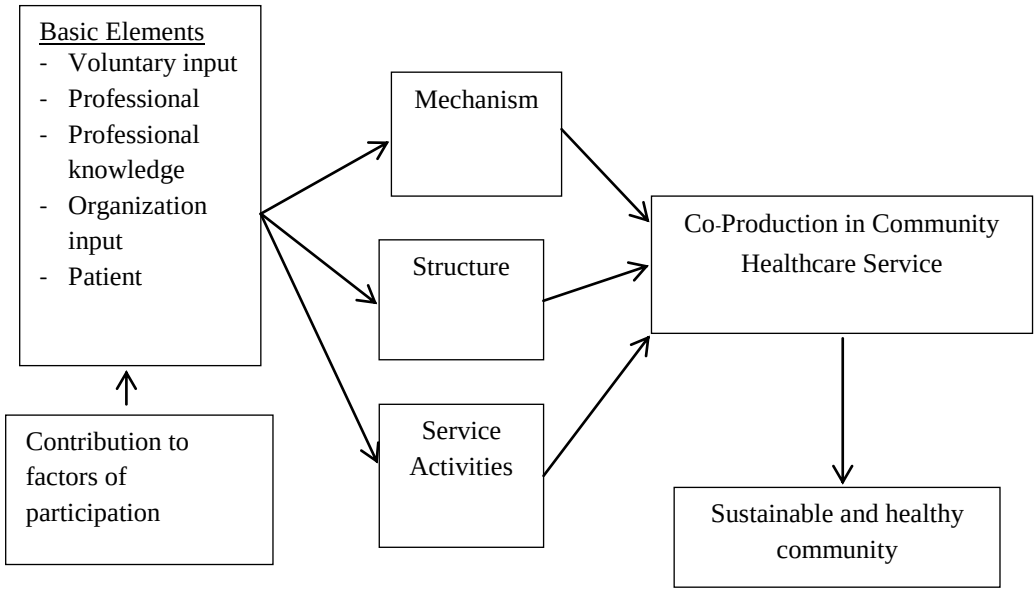

Figure 6.10 Model of the Management of Primary Care Service Provision for a Sustainable and Healthy Community

In addition to the basic elements proposed by Brandsen and Honingh (2015), which are voluntary input, the professional, professional knowledge, and organizational input, the author of this study added the patient as another basic element as well. The study results revealed that, in the health service provision in the form of Family Care Team in the areas of study, the participants are the professionals, the volunteers, the pharmacist owners, and, as added by the author, the patients. The patient is considered to be one of the important participants, with the role of caring for one's own health and also the community. All of the participants must share responsibility for the community's primary care service. Each of the four participants must receive adequate support and appropriate contribution factors for the co-participation.

In order to create co-production for a sustainable and healthy community, the mechanism stemmed from the closeness and familiarity among all four participants, which are parts of the basic elements, is the starting point toward building the trust and confidence in giving and receiving helps within the community. The mutual reliance, in which all participants rely on one another and are mutually compensated in one form or another, will help eliminate the limitations of each participant. In addition, the freedom of work of government officials is another mechanism that allows other sectors to participate in the service provision; and, for other sectors, especially the private sector, the experience of working with the government can lead to understanding the work process of the government and how to access government programs. This was clearly demonstrated by the participation of the private pharmacy, which built upon the experience of participating in a previous government project. Finally, the existence of a relevant knowledge base will enable all participants to be able to work in tandem, and each participant can then truly understand the service being provided, which will ultimately lead to the co-production toward a sustainable and healthy community.

The co-participation of all four participants must be according to a horizontal organizational structure. In other words, there is no hierarchy in each health service activity—from prevention and treatment to care—as illustrated by Figure 6.5. Eventually, the health service system must move toward a paradigm shift beyond the outdated system that views the patient as only a service recipient.

6.7 Recommendations for Health Service Provision in Thailand under the Family Care Team

6.7.1 Theoretical Recommendations

The public health service provision of Thailand should be further developed by changing the point of view of all parties involved in the service provision in order to change the concept from the old model of the service being a product that the producer only delivers to the consumer to the new model of the service recipient or "buyer" participating in the provision, which will result in the development of sustainable healthcare.

In the public sector, the government should change the point of view by having the patient at the center of the service provision or medical treatment. That is, in the process of medical treatment or healthcare, the patient, as the owner of his or her health, should be able to fully engage in the treatment by having an opportunity to choose the medical treatment appropriate to his/her health condition because of the diverse lifestyle, environment, and other conditions of each patient. Therefore, the health professionals should be open-minded and willing to find the most appropriate method for each patient. They should also consider the patient as the one of the participants rather than getting other parties to participate because the person that can best lessen the burden of the health officials is the patient him/herself. Therefore, if the patient, including the general public, can effectively and properly care for itself to full capability, the people can attain a healthy lifestyle, not be prone to sickness and, as a result, medical care can easily be performed, thus sustainably reducing the burden of health officials.

The patient and the people must receive proper training in healthcare and self-care in order to realize that they are the owners of their health. Proper self-care is, therefore, the most important action toward healthy well-being and stepping away from diseases. The hospital visit and medical treatment by the professionals is only a passive measure, which does not solve the problem in the long run.

The participating of civil sector, the public health volunteer, must change the point of view from viewing themselves as a "subordinate" or "underling" of professional officials. He/She should realize that his/her real duty is not only to

coordinate between professional officials and the community but also to complement the work of the officials in disease prevention and health monitoring for a healthy and hygienic environment in the community.

6.7.2 Recommendations for the Public Sector

In co-production, the officials should adjust their point of view from viewing the public health volunteer as a subordinate to having them seen as a co-worker instead in order to complement the limited capability of the government, such as access to community member information.

In urban areas, the government should invite the private sector, such as pharmacies, to help reduce the burden of the government by offering incentives in the form of honor, especially for the work without any monetary compensation like the Family Care Team. According to Maslow's theory, esteem needs can be satisfied by power, honor, fame, or social status. Therefore, the incentive could be a "symbol" of such honor or praise, such as a certificate of honor, an honorary pin, or an honorary plaque.

These symbols of honor should be valuable enough that the pharmacy desires to acquire them, and there should be multiple levels of honor as an incentive to further participate in reaching a higher level of their professional. Furthermore, the government should help promote the participating pharmacy to become well-known among the public. Overall, the government should understand the conditions of the participation of the private and civil sectors in the service provision with the government as follows.

1) Basic needs must be met. Participation is difficult when basic needs are not fully satisfied.

2) Realization of the benefit of participation. In some cases, the monetary payment is not the true benefit of participation but rather a hindrance to the sustainability of the participation because it cultivates a mindset where the payment is expected every time. If there is no payment, there will be no participation. Therefore, it is often found that the participation always ends after the project or budget is terminated.

3) Voluntary

4) The clarity of the level of participation and information sharing, such as making the people and private sectors understand the extent to which they can participate, in which area, when, and how.

6.7.3 Recommendations for the Private Sector

The private pharmacy participating in the healthcare service provision with the government and the community should enroll in an internship program with various universities because, in addition to creating the next generation of pharmacists that recognize the role of a professional, the interns can provide manpower in participating in the health activities provided in the community, thus lessening the loss of income from having to close the store. The Quality Pharmacy owner may need to close the store during the first week of the activity in order to train the interns. After that, the interns can work directly with the officials from the health service center, and the pharmacist owner can spend more time at the store, without the risk of being scrutinized by the Community Pharmacy Association (Thailand). Incidentally, there are faculties of pharmaceutical sciences at major universities in all regions of Thailand, as shown in Figure 6.11.

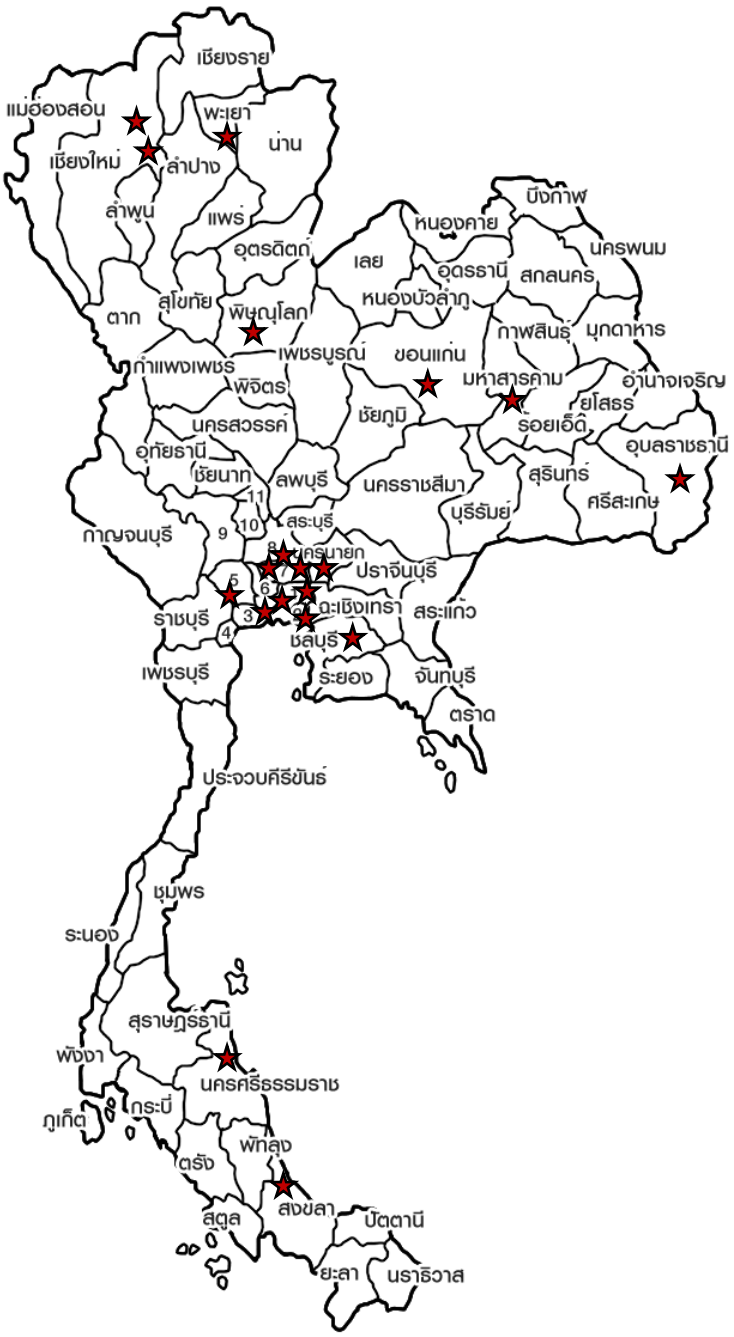

Figure 6.11 Locations of Faculties of Pharmaceutical Sciences in Thailand

According to Figure 6.11, there are 19 universities with a faculty of pharmaceutical sciences as follows.

Bangkok Metropolitan Region	
Chulalongkorn University	Bangkok
Mahidol University	Bangkok
Siam University	Bangkok
Silpakorn University	Nakhon Pathom
Rangsit University	Pathum Thani
Thammasat University	Pathum Thani
Huachiew Chalermprakiet Univ.	Samut Prakan
Srinakharinwirot University	Nakhon Nayok
Eastern Asia University	Pathum Thani
Northern Region	
Chiang Mai University	Chiang Mai
Payap University	Chiang Mai
Naresuan University	Phitsanulok
University of Phayao	Phayao
Eastern Region	
Burapha University	Chonburi
Northeastern Region	
Khon Kaen University	Khon Kaen
Ubon Ratchathani University	Ubon Ratchathani
Mahasarakham University	Maha Sarakham
Southern Region	
Prince of Songkla University	Songkhla
Walailak University	Nakhon Si Thammarat

6.7.4 Recommendations for the Health Service Center in Thailand

Because of an insufficient number of family physicians in each area, the health service center should be able to hand over some of the activities to the participating pharmacy, especially regarding the Quality Pharmacy, which requires to have a pharmacist stationed at the store during the entire business hours, in order to reduce

the burden and the number of patients attending the center. Such activities can be patient follow-ups and prescription refills for chronic disease patients, who are required to visit a physician every month or every three months to obtain their medications. In this way, the patient can have his/her prescription refilled at the participating pharmacy near his/her home. In addition, under the conditions of better management in logistics and information systems, the pharmacy can perform basic health measurements, such as that of weight, height, blood pressure, and blood sugar level. If there are any drastic changes or complications, the pharmacy can immediately refer the patient to the health service center under the condition that the patient must visit the physician for a follow-up at least once a year.

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