

Review Article

The Role of Nurse Practitioners in Primary Health Care: A Force for the Future

Pregamol Rutchanagul, Wipada Sangnimitchaikul

Abstract

The important workforce that drives and enhances the quality of primary health care (PHC) is the nurse practitioner (NP). However, it remains doubtful whether the NP can truly help PHC achieve its ultimate goal as expected. This article provides the reviews of related literature that include lessons experienced by Thai NPs. The results show four benefits of (1) the patients, (2) the healthcare system, (3) healthcare expenditures, and (4) the career advancement. The work-related challenges of NPs were found to include: (1) the lack of precise work policies; (2) the lack of clarity related to the NP role; (3) the risks of medical malpractice; and (4) unfair compensation. For PHC to achieve its goal, the NPs are still perceived as a necessary mechanism and vital driving force. Yet, the main weakness of Thai NPs work lies in unclear work-related policy; thus a solution related to its management system is urgently needed.

Keywords: Nurse practitioner, Primary health care, Thailand

Received: 8 October 2018

Revised: 25 August 2020

Accepted: 8 September 2020

Introduction

Primary health care (PHC) is defined as the frontline healthcare service with universal accessibilities for ongoing care, comprehensive and integrated, which include health promotion, disease prevention, cure, rehabilitation and palliation to promote ability of individuals and families in the communities to take care of their health.^{1,2} PHC was established according to the Declaration of Alma Ata by World Health Organization (WHO) in 1978 to meet its goal of "Health for All by the Year 2000". However, PHC has not yet achieved the aforementioned goal.² The shortage of healthcare workforce, especially primary care physicians in rural areas is one of the top three challenges causing failures of PHC in every country including Thailand.^{3,4,5} Based on data from Thailand's Ministry of Public Health, the maldistribution of physicians between the urban and the rural areas means the serious shortage of physicians in most areas of the country.⁶ It is essential to produce more qualified staff that are skillful in managing healthcare services and advanced clinical practice. In comparison with other healthcare professions, nursing is the career with the largest number of staff in the workforce. With experience in patient care, knowledge in epidemiology, behavioral science, and community health, nurses have the unique characteristics capable for enhanced capabilities to conduct PHC.⁷ Therefore, increasing the number of qualified nurses is probably the sustainable solution for physician shortages in PHC. One proposed solution is to expand the scope of practices for nurses so that they can provide care and treat patients while working collaboratively with physicians.⁸ Expanding the role of nurse practitioners (NPs) could fill the gap of ineffective PHC.⁵ Thus, it is proper for the global health organizations to generate role expansion policies for the NPs.

Nurse practitioners: Expected role in primary health care

The first nurse practitioner training program was originated in the United States during the 1960s by Prof. Dr. Lorretta Ford, a registered nurse (RN) and Dr. Henry Silver, a pediatrician in order to train nurses for providing effective healthcare services in communities.⁹ The role of NPs is to recruit resources for primary care due to physician shortages. Since responsibilities of nurses are similar to the scope of primary care physicians, they only need to be trained through advanced education and clinical skills for health promotion and maintenance through diagnosis and treatment of both acute and chronic illness.^{8, 10, 11} Regarding the scope of practice (SOP) of NP, the US law and regulations determined that independent professional practice is considered legal in the following areas: 1. comprehensive physical assessment; 2. diagnosis of common health problems or chronic diseases; 3. ordering and providing of treatment, and interpreting of laboratory tests; 4. prescribing and administering of medications; 5. implementation of appropriate interventions or therapeutic; 6. patient referring to appropriate healthcare services; and 7. providing of emergency care.⁹

Many countries have followed the model of US practices to solve problems in their healthcare systems. In Asia, a significant development for the NPs started in South Korea in 1973.¹² Similar to the NP development in the western countries, the need for promoting NPs for primary health care units was necessary for health care reform in Thailand in order to minimize the problem of physician shortages. In 2002, the Thai government introduced a policy to work towards the provision of NPs in all health promoting hospitals (HPH). To support this policy, a four-month short course training program for

registered nurses (RNs) to become general nurse practitioners (GNPs) was developed. Since then, there have been a number of institutes providing certified education for NPs.⁷ Recently, GNPs in Thailand are classified into two groups: 1) neonatal NPs, and 2) eye NPs. Additionally, many nursing schools offered Advanced Community Nurse Practitioners (ACNPs) programs at the master's level and got a certified as advanced practice nurse. There are differences in terms of preparation, qualifications, and the type of practice between two types of NPs in Thailand: 1) ACNPs and 2) GNPs. The GNPs work in the community as primary care providers; whereas the practice of the ACNPs is in primary care and outpatient settings. ACNPs with advanced knowledge and education are more formally qualified than GNPs since ACNPs are eligible to 1) participate in multi-disciplinary networks and medical organizations; 2) provide healthcare to patients with complex illnesses by using advanced health assessment; 3) diagnose and prescribe medication and intervention for common health problems according to the established protocol; 4) manage chronic diseases and treat dying patients at home giving counseling and related services; and 5) conduct research to assess the health care needs.⁷

Although the preparation and qualifications of GNPs and ACNPs are different, the practice of two types of NPs emphasizes to contribute to filling the gaps in service provision in primary care. According to the Thailand Nursing and Midwifery Act, Thai NPs have legal rights to manage and direct the care of patients in the following the scope of practice (SOP).⁷

1) Physical assessment, disease diagnosis, and appropriate treatments for emergency illness of 39 symptoms with immediate treatment, in addition to make referrals of patients with severe illness.

2) Medication prescription of 18 groups of drugs for disease treatment based on specified guidelines, including the provision of basic immunity and family planning care.

3) Provide emergency care and make referrals.

4) Follow-up treatments and management of chronic illness including dying patients at home.

Lessons learned from the NP roles in Thailand

NPs working at primary care units (PCUs) play key roles in managing health for people with chronic illness. The aims of this article were to explore the role of NPs within the Thailand context and show the advantages of NPs, in addition to identify challenges of NPs in the Thai primary health care. It also reflects on the important lessons learned in developing the NP roles in Thailand.

The role of NPs has changed from assisting physicians to functioning within extended skills that allow autonomous practice. NPs have the competencies to provide treatments in the outpatient department, geriatric clinics, chronic illness clinics, home visits, and community healthcare. Within this context Thai NPs' practices have shown three major roles, including 1) establishing relationship between healthcare providers and the community; 2) managing health and illnesses; and 3) providing health advice and managing quality in healthcare services.⁷ Evidence showed that NPs perceived their role performance has been allowed to autonomous practice at a high level and they expressed confidence regarding providing primary healthcare services.¹³ NPs realized their legalized capabilities to provide both holistic and systematic care to patients. With abilities to give counseling and referrals, they are also aware of the permitted role to provide proactive and preventive care to patients with chronic diseases.¹⁴ In summary, Thai NPs were found to be capable of serving in all scopes of practice regulations namely primary care, emergency care, and continuing care management of chronic illness.

Advantages of NPs in primary health care

An autonomous expanded clinical practice of Thai NPs has led to the extension of better primary care service, which can be divided into the following the advantages of NPs in the Thai PHC:

1. Patient Outcomes: This refers to how patients benefit from NP's services in terms of health outcome. It is found that NPs can effectively teach patients and their families to take care of health leading to significantly improved illness conditions, reducing complications, and healing of certain diseases. The quality of life of the patients also improves greatly, while life risk factors are much reduced.¹⁵ The primary medical care outcomes were that 57-73% of the patients who received care from NPs completely recovered from illness or were back to having normal symptoms, while 27-43% had improved symptoms.¹⁶ This brought about great satisfactions on the part of the patients who later returned to receive care and services of NPs. Almost all of them (97.3-99.5%) indicated their willingness to receive continuous care from NPs.^{16, 17} Clients were impressed with NP's services result in higher levels of satisfaction with nursing outcomes. Without having to wait in a long queue, clients received valuable advice from NPs who engaged them in a kinship-like talk. This made it a friendly, relaxing atmosphere encouraging them to talk out their health problems without worries.^{14, 15, 16, 17, 18} This empirical evidence revealed the positive impact that Thai NPs had towards their patients. Similarly, the studies in the western countries showed that NPs' services really improved health outcomes, reduced hospital admissions, lowered nursing home resident hospitalization rates¹⁹, and enhanced quality of care in both cases of acute and chronic diseases.¹⁰ NPs were also reported to have higher patient retention as a result of high patient satisfaction concerning NP healthcare.^{3, 4, 5, 6}

2. Health system outcomes: The positive outcomes in the overall health systems could be summarized as the increase in number of patients in primary care service; thus, reducing crowded conditions in the secondary and tertiary healthcare. In addition, NPs have been working in extended roles for care coordination with multidisciplinary teams that can lead to strong healthcare networks in the communities resulting in the reduction of morbidity rate.^{15, 20} Consistent with previous research in the western countries, NPs' services can truly facilitate community engagement as patients enjoy greater access to primary healthcare services with the provision of effective holistic clinical and community-based healthcare.²¹ Moreover, NP services had a significant impact on the access to primary care among vulnerable populations. Particular groups of patients without health insurance can receive NP services.^{5, 22}

3. Cost effectiveness: Since healthcare services given by NPs tend to cost lower than those provided by physicians, it is cost effective when it comes to patients' payment. Research found that medical expense paid to NPs' care is reduced to 24.57 baht per person per visit, which is much lower than that of the physicians' care.¹⁷ Additionally, health administration by NPs can significantly reduce costs of the service providers especially the annual costs of medical supplies.^{15, 20} This is consistent with previous studies in which the cost-effectiveness analysis showed less expense paid to health services of NPs than that of physicians due to less treatment costs provided by NPs.⁵ In other words, the costs and efficiency of NP healthcare service provision featured lower costs than physicians for the same services.^{23, 24} Owing to their lower educational costs and less payment the service providers give as salaries to NPs, services provided by NPs offer more accessibility to effective cost expenditures associated with healthcare services.⁴

4. NPs' benefits: Some previous studies in Thailand for the broadened roles in providing healthcare services of NPs were focused on the benefits to NPs including satisfaction and confidence with their roles. For example, NP's role in PHC enhanced their self-confidence in taking care of the patients with effective case screening abilities, more advanced capabilities due to formal trainings, and the continuing opportunities for career advancement. All of these factors create awareness of professional self-esteem.^{15, 20}

All these positive outcomes are found to be the direct results of characteristics of the NPs themselves especially the priorities they gave to holistic care so that all dimensions of health and well-being of patients are considered when planning and delivering care. As a consequence, comprehensive patient-centered approach in service provision was emphasized. This also refers to when they offered counseling with sufficient time to monitor, screen and assess patients.⁷

Challenges of NPs in primary health care

Despite research findings reveal benefits of Thai NPs in PHC, they still face certain challenges including the following:

The first challenge of development of nurse practitioner in Thailand can be grouped as the lack of precise work policy, proper organizational management, clear job responsibilities and career hierarchy that made it difficult for NPs' practices to become truly effective.^{14, 15} Based on the organizational hierarchy of Public Health Ministry, NPs work under the supervision of community health centers, rather than under the nursing department. Therefore, with limited understanding regarding SOP of NPs, supervisors tend to overlook the career advancement opportunities of NPs. Unclear managerial policies and work hierarchy resulting in unclear SOP of NPs, which could lead to overburdened job descriptions and the lack of properly assigned replacement workforce.²⁰

The second challenge encountered in the lack of clarity related to roles of NPs as perceived by supervisors, physicians, and co-workers. Therefore, a large number of NPs have been expected too much in terms of duties. This leads to improper assignment of work to NPs, the work that is outside of or unrelated to their SOP. Previous study found that unclear job responsibilities of NPs lead to over assigning of work and duties, some of which overlapped with belonged to the physicians; consequently, too much work results in ineffectiveness that their work was frequently neither valued, or appraised, nor approved, by supervisors and co-workers.²⁰ Likewise, in western countries, common misunderstandings and confusions found among other health providers were those concerning NPs' scope of practice and scope of cooperation with them.^{4, 25, 26}

The issue of support among co-workers is deemed important since it is one of the most important threats hindering the growth and success of NP. A number of physicians viewed NPs as inferior health providers and showed feeling of insecurity regarding the advantages and disadvantages of collaborating with an NP⁸. Therefore, they tended to oppose the expansion of independent roles of NPs' health services. Together with the compensation issue, NPs could be seen as career competitors by those physicians, so they were not fully supported as co-workers.⁴ In the Thai contexts, however, there has been no research that examined the challenges concerning the co-operation, nor the competition involving compensation between NPs and other health professionals. Unlike NPs in western countries, Thai NPs do not receive earnings based on the number of patients.

The third challenge was concerned about the risks of medical malpractice. Their unclear scope of practice made it difficult regarding decisions about job delegation as some were overlapped with those physicians. This affects comprehensive assessment of patients as well as supportive and symptomatic

treatments. With physician shortages and limited staff in some areas, many NPs may work outside their SOP prescribed by law. This is consistent with previous study found that most Thai NPs usually worked beyond designated roles prescribed by laws and their SOP.²⁰ NPs worked in replacement for physicians' absence in community hospitals. This could bring about the risks of medical malpractice. This problem was associated with the fact that a number of NPs lacked up-to-date clinical knowledge of medication, treatment of chronic diseases, vaccination, and the emergency medical treatment.¹⁶ This is obviously obstructing the development of NPs in Thailand. According to study in Western countries, NPs' malpractice mostly included (1) those related to diagnosis (41.46%) namely failure to diagnosis, delay in diagnosis, and misdiagnosis, (2) those related to treatment (30.79%) namely delay in treatment and errors in ordering wrong medication.²⁷ These risks of malpractice due to lack of updated clinical knowledge of NPs caused other healthcare professionals to raise critical issue of accountability of NPs and did not support the roles of NPs.

Finally, NPs' compensation has been found to mismatch with NPs' excessive workload. The characteristics of NPs' work differ from those of general nurses and certain work overlaps partly with that of the physicians' making it unfair compensation if they receive less than deserving salary when considering their excessive amount of workload.²⁰ Without the compensation equal to that paid to a registered nurse, NPs usually lack work-related motivation and this can lead to tendency for NP shortages in the future. Likewise, in other countries as their payment is based on the amount of their work and performance; however, remuneration for NPs is definitely different from physicians in Australia and USA.^{4, 10} These findings show that the reimbursement may not be appropriate for NP services, which can impede the sustainability of the NP roles.

Recommendations for the future step of NP in Thailand

Recommendations for improving the progress for NP growth and development can be summarized as follows:

1. Nursing professor leaders should push for the national policy that will clarify and identify the exact work description of NPs so that it will reflect their true scope of practice. This will enable their supervisors, physicians, and co-workers to understand the exact roles of NPs. Besides, they should help define the career hierarchy for proper organizational administration for NPs.

2. There is a need for more academic research on nurse practitioner clinical performance; further researches should also focus on clinical outcomes assessment, consisting of health status of patient, number of hospital admissions as the reflection of the work of NPs. The measurement of healthcare team satisfaction and changes in healthcare team workloads should be included in the study for evaluation of quality nurse practitioner.

3. The nursing schools and institutes should provide more professional training courses that emphasize NPs' continuing education in advancing their knowledge and career development. This will help them minimize risks of malpractice.

4. The effective health information systems (HIS) should be established to serve as databases for professional performance evaluation. This important information will reflect strengths and weaknesses in the health systems that relate to NPs, which can lead to determining proper policies by the healthcare policy makers in the areas of NPs' roles, remuneration and compensation as well as career advancement for NPs.

Discussion

NPs are an indispensable workforce that can help Thai PHC to achieve its ultimate goal of better health for all Thais. This goal can be achieved through greater accessibility, cost-effectiveness, and good quality care in the changing world. Challenges, however, still remain and the nursing professionals are urged to come up with better policies aiming to clarify NPs' scope of practices and career hierarchy as well as the solutions on risks for medical malpractice and unfair compensation. These will eventually help strengthen NPs' performances and Thai PHC at the same time.

References

- Muldoon LK, Hogg WE, Levitt M. Primary care (PC) and primary health care (PHC): what is the difference?. *Can J Public Health*. Sep 1, 2006; 409-411.
- Van Lerberghe W. The world health report 2008: primary health care: now more than ever. World Health Organization; 2008.
- Humphreys J, Wakerman J. Primary health care in rural and remote Australia: achieving equity of access and outcomes through national reform: a discussion paper; 2008.
- Cashin A, Theophilos T, Green R. The internationally present perpetual policy themes inhibiting development of the nurse practitioner role in the primary care context: An Australian–USA comparison. *Collegian*. 2017;24(3):303-312.
- Xue Y, Ye Z, Brewer C, Spetz J. Impact of state nurse practitioner scope-of-practice regulation on health care delivery: Systematic review. *Nurs Outlook*. 2016;64(1):71-85.
- Ministry of Public Health Thailand. Human Resources for Health Country Profile Thailand. 2010. Available from: www.searo.who.int/entity/human_resources/data/tha_profile.pdf.
- Hanucharunkul S. Nurses in primary care and the nurse practitioner role in Thailand. *Contemp Nurse*. 2007;26(1):83-93.
- Cassidy A, Bodenheimer T, Agres T, Schwartz A, Dentzer S. Health policy brief: nurse practitioners and primary care. *Health Aff*. 2012;1-4.
- Ritter A, Hensen-Turton T. The primary care paradigm shift: an overview of the state-level legal framework governing nurse practitioner practice. *Health Law*. 2007;20:21.
- Currie J, Chiarella M, Buckley T. An investigation of the international literature on nurse practitioner private practice models. *Int Nurs Rev*. 2013;60(4):435-47.
- American Association of Nurse Practitioners. What is a Nurse Practitioner?. 2016. Available from: <http://www.nursepractitionerschools.com/faq/what-is-np>.
- Schober M, Affara F. *International council of nurses: Advanced nursing practice*: John Wiley & Sons; C 2009.
- Jomjeen N. Perception and expectations of nurse practitioners and administrators regarding the nurse practitioner's role performance in primary medical care. [master, s thesis]. [Pathum Thani]: Thammasat university; 2009.
- Junprasert S. Nurse practitioners' performance quality: A case study of the eastern region. *Thai Journal of Nursing Council*. 2012;27(1):25-38.
- Hanucharunkul S, Nantachaipan P, Suwisith N, Noonill N, Kongtahn O, Isaramalai S. Lessons from the case studies: The success of nurse practitioners. *Nonthaburi: Thailand Nursing and Midwifery Council*. 2008.
- Boontong T, Athaseri S, Sirikul N. Nurse Practitioners Role towards Primary Medical Care in Primary Health Care setting. *Thai Journal of Nursing Council*. 2007;22(4):24-37.

17. Kasemsuk W, Piaseu N, Jarupat Maruo S. Activities and Primary Medical Care Outcomes of Community Nurse Practitioner. *Thai Journal of Nursing Council*. 2011;26(2):70-85.
18. Luecha T, Junprasert S, Rattanagreethakul S. The quality of nurse practitioner care services as perceived by clients in the eastern region. *The Journal of Faculty of Nursing Burapha University*. 2011;20(1):70-83.
19. Oliver GM, Pennington L, Revelle S, Rantz M. Impact of nurse practitioners on health outcomes of Medicare and Medicaid patients. *Nurs Outlook*. 2014;62(6):440-447.
20. Terathongkum S, Hanucharurnkul S, Suvisit N. Perceived benefits, problem situations, and suggestions of nurse practitioners in Thailand. *Thai Journal of Nursing Council*. 2010;24(2): 39-49.
21. Poghosyan L, Lucero R, Rauch L, Berkowitz B. Nurse practitioner workforce: A substantial supply of primary care providers. *Nurs Econ*. 2012;30(5):268-274.
22. Carryer J, Yarwood J. The nurse practitioner role: Solution or servant in improving primary health care service delivery. *Collegian*. 2015;22(2): 169-174.
23. Naylor MD, Kurtzman ET. The role of nurse practitioners in reinventing primary care. *Health Aff*. 2010;29(5):893-899.
24. Timmons EJ. The effects of expanded nurse practitioner and physician assistant scope of practice on the cost of Medicaid patient care. *Health Policy*. 2017;121(2):189-196.
25. McInroe G. Challenges remain for NPs, despite positive perceptions. *Nurs N Z*. 2016;22(2):20-22.
26. Archibald MM, Fraser K. The potential for nurse practitioners in health care reform. *J Prof Nurs*. 2013;29(5):270-275.
27. Sweeney CF, LeMahieu A, Fryer GE. Nurse practitioner malpractice data: Informing nursing education. *J Prof Nurs*. 2017;33(4):271-275.

บทคัดย่อ

บทบาทของพยาบาลเวชปฏิบัติในการสาธารณสุขมูลฐาน: พลังแห่งอนาคต

ปรียกมล รัชนกุล, วิภาดา แสงนิมิตรชัยกุล

คณะพยาบาลศาสตร์ มหาวิทยาลัยธรรมศาสตร์

ผู้ให้ติดต่อ: ผู้ช่วยศาสตราจารย์ ดร.ปรียกมล รัชนกุล คณะพยาบาลศาสตร์ มหาวิทยาลัยธรรมศาสตร์

99 หมู่ 18 ถนนพหลโยธิน ตำบลคลองหนึ่ง อำเภอคลองหลวง จังหวัดปทุมธานี 12120 โทร. 02-986-9213 Ext. 7390 E-mail: pregamol@nurse.tu.ac.th

กำลังคนด้านสุขภาพที่สำคัญที่จะทำให้เกิดการขับเคลื่อนและพัฒนาคุณภาพของระบบบริการสาธารณสุขมูลฐานก็คือพยาบาลเวชปฏิบัติ แต่อย่างไรก็ตามยังมีข้อกังขาว่า พยาบาลเวชปฏิบัติจะเป็นกลไกที่ทำให้การสาธารณสุขมูลฐานบรรลุเป้าหมายสูงสุดดังที่คาดหวังไว้ได้จริงหรือไม่ ดังนั้นบทความฉบับนี้จึงเป็นการทบทวนวรรณกรรมจากบทเรียนที่ได้เรียนรู้เกี่ยวกับพยาบาลเวชปฏิบัติในประเทศไทย ผลจากการศึกษาพบว่าการมีพยาบาลเวชปฏิบัติในระบบบริการสุขภาพ ทำให้เกิดผลลัพธ์ที่ดีทั้งต่อ (1) ผู้ป่วย, (2) ระบบบริการสุขภาพ, (3) ค่าใช้จ่ายในการรักษา, (4) ความก้าวหน้าในอาชีพของพยาบาล แต่อย่างไรก็ตามยังมีความท้าทายในการปฏิบัติงานของพยาบาลเวชปฏิบัติ ซึ่งประกอบด้วย (1) การขาดนโยบายที่ชัดเจนเกี่ยวกับโครงสร้างการทำงาน, (2) การขาดความชัดเจนในบทบาท, (3) มีความเสี่ยงต่อการปฏิบัติผิดพลาดทางการแพทย์ และ (4) ค่าตอบแทนที่ไม่เป็นธรรม การบรรลุความสำเร็จของการสาธารณสุขมูลฐานยังจำเป็นต้องมีพยาบาลเวชปฏิบัติเป็นกลไกสำคัญในการขับเคลื่อน แต่จากปัญหาเชิงนโยบายและการบริหารจัดการที่ไม่ชัดเจนซึ่งเป็นจุดอ่อนสำคัญของการพัฒนาพยาบาลเวชปฏิบัติในประเทศไทย ดังนั้นจึงจำเป็นต้องมีการแก้ปัญหาที่เกี่ยวข้องกับระบบการบริหารดังกล่าวอย่างเร่งด่วน

คำสำคัญ: พยาบาลเวชปฏิบัติ, การสาธารณสุขมูลฐาน, ประเทศไทย