

## Exploring Competencies of Primary Care Pharmacists Practicing in Public Sector: A Qualitative Study

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### Abstract

**Objective:** To identify competencies of pharmacists needed for practicing primary care in community in the public sector. **Methods:** Qualitative research methodology was undertaken. Eighteen purposively sampled participants including 12 professional pharmacists with at least three years of experiences in primary care in public sector, 3 health practitioners working closely with them, and 3 health profession leaders were in-depth interviewed. Triangulation of significant information from three different sources of data was undertaken to ensure trustworthiness of the study. **Results:** Eleven competencies essential to public primary pharmacy were elicited with inevitable voices of the context. These competencies can be characterized into four predominant interrelated domains: primary care pharmacist's personal attributes, human competency, professional technical competency, and conceptualization competency. The interrelation among these domains helps understand how to develop competencies to encompass primary care tasks. Typical characteristics of leverage and challenging properties in particular competencies emerged volitionally according to the situational context. The public-minded attribute was claimed a requisite competency for recruitment. **Conclusion:** The competencies found in this study were meaningful to the success of public primary care practice for pharmacists. These competencies are essential for pharmacy profession and governmental health organizations to strengthen and nurture primary care roles for pharmacists. Professional pharmacists would benefit from the guidance on how to commit primary care responsibilities and perform the job effectively. In addition, the lesson learned from this study helps evoke educational institutions to revitalize curriculum of formal programs and mentorship.

**Keywords:** competencies, primary care pharmacists, pharmacy profession, pharmacy education

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## การค้นหาสมรรถนะของเภสัชกรปฐมภูมิที่ปฏิบัติงานในภาครัฐ: การศึกษาเชิงคุณภาพ

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### บทคัดย่อ

**วัตถุประสงค์:** เพื่อค้นหาสมรรถนะของเภสัชกรที่จำเป็นสำหรับการปฏิบัติงานเภสัชกรรมปฐมภูมิในภาครัฐ **วิธีการวิจัย:** การศึกษานี้เป็นการวิจัยเชิงคุณภาพ ผู้ร่วมการวิจัย 18 รายที่เลือกมาด้วยวิธีการแบบเฉพาะเจาะจง ประกอบด้วยผู้ประกอบวิชาชีพเภสัชกรรม 12 คนที่มีประสบการณ์อย่างน้อย 3 ปีในการปฏิบัติงานเภสัชกรรมปฐมภูมิในภาครัฐ ผู้ประกอบวิชาชีพด้านสุขภาพที่ทำงานร่วมกับเภสัชกร 3 คน และผู้บริหารในวงสาธารณสุข 3 คน ผู้ให้ข้อมูลได้รับการสัมภาษณ์เชิงลึก การตรวจสอบสามเส้าข้อมูลส่วนที่สำคัญทำโดยรวบรวมข้อมูลจากสามแหล่งข้อมูลที่ต่างกันทั้งนี้เพื่อให้มั่นใจถึงความน่าเชื่อถือของการศึกษา **ผลการวิจัย:** สมรรถนะ 11 ประการที่จำเป็นสำหรับงานเภสัชกรรมปฐมภูมิในภาครัฐปรากฏในการศึกษาโดยมีบริบทเป็นตัวกำหนด สมรรถนะเหล่านี้สามารถแบ่งออกเป็น 4 กลุ่มหลักที่มีความสัมพันธ์กัน ได้แก่ ลักษณะส่วนบุคคลของเภสัชกรปฐมภูมิ ความสามารถในการทำงานกับผู้อื่น สมรรถนะด้านเทคนิคในทางวิชาชีพ และความสามารถในการคิดรวบยอดความสัมพันธ์ระหว่างความสามารถในด้านต่าง ๆ เหล่านี้ช่วยให้เข้าใจว่าจำเป็นต้องพัฒนาความสามารถใดเพื่อให้เภสัชกรสามารถปฏิบัติงานด้านปฐมภูมิได้ดี ลักษณะเฉพาะของความสามารถในการแก้ปัญหาซึ่งมีความท้าทาย เกิดจากบริบทในการทำงานนั้นๆ คุณลักษณะในเรื่องการมีจิตสาธารณะเป็นสมรรถนะที่จำเป็นในบุคลากรที่จะได้รับการคัดเลือกให้ทำงานเภสัชกรรมปฐมภูมิ **สรุป:** สมรรถนะที่พบในการศึกษาครั้งนี้มีความหมายต่อความสำเร็จของการปฏิบัติงานด้านเภสัชกรรมปฐมภูมิในภาครัฐ สมรรถนะเหล่านี้เป็นข้อมูลสำคัญสำหรับวิชาชีพเภสัชกรและหน่วยงานด้านสาธารณสุขของรัฐเพื่อใช้เสริมสร้างบทบาทในงานเภสัชกรรมปฐมภูมิ ผู้ประกอบวิชาชีพเภสัชกรรมจะได้รับประโยชน์จากข้อเสนอแนะจากการศึกษาในเรื่องหน้าที่หลักในการทำงานและวิธีการปฏิบัติงานให้มีประสิทธิภาพ นอกจากนี้ บทเรียนที่ได้จากการศึกษาครั้งนี้ยังช่วยกระตุ้นให้สถาบันการศึกษาปรับปรุงการจัดเรียนการสอนในหลักสูตรและการพัฒนานักศึกษา

**คำสำคัญ:** เภสัชกรปฐมภูมิ วิชาชีพเภสัชกร เภสัชศาสตร์ศึกษา

### Introduction

Primary healthcare is the principal approach of delivering health care at the most local level of a country according to the World Health Organization (WHO) (1). It is the first line health services closely functioning in community. The role of primary care is supposed to cover all ranges of health condition—prevention,

promotion, treatment, and rehabilitation and targets all aspects of health—physical, social, and spiritual (2). In Thailand, since 2006, pharmacist was required as one of health professionals to serve the national policy of primary care by providing quality medications in community (3). Additionally, there were substantial movements to bring pharmacy profession to become a

part of primary care service in healthcare system in the current decade. In the year 2009, the National Health Security Office (NHSO) and the Health Consumer Protection Project supported by the Health Fund—developed a project called “Improvement of Pharmacy Services in Community”. The pharmacists in this project committed to fulfill five tasks in sub-district health promoting hospitals (SDHPHs) including drug inventory control, drug dispensing and counseling, pharmaceutical care in community, health consumer protection, and promotion of self-reliance in medication (4). Since then the role of pharmacist in medication provision for primary care has been gradually developed and recognized. According to Sriwanitchakorn (5), pharmacists were the needed manpower in performing the indispensable roles for primary care settings, especially providing rational and safe use of medication, and supervising alternative medicines used in community.

Pharmacy Council of Thailand has declared the role of pharmacists in primary care services. The stated major goal of pharmacy professional service in primary care is “healthy communities and medication safety”, and pharmacists in primary care are required to strengthen the capabilities of patients and communities (6). The responsibilities for provision of quality medications in primary care services become not only a new opportunity to pursue but also a big challenge for pharmacy professional. Serving primary care is to work in a new context for pharmacists; it is—an open and dynamic circumstance—very different from traditional work setting like hospital or drugstore. The challenges of primary care tasks for pharmacists can be bigger and tougher than normal expectation. In the United States, the serious shortcomings related to the provision of safe and effective medication management in primary care are reported, and the tremendous costs of drug-related illness and death are realized (7). In addition, patients’ primary care needs also demand coordination, management, and integration of their chronic disease

care following acute episodes. The demand for more intensive primary care, combined with the role that medications play in prevention and primary care treatment, requires the inclusion of competencies in this area for pharmacists.

The question of what are the characteristics of pharmacists needed—to ensure the accomplishment of primary care tasks—is persistent since the previous literature attempting to examine pharmacist competencies in Thai context is very limited. The only study has defined the prominent primary tasks that needed pharmacists to perform, and the training need for developing primary care competencies (3). The study defined exclusive activities for pharmacists requiring intensive pharmacy knowledge. However, activities of primary care in the study tended to be chosen by the researchers rather than the ones elicited from the practitioners. Moreover, only apparent competencies were indicated e.g. essential knowledge and skills. According to McClelland, a person’s knowledge and skills representing the visible tip of the iceberg, while the underlying and enduring personal characteristics or self-concepts, traits and motives hidden below the water-line have a more substantial impact on how effectively an individual performs on the job (8). McClelland’s iceberg model of competency has been popular in various fields of research. This study borrowed the lens of McClelland’s competency concept and combined it with Spencer and Spencer’s competencies and workplace (9) to explore pharmacist’ competencies in performing primary care tasks. Spencer and Spencer defined “Competency as an underlying characteristic of an individual that is causally related to criterion referenced effective and/or superior performance in a job or situation” (9), and they maintain that competencies must be related to performance in the workplace and not “would be desired to have”. It is thus vital to explore into the experiences of pharmacists who carry on the primary care tasks in the real situations to obtain insightful and in-depth data of their

competencies. This study was an attempt to identify and illuminate competencies of pharmacists in effectively performing primary care tasks and strengthening the new initiated primary care role.

## Methods

Phenomenological qualitative methodology was undertaken to acquire the inter-subjective knowledge of Thai pharmacists with experiences in primary care. "A phenomenological study describes the meaning for several individuals of their lived experiences of a concept of phenomenon" (10). The basic purpose of phenomenology is to reduce individual experiences with a phenomenon to a description of the universal essence (11). Multiple in-depth interviews with professional pharmacists who experienced primary care practice were undertaken. To enhance the validity of findings, an attempt of triangulation was conducted by interviewing from other groups of informants including other health professionals working with pharmacists and health profession leaders.

### Participants

A total number of 18 participants agreed to share their deliberate experiences in this study. In this number, there were 12 professional pharmacists and 3 other health practitioners who experienced in public primary care services and additional three health profession leaders who involved in higher level health policy making and academic institution. Purposive sampling was undertaken and all the participants were recruited according to the criteria of high involvement in primary healthcare for more than three years. Pharmacist participants were selected considering their solid background in primary healthcare and asked for consent before interviewing. Then a number of health practitioners working closely with the pharmacists in primary care in community for years were interviewed for checking the consistency of data. Health profession leaders were selected from academic administrators in the higher education institutes that were publicly

recognized in providing courses and training in community and primary care services for undergraduate students and health policy makers in accordance with their consistent influence in primary care, especially their impactful initiatives in promoting primary health care in Thailand.

### Data collection

This study undertook qualitative data collection strategies in the manner suggested by Patton (12), "studying real-world situations as they unfold naturally; non-manipulative and non-controlling; openness to whatever emerges". Face-to-face, in-depth interviews with 18 participants were conducted. Open-ended questions and a semi-structured interview guide were used. Each interview with professional pharmacist and health practitioner included questions: 'What kinds of primary care activities do you engage in, and how have you got them done?', 'What skills or abilities did you use while undertaking primary care tasks?', 'Can you give some examples of your success, and please describe any characteristic you have and relating to the success? What is your biggest challenge in primary care job, how can you solve it, and what support do you need?' Interviews of health profession leaders emphasized on three protocol questions: 'What are the underlying characteristics of pharmacist needed in performing primary care job? Can you give some example of pharmacist's success in your observation?' and 'what is the biggest challenge for pharmacists?'

Probing questions were asked following some of the answers produced by the participants to explore for more emerging data. The interviews, held at each participant's workplace, lasted 45-90 minutes and were audiotape recorded. Data collection in this study ended when the conceptual information was saturated and no new data emerged. Non-participating observations of the activities during job operations were conducted when the participants allowed. Field notes and memos from observations and during interviews were taken with the attempt to describe the context and situations,

including subtle matters while pharmacists visited patients and their families at their home places.

Participation in the study was voluntary, and all research participants were interviewed with informed consent. To protect their anonymity and confidentiality, pseudonyms were assigned to them by using alphabets and numbers instead of their names.

### **Data analysis**

The audiotape records of interviews were transcribed and transferred to standard transcripts. The study undertook inductive content analysis process (12) to analyze the qualitative data in order to identify emerging reality of the competencies. The transcripts were analyzed by using the procedures suggested by Creswell (10); (1) going through interview transcriptions and highlighting significant statements—sentences or quotes that provide an understanding the phenomenon, (2) developing clusters of meaning from the significant statements into themes, (3) writing a description of what the participants experienced and the context that influenced the experience, (4) writing a composite description that presents the essence of the phenomenon. Later, the researchers described and interpreted the fundamental structure of the phenomenon through the lens of McClelland's and Spencer and Spencer's competency model in order to formulate relevant pharmacist's competencies. Field notes and memos were analyzed separately for emerging themes as well, and were used to increase the richness of data meaning making.

### **Trustworthiness of the study**

According to Lincoln and Guba (13), trustworthiness of qualitative study is enhanced by certain operations dealing with the required criteria. The researchers of this study consistently engaged in many aspects of professional practice in primary care for more than 5 years. To ensure credibility, triangulation of significant information from three different sources of data was undertaken to make the description of essence. The study used two authors to analyze the

data independently and compared emerging themes together until a consensus was reached. A summary of the interviews was sent to the informants to confirm their perspectives. Although the number of participants was limited, their descriptions were rich and insightful.

## **Results**

The data analysis elicited competency descriptions by interpreting the content of meaningful quotations from the experienced practicing pharmacists, practitioner peers and health profession leaders. These descriptions detailed the behaviors and personal characteristics of professional pharmacists while they performed the essential tasks of primary care or thus called primary care pharmacist (PCP).

According to Jordan, Carlie, and Stack (14), "Competency is the ability to carry out a complex task that requires the integration of knowledge, skills, and attitudes." Competency descriptors identified in the study were subsequently clustered into 11 groups according to task properties or similarity of personal characteristics. Spencer and Spencer (9) maintain that competencies must be related to performance in the workplace and not would be desirable to have. In so doing, the study defined desirable characteristics as competency gaps suggested to be developed.

From data analysis, the competencies were exhaustively explained on how they related to the task performance and community context as the followings.

### **1. Clinical knowledge and skills in providing medication therapy at home**

This study found that the clinical competency was needed to fulfill the task—medication therapy for patients while they were staying at home—with safety and efficacy.

The context and situation of tasks: The experiences of the informants consensually indicated that these patients frequently had serious chronic health problems that needed tertiary care, but they stayed at

home. The situation was improvisational for primary care task in community.

*"Prepare for dealing with chronic disease patients who can die during 3-4 months waiting for the next doctor appointment just because of physiological change due to medication e.g. potassium level in blood change which can be easily treated by stopping or taking a medicine."* (PP7)

*"Don't think that home visit in primary care is as simple as everyone can do; it's not—it is complex and filled with various illnesses, heart failure, breast cancer...DM."* (PP3)

Competency descriptors for this competency were: knowledgeable in what and how to use a particular medicine for a patient—from simple to complex illness; well-planned home visit for continuing care and able to apply pharmacotherapy in drug administration, monitoring and decision making when to adjust medication in chronic patients; able to define drug related problem and in-timely fashion.

There were challenging descriptors of basic physical examination and treatment e.g. wound dressing, physical therapy, measuring blood pressure; and even prescribing medications

*"We do not diagnose patient, but we assess how efficient the patient uses the inhaler drug."* (PP3)

*"I practice special technique in drug administration e.g. feeding drug through NG tube"* (PP10)

*"I measure blood pressure and weight for physical examination when necessary."* (PP1)

*"I do wound dressing, muscle strength assessment, basic physical therapy"* (PP9)

These behaviors were determined as skill mix for seamless care and were found appreciated in primary care by health professional alliances since the situation of complex illness at home could not wait for the presence of all health professionals at the same time.

*"There is a need of skill mix, meaning the mix of skills of other health professionals—nurse, physician,*

*and physical therapy—to enhance primary care task while all health professionals are not present at the same time and the task can't be allocated."* (PP2)

*"Pharmacists have potential expertise in providing medications for chronic patients and palliative care."* (HPC1)

The abilities were not for traditional professional practice, but they were supported by physicians who were informants in accordance with the shortage of physician in need.

*"When pharmacists do home visit, I would like pharmacists to help prescribe medication for chronic patients because physicians probably don't have enough time to follow and assess the illness for patients at home."* (HPC2)

Nevertheless, there were considerably overlapping professional practices, so the practitioners must aware on the professional boundary and health professional organizations should take this into account in changing the law governing health professionals

## 2. Adverse product reaction (APR) surveillance

Competency to perform APR surveillance in community was perceived as ability at system level to detect unwanted consequences from medications and other health products concurrently used by patients.

*"Pharmacists can detect side effects of drug used in chronic patients during home visit."* (HPC2)

*"The focus of primary care is health in family—even the individual's health problem like DM is resolved if we see their family; we will see other health related problems as well e.g. other health products they are consuming."* (HPE1)

The competency descriptors emerged from data analysis was: knowing what APR is and how to detect and anticipate the risk;



*"I follow up drug use and detect adverse drug reaction" (PP11)*

*"Be aware of other products which interact with medications therapy of patients" (PP9)*

The effective APR would help reduce risk in medication therapy. However, there was a competency gap of the ability in setting up a system to prevent APR emerged from the data analysis.

*"Pharmacists must design a system to prevent ADR in patients at home." (PP5)*

### 3. Fostering effective alternative treatments to drug use

Provision of alternative treatments was an emerging task in this study and acquired a strong support from all groups of informants. The competency in performing this task was illustrated by the competency descriptors: ability to provide other effective treatment choices especially herbal drugs for patients to add on or replace drug medications; promote the use of herbal drugs or medical nutrition in chronic patient or palliative care

*"I arranged to invite a monk to come and pray for patients who had no hope and wanted to die; the result was surprising, the patients became calm and filled with trust." (PP8)*

*"I have to advise patients the use of herbal medications and nutrition for patient's family to enhance self-reliance; even though I need more knowledge to give a good advice." (PP9)*

Knowledge and ability to use herbal medications for simple and chronic diseases in community was highly appreciated by all groups of informants. They expected PCP to pursue more abilities to apply alternative treatments in community. This competency had a meaning of leverage competency or competency that can generate a greater impact on community:

*"Herbal drug and Thai massage are needed treatments in community since people are familiar to these treatments." (HPC3)*

*"Community in Thailand has a plenty of herbal medications and Thai traditional therapy, pharmacists can help enhance the value and make them meaningful in primary care" (HPC1)*

*"Develop herbal drug formulas and convenient preparations that are safe and efficacious for use in community" (HPE3)*

### 4. Inter-professional team working skills

This study found that team building ability of health professionals was an indispensable in order to foster successful primary care role of pharmacist and promote comprehensive care. The competency to work effectively within inter-professional team was the ability to establish teamwork among health practitioners in community,

*"Facilitate comprehensive care for primary care by coaching and giving consult to other health practitioners to deal with difficult illness cases." (PP2)*

*"Work mutually with other health professionals, filling the gaps in primary care operations" (PP7)*

*"If possible, pharmacists should do more than dispensing medicines for individuals in community that is co-operation with doctors for medication use in an individual patient—to clear drug related problems." (HPE2)*

PCPs recognized team spirits and respect to enhance a good relationship in team, *"Give respect to other health professionals in team." (PP7)*, *"Team spirit is indispensable; without it we fail" (PP2)* and acquired the ability to keep the team well communicated.

*"We meet with other health practitioners to agree upon that pharmacists can adjust drug dosing according to the patients' health condition." (PP1)*

A good teamwork can help manage more difficult illness cases in the experience of an informant

or make a leverage of competency to commit higher order task in primary care.

*"Knowledge sharing in team building is necessary to strengthen medication therapy because there is redundancy in drug use."* (HPC1)

## 5. Effective communication with patient skills

Communication skills elicited in this study aimed to keep patients comply with medication therapy for their better health condition. The descriptors for this competency were: Building therapeutic relationship with patients is meaningful for fostering effective primary care tasks.

*"There is a big gap between health provider and patients' need in primary care, our ultimate goal is to provide care with understanding on patients, their identity and family. Building therapeutic relationship with patients is difficult but necessary."* (PP3)

*"Patients seem reluctant to comply with what we (health volunteers) have advised about medication, it's not like professional persons' advice."* (HPC3)

*"I can't stop home visit—it is a bond between us"* (PP1)

Ability to perform patient counseling effectively for changing patient behaviors and health awareness was the account of competent pharmacist.

*"DM and high blood pressure in elderly are difficult to handle because patients are stubborn, we need behavioral change."* (PP1)

*"Pharmacist should send an effective message to patients and individuals in community to raise health awareness".* (HPE2)

A list of communication skills to perform the task was realized necessary including deep listening to gather enough understandings, observation skill, and delivery of key messages on medications.

*"Listening helps us a lot, listening right at the right point will help resolve the right problem."* (PP3)

*"We need not only verbal communication, but also observation skill"* (PP9)

A significant statement elicited an undeniable quote of being aware of possible confusing dialogues by sending different health messages from different health professionals.

*"Only one sentence can generate confusion, that is, the same issue but talk differently to patient"* (PP7)

## 6. Engaging and educating community

Competency to engage community was firmly elicited by PCPs and peers and indirect quotes from health profession leaders. The importance of this task in building a promising health activity platform—for PCP to generate health activities and projects for educating the community—is in sight.

*"It's very important to empower patient's family to make them able to stand by themselves because we need them to look after the patient in the long term"* (PP3)

*"Always start first with good relationship before caring and when the trust has developed; we will see the reality about the patients"* (PP2)

The competency descriptors of this competent were: ability to build a tie with community, behave as community neighborhood,

*"I observe that the pharmacist does not only stay in the station and dispense medicines, but she goes out to talk with people and check information in community, keep close contact and learn about drug use including the communal life."* (HPC3)

*"Behave friendly, act as you were neighbor, make known with community's leaders"* (PP1)

This competency also included ability to provide health education to community and caregivers with respect and trust, and initiate health project with the participation from people in community, and to coordinate the implementation of health related project.



*"Identify community's health problems, persuade people to discuss, share ideas, and empower them to act" (PP4)*

*"In my experience, coordinator--not the same as leader--just knows what to do, who can do it, and what technical ability we need; and then coordinate to carry on a project." (PP4)*

*"Primary care pharmacists should behave like a broker or change agent to connect with health professionals for patient's need." (HPE2)*

Health educating ability was clearly supported by the health leader informants.

*"I tried to do a project--no drugs sold in groceries--but people did not buy in until the pharmacist helped by visiting individual grocery together with me and provide the information on drug lists illegal sold in groceries." (HPC3)*

*"Pharmacists could provide education in medication for community to make individuals alert in drug consumption." (HPE2)*

*"Medication means more than drug treatments; it includes massage and herbal medicines as well.... Educate community the appropriate use of these alternatives for remedy of illness." (HPE2)*

## 7. Conceptual thinking ability

Some of professional pharmacist informants elicited what they did in a broader view of primary care. They did introduce abilities to relate primary care performance with the health context--epidemiology of diseases, laws and regulations, and other local context, including the ability to conceptualize the whole view and design a system of operations for better positioning the primary care. The competency descriptors for this competency were: the ability of systems thinking and conceptualizing.

*"Primary pharmacists must know local context, epidemiology of diseases in the area, and regulations." (PP4)*

*"Look beyond home visit--a particular patients' medicine usage is not the whole story; but for good understanding of community--why they consume faked health products or useless energy drinks" (HPC1)*

Ability to learn the contextual factors of community and apply epidemiology, risk assessment, and health regulations in designing working system.

*"Pharmacists must design a system to prevent ADR from drug use of patients at home." (PP5)*

*"Home visit does finish at the end of the day when you have done your activities, but follow up and monitoring of drug use is more important to see the bigger picture of community's health problems." (HPE1)*

*"The (health) system is failed because we focus on the provision of hospital services, that is, every patient walks to hospital--this is passive health provision; the best is...to design for health personnel to integrate their work in all areas (of health provision) to attack (approach) individuals in community as relatives...and change their health behaviors." (HPE2)*

*"Pharmacists must be able to work with broad health issue, relate medication issues with other factors including social factors; if we have community's knowledge-base and know how to approach community, it will be easier to resolve health problems however, I can observe that pharmacists undervalue systems thinking, integrative working and conceptual- lization of the overall picture" (HPE1)*

However, these abilities were only introduced by health profession leaders and practitioner peers, and without evidence of actual implementation. These should be a competency **gap** waiting for further competency development for PCPs in the future.

## 8. Managing drug supply skills

The administrative tasks appeared to focus on managing drug inventory to assure drug accessibility for patients in community. The competency descriptors

were the abilities to record and monitor drug inventory system, and conduct risk management of drug supply.

*"I control inventory, apply the rule of first-in/ first-out to inventory, record, fill and pack drugs for dispensing" (PP1)*

*"It's a must for pharmacists to train local health practitioners to manage drug inventory" (PP5)*

*"I do risk evaluation in management of drug supply, monitoring and controlling." (PP11)*

There was a challenging competency descriptors of facilitating the access to risky drugs--e.g. morphine and psychotropic drugs--for chronic illnesses and palliative patients since the accessibility for the drugs in primary care was a typical issue that differed from that in health institution settings and difficult to handle in community context.

*"It's hard for psychiatric and palliative care patients to access their needed medications, so we need someone who know how to handle these risky medicines to ease the access." (HPC2)*

## 9. Containing medication expense

The only financially related competency emerged from this study was containing medication expense to ensure efficiency. How pharmacists could help reduce the medication cost in primary care services was one of the prominent agenda in Thai health service system.

*"Ultimately we must achieve 2 solutions (in primary care): people access to care, and cost containment of primary care." (HPE2)*

It could be spelled out the abilities to contain the cost of inventory in primary care setting, and an expected higher order competency--systemic medical cost management, and enhancing the efficiency of medications by promoting the use of alternative treatments.

*"I randomly check the drug inventory to see the annual cost, and bring down the total inventory cost from 500,000 to 200,000d baht" (PP1)*

*"System approach is an effective way to reduce medication cost." (HPE2)*

*"Using herbal medications helps reduce the cost of medication especially in primary care." (HPE3)*

## 10. Personal development competency

The data analysis produced an important self-learning competency theme--learning by doing ability which PCP commits to earn their credit to pave to way to be recognized in primary care since there was no official training in university at the time being. The significant statements of PCP elicited the needs of personal development competencies were: active learner ability and experiential learning strategy.

*"I do and learn it by trialing whether it works (or not)...the health needs are not the same over time--it is like a learning curve." (PP2)*

*"Currently I can observe that there are governmental supports for strengthening Sub-District Health Promoting Hospitals, however pharmacists' involvement is rare. I realize that I would like to encourage pharmacist to join the development of innovative health service for primary care." (PP6)*

*"My communication skill needs to be improved, and also observation and counseling skill" (PP9)*

*"I think I need to update my knowledge on therapeutic guidelines, and would like an opportunity to learn how to feed medical nutrition, to provide basic physical therapy, physical examination, and the use of medical devices" (PP10)*

*"It must be adult learning, context-based learning, and learning by doing as mentioned by Dr. Surakiat (the physician expert in primary care)." (PP3)*

Moreover there was no official but voluntary mentor to facilitate the experiential learning or to coach a novice PCP.

*"I always look for a good patient case that can be used as an exemplary model for learning, and I use the case for training a novice pharmacist." (PP2)*

## 11. Personal attributes

Public-minded could be the appropriate term that described the meaning of informants' inner of heartfelt service, persistent intrinsically motivated competency in practicing primary care. These attributes could be defined as deep as 'motives' in McClelland's iceberg model of competencies.

*"I love to do home visit, and ready to give advice and counseling to patient" (PP9)*

*"See that home visit is happiness in work; when I get tired and bored of work, I go home visit and get better and I am happy. It's true." (PP3)*

*"In my thought, I come to work in community because my heart desires to do it, and because I have friends of same ideology to help people out of their health suffering" (PP8)*

The data analysis could identify a self-concept of 'caring individuals in community as ones' relatives'.

*"For primary care—the design of care to everyone—we do care individuals in community as our relatives" (HPE2)*

The trait of self-control in practicing also emerged from the data

*"I prepare to be humble, and be patient to cope physical and emotional stress." (PP10)*

This public-minded attribute was affirmed by the health profession leader as a conditional competency for recruiting a PCP.

*"Primary care is for practitioners who love community, people in community, and love their professional." (HPC1)*

*"Sincerely speaking, it's not that every pharmacist can do this job; it must be pharmacist who loves to do, minds for it, and knows what to be achieved." (HPE1)*

Leadership was the other personal attribute necessary for PCP. The leadership characteristic found in this study was nicely matched with the concept of charismatic leadership in the way that the leadership was acquired by exercising expert power, acting in humble manner and coping stress. This led to the ability of influence people in community.

*"Our leadership is to accumulate from time to time. Create new initiations (in primary care) and influence others to do, it is not by authority...it's very difficult...expert power is our leadership power." (PP4)*

## Discussion

This study describes the perspectives of PCPs in Thailand and the competencies that they have developed to perform the needed tasks. The validity of findings was enhanced by triangulating with the thoughts of practicing peers and health profession leaders who had consistently observed the performance of PCPs. There are 11 competencies emerged from this study, covering functional domains necessary to perform the work of a PCP. The property of each competency (or each competency descriptor) provides useful clues to pursue further steps of competency development.

## Competency gaps

There are gaps between the acquired competencies in PCPs and the desirable ones to fulfill the needs of primary care mission. *Conceptualization ability* can be defined as working with systems approach to attack long-term problems and create sustainable healthy community. The desired competency domains are the ability to relate primary care performance with the healthcare context—epidemiology of diseases, laws and regulations, and other local context, including the ability to conceptualize the whole view and design a system of operations for better positioning the primary care. Obviously these competencies were emphasized by health profession leader rather than practicing

pharmacists. The finding shows that PCPs could only acquire the technical ability to deal with access to medicines for the severe chronic patients at home, which reflected the competency to close the gap of drug distribution system. If PCPs can acquire more conceptualization abilities, they would generate more impact to the health system. Likewise, the health system management in the United States, according to Manolakis and Skelton (7), appreciates the importance of pharmacist in medication cost containment of primary care—for every \$1 invested in clinical pharmacy services, more than \$4 in benefit is seen. The data seems to signal a gap for future training, especially the ability to perceive the broad view of primary care movement.

### Challenging competency

Since the shortage of primary care physicians in community and seamless care for patients at home was undeniable, the situation created a challenge overlapping professional practices. A study of primary care in the United States has a resolution for this situation—‘prescribe under protocol’ by PCP in some chronic illnesses e.g. conditions needing treatment with anticoagulation, hypertension, diabetes, heart failure, pain, and psychiatry (7). Unfortunately, there was no such formal measure for pharmacists in Thailand to cope with the situation, so pharmacist learned and acquired an essential team working competency with other health professionals to mitigate the drawbacks in caring chronic patients at home.

### Leverage competency

There were competencies emerged from the study that are meaningful for PCPs to make a leap in performance to maximize health outcomes. A good teamwork can help take care of more difficult patient cases in the experience of an informant or make a competency of leverage to commit higher order task in

primary care or to expand primary care services to help build self-reliance community.

There is a great opportunity in herbal medications for primary care. The ability of fostering effective alternative treatments in addition to modern drug use is somehow unique for Thai context, especially herbal medicines and can be a leverage competency as well. The informants experienced in using the treatments in appropriate occasions. Future prospect of alternative treatments in primary care, as perceived by health profession leader informants, is shining. Expectation of more development in this competency for PCPs was on tract in the country’s agenda. Pharmacists are in a good position to pursue more abilities to apply alternative treatments and generate a bigger impact in primary care.

### Requisite competency

Personal characteristics were mentioned briefly but meaningful. These were critical competencies convinced by all groups of informants especially the trait of community-minded, meaning that pharmacists can rarely successful in primary care without this personal characteristic. The self-concept of charismatic leader was proofed to be a success factor for leading changes. The intrinsic motive of work—‘love to work’—may help sustain career retention in primary care. Spencer and Spencer (9) claim that knowledge and skills are easy to develop compared to personal competencies of self-concept, traits, and motives. Briefly say that the personal attributes are considered a requisite competency, meaning that it is more successful to recruit pharmacists with the required competency to work for primary care.

### Competency initiative

Good health and wellness of people in community cannot be accomplished without the participation of people who live there. Communication and interpersonal skills were instrumental to build good

ties and relationship between involving people and create trust. Building therapeutic relationship with patients in community is necessary to foster effective primary care. Therapeutic relationship is a new term of relationship that is recommended to create between health care provider and patients (and family or caregivers) to close the gap of understanding about the ongoing therapy. This kind of relationship has never been recognized before, so patients have a low level of compliance. In this study, therapeutic relationship with patients is claimed to be difficult to build, but it is useful for long term or chronic illness.

### Competency development model

The competencies found in this study have a meaningful interrelationship and can be categorized into four predominant groups according to the functional property to primary care: (1) professional technical ability, (2) human ability, (3) conceptualizing ability, and (4) personal attainment ability. The interrelationship is likely to support the competency developing process (Figure 1).

*Professional technical ability:* Practicing medication therapy especially for chronic illnesses in community required a need to embrace significantly different knowledge from that needed in usual clinical pharmacy in a hospital setting, where tasks and routines are standardized. The context at home was loosely controlled and patients had more freedom to access to variety of health related products and information from various sources as well. Professional pharmacist informants acquired professional technical abilities adapted for the dynamic tasks inherent in primary care roles, including the ability to detect adverse reactions from different kinds of health products rather than usually focusing on only drugs. The ability of fostering effective alternative treatments in addition to drug use is somehow unique for Thai context, especially herbal medicines.

*Human ability:* Informants realized that working for community was significantly influenced by human factors. Good health and wellness of people in community could not be accomplished without community participation. Communication and interpersonal skills were essential for building good relationship and trust. Therapeutic relationship with patients in community was necessary for effective primary care. Human ability was thus essential for building a promising platform to support health related projects demanded by community needs, and even to make leverage depending on how good the ideas could be conceptualized.

*Conceptualization ability:* The third dimension of competency clusters can be defined as working with systems approach to attack long term problems and create sustainable healthy community.

*Personal attribute and attainment:* The finding is well explained by the McClelland's iceberg competencies model (15). Knowledge and skills—the visible tip of the iceberg—are shorter 'shelf-life', while enduring personal characteristics—the hidden below the waterline—have a more substantive impact on job performance. These were critical competencies especially community-minded, self-concept of charismatic leader, intrinsic motives of work—'love to work'. Nevertheless, these competencies are harder to be assessed when compared to skills and knowledge (16). In addition, Spencer and Spencer (9) argue that knowledge and skills are easy to develop compared to personal competencies of self-concept, traits, and motives.

Overall, the competencies of PCP found in this study reflect intangible linkages from one to another characterized dimension. The linkages have a requisite meaning which depicted a framework of successful competency development for PCP. The personal attributes are recommended to be used for recruitment and selection of new PCPs, and then

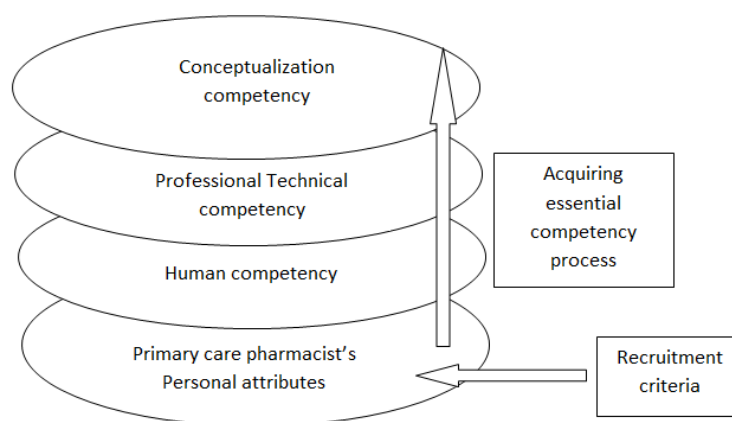


Figure 1. Primary care pharmacist competency development

systematic training programs should be planned to equip the pharmacists with human competencies and functional technical abilities to do field work and gain community participation. Finally, PCPs will gradually gain conceptualization abilities and be ready to create impactful projects for community and health care system

### Limitation

The study identified the competencies related to performance of pharmacists in primary care in terms of behavioral characteristics but not in term of extent or criterion referenced performance. The additional data from peers and health profession leaders help strengthen the result of the study. However participants who were peers of PCPs should be increased in terms of number and professions in order to more comprehensively explore the competencies.

### Conclusion

The study elicited substantial competencies for primary care from the perspectives of experienced pharmacists, their peers and health profession leaders. These competencies were interrelated and meaningful to the success of primary care practice in the health system both in terms of health and economic outcomes. The findings unfolded indispensable clues for pharmacists on how to acquire and incorporate individual competencies in performing the required

tasks effectively, and how to resolve challenging inter-professional practice to facilitate seamless comprehensive care for patients at home. Moreover, this study was able to identify personal characteristic of public-minded as the requisite competency for success in primary care. Finally educational institutions and relevant organizations for new PCP will benefit from using study results in their work to promote sustainability of primary pharmacy care. Professional pharmacists benefit from guidance on how to commit primary care and pave the way for success.

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