

CHAPTER 1

INTRODUCTION

Background and significance of the study

Primary care is viewed as a new system of health care reform. Since the universal healthcare coverage was implemented into the Thai healthcare system in 2001, primary care has been the highlight of the new program. All community hospitals in Thailand have become contracting units for primary care (CUP). The resulting Primary Care Units (PCUs) and community health centers have become front-line healthcare services, under the technical supervision and support of CUP (The Working Group on Implementation of Universal Health Coverage under the State Policy, 2001; The Ministry of Public Health, 2001). The PCUs' goals are to provide primary care that is available, accessible, acceptable, affordable, holistic, coordinated, and continuous with maximum community involvement (Srivanitchakorn, 1998; Yengkratok, 2001). Starfield (1992) described two major goals of primary care, i.e., optimization of health and equity in distributing healthcare resources. In the Thai primary care system, four features are emphasized, i.e., first contact care, longitudinal care, comprehensive care, and coordinate care (Health Service Network Development Institute, 2003; Bureau of Nursing, 2003, Srivanitchakorn, 1998; Yengkratok, 2001).

Primary care is a health provision for all groups of people and types of health service including holistic and continual care. The primary care system is the basis of health care services for clients with all status of health conditions. Based on PCU goals, the provision is specific for people in distance areas. The healthcare provision includes health promotion, disease prevention, basic medical care, rehabilitation, chronic illness

management, and palliative care based on the health service network (Hanucharurnkul, 2003).

Primary care needs specific competency which is different from hospital-based in that the competency must include a broad range of primary and preventive care. People in community needs direct access and appropriate source of primary care for continuing on hand over time. PCU needs providers with high competence in general clinical practice and being able to work effectively within the community context (Starfield, 1992; The Community Practitioners' and Health Visitors' Association - CPHVA, 2003). The primary care (PC) providers are expected to be highly knowledgeable and skillful in PC services especially practical community and managerial PCU.

Newly established PCUs need more personnel especially professional nurses to provide comprehensive care of primary care. Based on PCUs' goals, the people in remote area need basic medical care for all age groups especially patients with a chronic illness. Before the latest healthcare reform in 2001, community health centers consisted of public health staffs, health officers, public health directors, midwives, and technical nurses who had run the health centers for providing primary care and managing of general activities. The newly established system focused more on promoting holistic and continuing healthcare rather than merely prescriptive medicine. Consequently, the demand of the healthcare personnel working at the PCUs substantially increased, especially for more professional nurses from hospitals and some other health professionals such as physicians, pharmacists, and technicians became PCU employees (Chutinuntakul, 2004; The Ministry of Public Health, 2001). The professional nurses who were the most sizeable group of healthcare team and were well trained to care for all groups of people had an expanded role within the new

healthcare system. Some were volunteered and some were assigned to work at PCUs. The hospital-based outlooks which focused on the diseases of individual clients were come with them whereas the PC practices are largely focused on care in a community context.

The PCU personnel with hospital-based nursing background face many problems. They have had a difficult time adjusting and preparing themselves for challenges resulting from the healthcare system's rapid changes. They received training as primary care providers before making the transition from the hospital to the PCUs. They still face many problems such as high workload, lack of knowledge and specific skills for PC provisions. Furthermore, the PC providers were confused on their roles and face collaboration problems within their team, e.g., professional nurses, public health staffs, health officers, public health directors, midwives, technical nurses, pharmacists, and physicians (Chutinuntakul, 2004; Hasuwanakij, 2002; Konggumnerd, 2003; Lapying & Srithamrongsawat, 2003; Pengpara, Jongjirasiri, & Hongsampai, 2003; Phongpipattanapan, 2002). The PC providers' problems which have been explored by those authors are similar to DiGiacoma and Adamson (2001). They stated that healthcare professionals face continual problems and challenges by attempting to meet expectations imposed on them by patients, administrators, funding agencies, and working with other health professionals.

The PCU staffs' problems can be solved by training for competency improvement. Those complex problems and demanding set of requirements placed on the primary care providers. In many cases, their experience and expertise do not fit well into the positions. Many research studies on Thai healthcare reform have concluded that PC providers need training to develop their primary care and

management competencies to provide care at the PCU (Konggumnerd, 2003; Lapying & Srithamrongsawat, 2003; Pengpara, Jongjirasiri, & Hongsampai, 2003; Yodanont, 2003). Similarly, Lundgren and Houseman (2002) stated that health services professionals are confronting the challenge of maintaining and improving competence over the course of lengthy careers in diverse practice specialties.

The training for improving competency refers to competency-based education that is designed to guide staff members for maintenance and improvement of their competencies on an ongoing basis (American National Nursing Staff Development Organization, 1995 cited in Jutsum, 1999). The competency-based education consisted of six steps, i.e., (1) specifying the role and work setting, (2) identifying competency areas, (3) writing competency statements, (4) writing performance criteria, (5) developing competency assessment tools, and (6) designing a method of documentation (Barczak & Spunt, 1999; Jutsum, 1999; Waddell, 2001). The development of PC providers' competencies had to be assessed by using competency assessment tools. After that, strength and weakness of their competencies were identified before the PC providers were trained or were let to continue the study.

Experience on each work has shown to improve practical competency. Health professionals who work for a long time would have higher competency than that one who has short time of work. Based on Benner (1982), competency is the ability to perform a task producing desirable outcome. The competent practice is experience-based on each specific work context (Benner, Tenner, and Chesla, 1996 cited in Waddell, 2001). Professionally, healthcare team who are competent in one setting may be incompetent in another (Waddell, 2001). This is in accordance to the Benner model, (Benner, 1984) which was used for arrangement on health professionals'

competency as a process moving from novice to expert practitioners. Their competencies would increase in parallel with the length of the time spent in their work. Thus, duration of time work in PCU setting and PCU experience are positively related to PC competency which can be evaluated by using certain instruments.

The primary care competency assessment scale should be developed to assess the PC providers' competency. According to the evidences, competency of the PC providers especially PCU nurses should be assessed for further development. In addition, the new (proposed) instrument can evaluate the PC competency of the health professionals who are at different levels in terms of experience. The workers who are more experienced are more competent than that those who are less experienced.

In conclusion, primary care has constituted a new system of health care reform. It provides for all groups of people and types of health service including holistic and continual care. Primary care needs specific competency which is different from hospital-based in that the PC providers have to have a broad range of primary and preventive care competency. The PCU personnel with nursing background have had a difficult time adjusting and preparing themselves for the challenges resulting from the healthcare system's rapid changes. However, the PCU staffs' problems can be solved by training for improving the competency. In addition, experience in each work context also improves practical competency. Therefore, the primary care assessment scale should be developed so as to increase the competency of the PCU personnel by identifying their areas of professional weakness. The Primary Care Competency Assessment Scale (PC-CAS) for PC providers in Thailand, especially the PCU nurses had to be conducted. Because of the PCUs major tasks, the basic medical care and comprehensive care are provided by the PCU nurses.

Objectives

1. To develop the Primary Care Competency Assessment Scale (PC-CAS) for PC providers in Thailand.
2. To evaluate the validity and reliability of the Primary Care Competency Assessment Scale (PC-CAS) for PC providers in Thailand.

Research Questions

1. What are the components of the Primary Care Competency Assessment Scale (PC-CAS) for PC providers in Thailand?
2. How valid and reliable are the newly developed Primary Care Competency Assessment Scale (PC-CAS) for PC providers in Thailand?

Hypotheses

The proposed Primary Care Competency Assessment Scale (PC-CAS) for PC providers in Thailand was expected to be a well - developed instrument by having evidence support for its reliability and validity as the following:

1. Content validity index (CVI) is 0.80 or greater.
2. Internal consistency reliability using Cronbach's alpha coefficient is 0.70 or greater.
3. Stability reliability using percentage of agreement for two times measures is 0.75 or greater.

4. Construct validity evaluation using Confirmatory Factor Analysis (CFA) is appropriate for the primary care competency concept (χ^2 is the smallest value, GFI, AGFI, and CFI > 0.9, RMSEA, and RMR < 0.5).

5. Construct validity evaluation using hypothesis testing supports the Benner's theory as the following hypotheses:

5.1 Full-time PC providers have higher PC-CAS scores than part-time PC providers.

5.2 The duration of the PC providers' experiences are positively correlated with the PC-CAS scores of the PC providers.

Conceptual framework

The conceptual framework of this study was developed by incorporating theoretical and methodological considerations regarding primary care competency and Benner's model as follows.

Primary care competency was significant in healthcare competency which was itself a policy of the first National Health Professional Development Plan of Thailand (Srisuphan, Boontong, Senaratana, Hanucharurnkul, Suwannachat, & Kunaviktikul, 1999). Nurses, midwives, and others healthcare professionals who are in service must continuously improve their qualifications, competencies, communicative skills, and ethical values. The policy development places a greater legal obligation on employers to ensure that employees are suitable and possess appropriate competencies to carry out the tasks or activities they are required to undertake (McGee & Castledine, 2003). According to the Thai National Health Professional Development Plan, healthcare providers' competencies were mentioned especially primary care competency.

Primary care competencies consisted of many aspects based on clients' needs and standard of care. The competencies were based on PCUs' standard of work which were needed by the clients, e.g. professional nurses were high on health assessment and treatment/ prescription of acute and chronic illness competency, health officers were high on planning and evaluation of program, data analysis and synthesis, and research, public health staffs were high on health promotion and prevention, etc (The Working Group on Implementation of Universal Health Coverage under the State Policy, 2001; The Ministry of Public Health, 2001). Nevertheless, clear evidence indicates that PCUs require PC providers that possess competencies in primary care, namely, health assessment, healthcare management, integrated healthcare service, professional responsibility, and communication (Hattakit, Inthanon, Tonthreebon, Boonyasophon, Chinawong, Narin et al., 2001; Nuntaboot, Leelakraiwan, Sangchart, Shokebumroong, Buajaroen, Charoenchai et al., 2001). Those are similar to Senarattana and Kunaviktikul's work (2001 cited in Tiansawad, Yimyam, Senarattana, & Suchaxaya, 2002) but some aspects were added, such as patient empowerment, patient advocacy, environment and sanitation management, health information management, strategic planning, evaluating and continuing improvement, and establishing and developing team workers and research.

In addition, primary care competency of each professional provider was derived from research studies. The concept of competency from the western perspective comprises of multiple dimensions. Few studies developed competency, i.e., public health competency (Ouzts, Brown, Diaz, & Swearingen, 2006), cultural competency (Ekelman, Bello-Haas, Bazyk, & Bazyk, 2002; Velde, Wittman, & Bamberg, 2002), and health informatics competency (Moorsel, 2005). Many studies assessed clinical and cultural competency of

healthcare providers/ professionals (Connelly, Yoder, & Miner-Williams, 2003; Davies & Gould, 2000; Gibson, Fletcher, & Casey, 2003; Girot, 1993; Lockyer, 2003; Meretoja, Eriksson, & Leino-Kilpi, 2002; Ramos, Schafer, & Tracz, 2003; Smith-Campbell, 2005; Snyder, 1997; Staggers, Gassert, & Curran, 2002; Watson, Stimpson, Topping, & Porock, 2002). There was not research development of primary care competency assessment tools. Little research were related to that, they were the development of public health competency assessment tools (Kaiser & Rudolph, 2003), competency in community-oriented health care instrument development (Chen, Ervin, Kim, & Vonderheid, 1999), competencies for use in objective structured clinical examinations (Geiger, Heermann, & Eilers, 2005), assessment physicians' competency tools (Evans, Elwyn, & Edwards, 2004; Violato, Marini, Toews, Lockyer, & Fidler, 1997). However, these scales were used to assess the competency of health professionals working in community / rural areas, including lay caregivers. They seemed to be inapplicable to assess primary care competency among PC providers working in primary care units.

In Thailand, primary care competency in various characteristics of provider professionals was studied. Many research studies were taking the concept of competency (Cheaplump, 1995; Chumchuay, 1998; Sansuk, 1996; Wisawatapnimit, 1996; Wongkumjun, 1998). Most of them studied factors which contributed to healthcare providers' competency in different professions, e.g., professional nurses in health centers (Sungsuwan, 1995), public health directors (head/chief of health center) (Homteep, 2006; Phusing, 2002; Vanichanon, 1990) midwife and technical nurses (Klaiklung, 1992), health personnels (Buddharo, 2002; Pramono, 1999; Thongton, 1999), health officers (Bunsaenpaen, 1996), and factors related to primary care performance or role performance (Thongruksri, 2001; Wongprayoon, 2002;

Wungsiripecth, 1991). Two studies (Boontong, 2000; Wongprayoon & Authid, 2004) explored roles of PC providers, i.e., manager, healthcare provider, coordinator, change agent, counselor, participator, teacher, patient advocator, researcher, and informatic and technological user. These roles reflected the PC providers' competencies in many aspects, e.g., health assessment, health and illness management, community empowerment, patient advocacy, nursing care provision, sanitation and environment management, referral and continuing care management, nursing information management, nursing policy and nursing strategic planning, nursing evaluation and quality control, and nursing team-working. Only one study developed a competency assessment tool for nurse directors in community hospitals (Pidchayanon, 1999). The scale was composed of eight factors, i.e., (1) manager, (2) leader, (3) technological user, (4) marketing provider, (5) healthcare service supporter, (6) academy and researcher, (7) practice provider, and (8) personal developer. However, the review of current literature indicates that research needed to be carried out in relation to assessing primary care competency of PC providers and constructing an instrument for measuring competency of the PC providers.

Primary care competency

Primary care core competencies were derived from research studies and professionals' regulations. The primary care competency for PC providers was proposed by many authors, e. g., Senarattana and Kunaviktikul (2001 cited in Tiansawad et al., 2002), Hattakit et al. (2001), and Nuntaboot et al. (2001). The core competencies proposed by those authors were (1) health promotion, (2) health prevention, (3) health rehabilitation, (4) healthcare practice, (5) human relationship,

(6) informative management (7) home healthcare, (8) professional development, and (9) continuing healthcare improvement. While primary care provision including the practice in the community was expressed on the major competency of Thai general nurses and midwives consisted of (1) ethical practice (according to professional standards and professional regulations and civil litigation), (2) educator and counselor, and (3) leadership (Boontong, 2001). The standards of primary care nursing and midwifery services mention (1) healthcare organizational management, (2) personnel management, and (3) healthcare outcome management (Srisuphan, 2004). Patient empowerment, patient advocacy, and environmental management were stated by Senarattana and Kunaviktikul, whereas cultural competency and critical thinking were mentioned in the two researches (Hattakit et al., 2001; Nuntaboot et al., 2001). In addition, other competencies of healthcare providers in Thailand consisted of planning and motivation (achievement, recognition, and responsibility) (Buddharo, 2002; Phusing, 2002; Vanichanon, 1990), practical skills (home visits, school health inspection program, and pregnancy checking programs (Klaiklung, 1992), and health administration (planning and developing human resource) (Thongton, 1999).

In addition, constructing the concept of PC competency was supported by core competency of 10 international agencies. The agencies consisted of competency of the American public health (Quad Council of Public Health Nursing Organizations, 2004), competency of Canadian nurse practitioners (Registered Nurses Association of British Columbia-RNABC, 2003), competency of the American primary care nurse practitioner and clinical nurses specialist, and the American family nurse practitioners (Family Nurses Practitioner Association, 2004; the American Association of Colleges of Nursing-AACN, 2002, 2004), competency of New Zealand nurse practitioners

(Nursing Council of New Zealand, 2004), competency Nova Scotia nurse practitioner, Canada (College of Registered Nurses, Nova Scotia, 2002), competency of the US training specification for primary health care nursing (Clinical Training Agency, 2003), competency of Manitoban registered nurses, Canada (College of Registered Nurses of Manitoba-CRNM, 2003), and competency of Alberta registered nurses, Canada (Alberta Association of Registered Nurses, 2000).

The core competencies among those agencies consisted of (1) health assessment, (2) planning, (3) communication, (4) practical community, (5) basic public healthcare, (6) care management, (7) health promotion, health protection, disease prevention, and treatment. While, pharmaco-therapeutics and therapeutics are focused by RNABC, CRNM, and SRNA. Professional responsibility and accountability were mentioned by RNABC, AACN, Nursing Council of New Zealand, SRNA, CRNM, and Alberta Association of Registered Nurses. Cultural competency is expressed by Quad Council of Public Health Nursing Organizations and AACN. Quality of health care practice and improvement was stated by AACN and Nursing Council of New Zealand. In addition, Quad Council of Public Health Nursing Organizations mention leadership and system thinking, whereas Nova Scotia nurses expressed advocacy and community development competency, Alberta Association of Registered Nurses stress ethical competency, and AACN present teaching-coaching competency. In addition, competency of physicians (Evans, Elwyn, & Edward, 2004; Lockyer, 2003) consisted of clinical competency, interpersonal and communication, code of ethic (integrity, empathy, compassion, and justice), professionalism (professional management), and humanistic qualities (psychosocial management). Including, competency of the American Family Medicine - AFM (2007) were added, i.e.,

practicing holistically, data gathering and interpretation, making a diagnosis/making decisions, clinical management, managing complexity and promoting health, primary care administration, working with colleagues and in teams, community orientation, maintaining performance, and earning and teaching.

Core competency between international health professional agencies and national health agencies which were similar were kept to be the conceptual structure of PC competency. The competency of health assessment, health promotion, disease prevention, treatment, and healthcare management were emphasized by the internationally health professional agencies. It was similar to the national health agencies that focused on health promotion, health prevention, health rehabilitation, healthcare practice, home healthcare and basic medical care. In addition, both national and international healthcare agencies regarded to professional responsibility and accountability, culture, ethic and advocacy, and quality improvement. Furthermore, they focused on leadership, critical thinking, educator and counselor. Almost all aspects of management competencies of the international healthcare agencies referred to the care management whereas in Thailand they referred to administration of healthcare system. The construct of competencies from the national and international agencies were integrated to develop pre-specified domains of primary care competency for the Thai PC providers as the following.

1. Health assessment

Health assessment refers to the performance in assessing all aspects of patient's health status, and healthcare services. Health assessment consists of data gathering, screening, recording and reporting, and making diagnosis.

2. Healthcare management

Healthcare management refers to the performance in process of working through resource preparation for providing health care, composing of strategic/program planning, organizational management, personnel management, policy development/policy directing, financial management, network coordination, information management, quality improvement and risk management.

3. Integrated healthcare service

Integrated healthcare service refers to the performance by using health promotion, health prevention, treatment/ prescription, and health rehabilitation.

4. Professional responsibility

Professional responsibility refers to the performance and demonstration of professional knowledge and judgment to the public in ensuring that PC providers' practices and conduct meet legislative requirements, professional standards, and quality improvement. The effort attempts to maximize clients' safety and health. The professional responsibility consists of ethical provision, patient rights and code of ethics concerning, patient advocacy, professional development, self development, research utilization, and quality improvement of healthcare.

5. Communication

Communication refers to the performance in expressing ideas and feeling when giving information. Communication consists of leadership behavior, human relationship, cultural competency, community empowerment, healthcare professional networking, and multidisciplinary team participation.

Benner's Model

Benner (1984) presented the skillfulness of clinical practitioners in daily practice and competency stages. The stages of novice, advanced beginner, competent, proficient, and expert are used to apply competency to the skill development of clinical staff development. Benner's model is a performance progression of the new staff to specialist, with characteristics and development activities for each level.

Novice/advanced beginner refers to specific guidelines to direct action. The duration of time should be 0-18 months.

Competent refers to actions in terms of long-range planning, data analysis, apply to action plan, and using guidelines to handle variables. The duration of time should be 18-36 months.

Proficient refers to situation as a whole process, performance guideline, and planning adaptation. The duration of time should be 3-5 years.

Expert refers to intuitive grasp of situation that can approach and be consultants. The duration of time is 5-7 years or above.

Based on Benner's model, healthcare professionals' competency change when they get more experiences, e.g., long time work, high education, and repeated situation. Therefore, in this study, construct validity was evaluated by testing the hypotheses based on Benner's model. The duration of healthcare professionals' experience in primary care, PCU employment, and education was seen to be correlated with the primary care competency of PC providers.

Definition of terms

Primary care refers to a type of health service provision by PC providers especially healthcare personnel, e. g., PCU nurses, physicians, public health staffs, health officers, head/ director of health center. Feature of the Thai primary care system is front line health care service of the Ministry of Public Health which provides primary care to all people in the community. There are four attributes of primary care, i.e., first contact care, longitudinal care, comprehensive care, and coordinated care. Goals of the primary care system are to provide care based on the principles of availability, accessibility, acceptability, affordability, community involvement, holistic care, coordination and continuation of care.

Primary care (PC) providers refer to healthcare personnel, e. g., PCU nurses, physicians, pharmacists, dentists, public health staffs, health officers, midwives, technical nurses, and public health director who have been working at PCU more than one-year .

Primary care competency refers to acquired knowledge, skill, and trait of PC providers needed for providing health services in PCU. “Knowledge” refers to an essential knowledge for the PC providers to provide care at PCU. “Skill” refers to specific skills that the PC providers needed for providing care at the PCU. “Trait” refers to significant personality of the PC providers that are needed for their care provision. According to five primary care competencies that derived from previous research studies and literature reviews, i.e., health assessment, healthcare management, integrated healthcare services, professional responsibility, and communication were used to be pre-specified domain of primary care competency.

Significance of the Study

The newly developed PC-CAS can be used to assess and monitor the primary care competency for Thai PC providers. Furthermore, the PC-CAS can be guided to develop professional healthcare curriculum for future PC providers. It can be directed to conduct the PC providers' competency regulations for health professionals. The creation of PC-CAS will allow other researchers to explore more evidences in support of its construct and criterion- related validity.