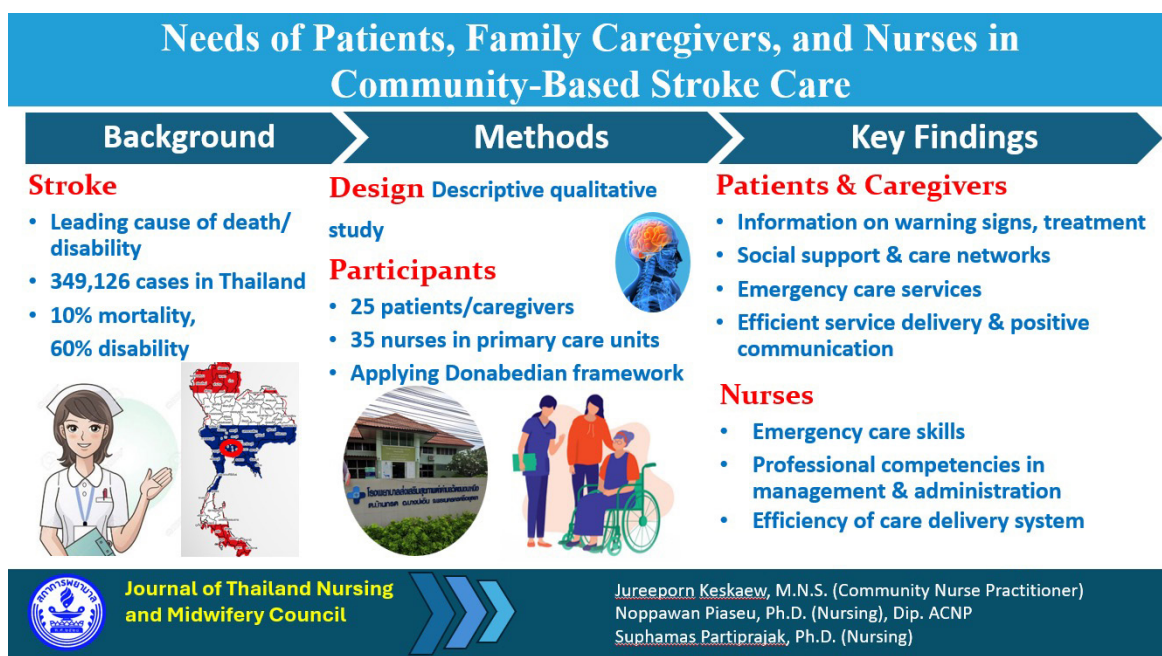


Needs of Patients, Family Caregivers, and Nurses in Community-Based Stroke Care¹

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Extended Abstract

Introduction Stroke is a leading cause of mortality among non-communicable diseases. However, research on the need for community-based stroke care remains limited, particularly among key stakeholders such as stroke patients, family caregivers, and nurses working in primary care units (PCUs).

Objective This descriptive qualitative study aimed to describe the care needs of stroke patients, family caregivers and nurses working in primary care units.

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Design This study was descriptive qualitative research.

Methodology The study participants included 35 nurses working in primary care units across four provinces in central Thailand, and 25 stroke patients or their family caregivers, selected through purposive sampling. Data were collected using in-depth interviews and focus group discussions guided by semi-structured interview questions. The data were analyzed using content analysis.

Results The majority of stroke patients had been diagnosed with hypertension (80%), and only five patients were in the recovery stage. The average duration of service utilization at the primary care unit was 60 months. The needs of patients and family caregivers included: 1) information regarding warning signs and treatment, 2) social support and care networks, 3) emergency health care services and 4) efficient service delivery and positive communication. Patients and caregivers expressed structural needs related to staffing and infrastructure, including a desire for increased nursing personnel and more spacious service areas with sufficient seating. Process-related needs included educational information on stroke prevention and warning signs, such as dietary guidelines, physical activity, smoking cessation, and symptom monitoring. Additionally, there was a need for emergency care and efficient services and communication for patients requiring long-term care. All nurses were female, with a median of 8 years of experience working in primary care settings. Their expressed needs included: 1) emergency care skills, 2) professional competencies in management and administration, and 3) efficiency of care delivery system.

Recommendation The findings of this study suggest the need for developing a comprehensive care management guideline for stroke patients. Key recommendations include enhancing emergency care competencies among nurses working in primary care settings, improving the efficiency of management systems, strengthening care networks and support mechanisms, and ensuring the provision of medical tools and equipment that align with the needs of patients and caregivers. These measures aim to improve health outcomes and the quality of stroke care within community settings.

Keywords stroke patients/ family caregivers/ nurses/ care needs/ community

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ความต้องการของผู้ป่วย ญาติผู้ดูแล และพยาบาลในการดูแล โรคหลอดเลือดสมองในชุมชน¹

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บทคัดย่อขยาย

บทนำ โรคหลอดเลือดสมองเป็นสาเหตุการเสียชีวิตที่สำคัญของกลุ่มโรคไม่ติดต่อเรื้อรัง อย่างไรก็ตาม การวิจัยเกี่ยวกับความต้องการในการดูแลผู้ป่วยโรคหลอดเลือดสมองที่มีชุมชนเป็นฐานยังมีจำกัด โดยเฉพาะในกลุ่มผู้มีส่วนได้ส่วนเสียที่สำคัญ ได้แก่ ผู้ป่วยโรคหลอดเลือดสมอง ผู้ดูแลในครอบครัว และพยาบาลที่ปฏิบัติงานในหน่วยบริการปฐมภูมิ

วัตถุประสงค์การวิจัย การวิจัยเชิงคุณภาพแบบพรรณนาครั้งนี้มีวัตถุประสงค์เพื่ออธิบายความต้องการในการดูแลของผู้ป่วยโรคหลอดเลือดสมอง ผู้ดูแลในครอบครัว และพยาบาลที่ปฏิบัติงานในหน่วยบริการปฐมภูมิ

การออกแบบการวิจัย การศึกษานี้เป็นการศึกษาเชิงคุณภาพแบบพรรณนา

วิธีดำเนินการวิจัย ผู้ให้ข้อมูลเป็นพยาบาล 35 คน ที่ปฏิบัติงานในหน่วยบริการปฐมภูมิใน 4 จังหวัดทางภาคกลาง และผู้ป่วยโรคหลอดเลือดสมองหรือผู้ดูแลในครอบครัว จำนวน 25 คน เลือกแบบเจาะจง ดำเนินการสัมภาษณ์เชิงลึกและการสนทนากลุ่มโดยใช้แนวคำถามกึ่งโครงสร้าง วิเคราะห์ข้อมูลด้วยการวิเคราะห์เชิงเนื้อหา

ผลการศึกษา ผู้ป่วยโรคหลอดเลือดสมองส่วนใหญ่ได้รับการวินิจฉัยว่าเป็นโรคความดันโลหิตสูง (ร้อยละ 80) มีเพียง 5 คนที่อยู่ในระยะฟื้นตัวระยะเวลาก่อนการรับบริการจากหน่วยบริการปฐมภูมิเฉลี่ย 60 เดือน ความต้องการของผู้ป่วยหรือผู้ดูแลในครอบครัว ได้แก่ 1) ข้อมูลเกี่ยวกับสัญญาณเตือนและการรักษา 2) การสนับสนุนทางสังคมและเครือข่ายการดูแล 3) บริการทางสุขภาพในภาวะฉุกเฉิน และ 4) การบริการที่มีประสิทธิภาพและการสื่อสารเชิงบวก ผู้ป่วยและผู้ดูแลมีความต้องการด้านโครงสร้างในเรื่องบุคลากรและสถานที่ โดยต้องการให้มีพยาบาลเพิ่มขึ้น และมีสถานที่ให้บริการที่กว้างขวางขึ้น

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มีที่นั้งเพียงพอ ความต้องการด้านกระบวนการ ได้แก่ คำแนะนำเกี่ยวกับแนวทางปฏิบัติและสัญญาณเตือนของโรคหลอดเลือดสมอง เช่น แนวทางการรับประทานอาหาร การออกกำลังกาย การเลิกสูบบุหรี่ และการสังเกตอาการเตือนของโรค นอกจากนี้ยังมีความต้องการด้านการดูแลในภาวะฉุกเฉิน และการได้รับการและการสื่อสารที่มีประสิทธิภาพสำหรับผู้ป่วยที่ต้องการการดูแลระยะยาว พยาบาลทั้งหมดเป็นเพศหญิง มีค่ามัธยฐานของประสบการณ์ในการทำงานที่หน่วยบริการปฐมภูมิ 8 ปี ความต้องการของพยาบาล ได้แก่ 1) ทักษะการดูแลผู้ป่วยในภาวะฉุกเฉิน 2) ความเป็นมืออาชีพด้านการจัดการ/การบริหารจัดการ และ 3) ประสิทธิภาพของระบบการดูแล

ข้อเสนอแนะ ผลการศึกษานี้เสนอแนะให้มีการพัฒนาแนวทางการจัดการดูแลผู้ป่วยโรคหลอดเลือดสมอง โดยการเสริมทักษะการดูแลผู้ป่วยฉุกเฉินให้กับพยาบาลที่ปฏิบัติงานในหน่วยบริการปฐมภูมิ เพิ่มประสิทธิภาพของระบบการบริหารจัดการ เครือข่ายและการสนับสนุนการดูแล รวมถึงการจัดหาเครื่องมือและอุปกรณ์ให้เหมาะสมกับความต้องการของผู้ป่วยหรือผู้ดูแล เพื่อให้เกิดผลลัพธ์ที่ดีในการดูแลผู้ป่วยโรคหลอดเลือดสมองในชุมชน

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คำสำคัญ ผู้ป่วยโรคหลอดเลือดสมอง ญาติผู้ดูแล พยาบาล ความต้องการการดูแล ชุมชน

วันที่ได้รับ 12 เม.ย. 68 วันที่แก้ไขบทความเสร็จ 6 มิ.ย. 68 วันที่รับตีพิมพ์ 6 มิ.ย. 68

Background and Significance

Stroke constitutes a major public health problem in Thailand, exerting profound effects on the patients, their families, and society across multiple dimensions, including health outcomes, economic stability, and overall quality of life. The national incidence of stroke is increasing, accompanied by elevated rates of mortality and long-term disability. These trends contribute to considerable financial strain on both healthcare systems and affected households.

Stroke is a non-communicable disease, affecting brain arteries. The blocking of arteries by clots or bursts causes a shortage of blood flow that carries oxygen and nutrients to the brain, leading to the death of brain cells. It is considered the fifth leading cause of mortality and a leading cause of morbidity in the United States.¹ Globally, strokes are the second leading cause of death and the third cause of death and disability to the affected patients, with increasing economic burden to both developed and developing world.² In addition, 1 in 6 deaths (17.5%) of cardiovascular diseases was mainly because of stroke in the United States alone in 2022. However, stroke-related deaths slightly decreased from 41.1 per 100,000 in 2021 to 39.5 per 100,000 in 2022.³ Ischemic stroke is the most frequent of all stroke cases, accounting for 62.4% worldwide. Most survivors suffer from neurological death and long-term disability with massive health problems and high economic burdens.⁴ Although the incidence of stroke is reduced in developed countries, strokes are exceptionally higher among people living in low and middle-income countries. The World Stroke Organization reported more than 85% of stroke-related deaths worldwide that occur only in low and middle-income countries in 2022. The stroke victims are of lower average age in these

countries as compared to the developed world, leading to more economic burden.⁵

In Thailand, the Health Statistics Report by the Department of Disease Control, Ministry of Public Health, reported 349,126 stroke cases with a mortality rate of 10% and 60% disability in 2023. Most of the mortality cases were observed among patients under 70 years of age, alarming the current health problem of the country. In addition, stroke is still the second leading cause of death in the Thai population.⁶ The incidence rate is comparatively higher than the country's overall statistical data which accounts for only 506.20 stroke patients per 100,000 people. Stroke is the third most common cause of death among men after traffic accidents and alcohol consumption and is the second most common cause of death among women with diabetes.⁷ Since strokes mainly affect those at the peak of their productive life, the effects of strokes are not only restricted to patients but also on family socioeconomic status and overall communities.⁸ Moreover, the higher degree of disability among stroke survivors directly affects the working manpower of the nation. Therefore, effective stroke prevention, including effective management of patients' care, requires lifelong medication, lifestyle maintenance and self-management skills training, and caregiver and family support to achieve optimal health outcomes with reduced mortality, morbidity, and economic burden.⁹

The World Health Organization (WHO) recommends regular surveillance of stroke patients as an essential component of overall stroke control that provides information about etiology, risk, prognosis, prevention, intervention, disease distribution, and time trends. The stroke guidelines included recommendations on the diagnosis of strokes, the best treatment for stroke victims, supportive treatment after recovery from stroke, and various precautions to avoid recurrent strokes.¹⁰ Awareness

through healthcare workers, including nurses, plays a key role in the management and prevention of stroke patients and potentially risk populations as well. Nurses working in District Health Promoting Hospitals (DHPHs) prioritize holistic care, disease surveillance, empowerment, and capacity building among patients, families, and communities in stroke care. Furthermore, they collaborate with public health volunteers (PHVs), caregivers, care managers, community members, and other stakeholders to enhance the health and well-being of stroke survivors.¹¹⁻¹² However, the limited number of nurses who obtained stroke education and training posed great challenges to the proper management and high-quality care of stroke patients. In addition, the education and training of caregivers face significant challenges due to the dynamic and evolving conditions of stroke survivors, including physical disabilities, psychological disturbances, and cognitive issues.¹³

Moreover, care quality in terms of structure such as personnel, materials, and equipment, care quality in terms of the health promotion process, primary prevention, secondary prevention, care for chronic conditions with coverage of the physical, psychological, intellectual dimensions and acute conditions had led to positive health outcomes.¹⁴ The Get With The Guidelines–Stroke (GWTG–S) program provides updated, evidence-based recommendations for the management of patients with ischemic stroke and related conditions. These guidelines include key components of stroke care, including hyperacute management, thrombolytic therapy, interventional procedures, secondary prevention strategies, hospital discharge planning, and post-discharge follow-up.¹⁵ The implementation of GWTG–S has significantly contributed to quality improvement in the care of patients with acute ischemic

stroke across the United States. A comprehensive study, incorporating both retrospective and prospective analyses from 2003 to 2023, evaluated the impact of these guidelines on nine stroke care quality measures endorsed by the American Heart Association/American Stroke Association (AHA/ASA), using a cost-effectiveness analytic framework.¹⁶ However, there is a paucity of research in Thailand addressing the needs of nursing in managing stroke care within community-based settings.

Objectives

The objectives of this study are twofold: 1) to describe the care needs and perceptions related to community-based stroke care among stroke patients and their caregivers, and 2) to explore the needs of nurses in managing stroke care in primary care units within Thailand's 4th Public Health Region.

Conceptual Framework

This study employs the Donabedian framework,¹⁴ which comprises three core components: structure, process, and outcome to examine care needs within the stroke care system. The Donabedian framework serves as a foundational guideline for evaluating the quality of healthcare services. Structure refers to the resources and organizational systems that support service delivery; process includes the methods and procedures involved in patient care; and outcome pertains to the health results experienced by service recipients. The framework emphasizes that the quality of healthcare is determined by the strength of its structural foundations, the appropriateness of care processes, and the achievement of favorable health outcomes. Together, these elements provide a systematic basis for improving service quality. Findings from this study are expected to inform structural enhancements and ensure alignment

with the care needs of stakeholders, ultimately contributing to positive outcomes such as improved self-care among patients and strengthened community capacity.

Methods

Study design

This descriptive qualitative study was conducted as part of a nationwide research initiative led by the Thailand Nursing and Midwifery Council. The study involved in-depth interviews with nurses, stroke patients, and family caregivers to explore their care needs in managing stroke within community settings.

Participants

A total of 35 nurses were recruited through purposive sampling from District Health Promoting Hospitals (DHPHs) located across four provinces in the central region of Thailand, with five DHPHs selected per province. From each DHPH, seven nurses with a minimum of one year of professional experience were recruited. Eligibility criteria included current employment as a professional nurse at a DHPH, prior experience in stroke patient care, and willingness to participate in the study.

In addition, the study enrolled 25 participants comprising stroke patients and their family caregivers, aged between 20 and 59 years, also selected via purposive sampling. Inclusion criteria for patients required a confirmed diagnosis of stroke, clinical stability, and voluntary participation. Family caregivers were eligible if they served as the primary caregiver, either residing with or consistently attending to the patient. Exclusion criteria included patients with severe dementia and caregivers with communication disorders.

Instruments

The study instruments comprised a demographic questionnaires and interview guides collaboratively

developed by the research team and working groups from the Thailand Nursing and Midwifery Council (TNMC) using a comprehensive literature review and relevant empirical studies, aligned with the service framework of District Health Promoting Hospitals (DHPHs). Finalization of the instruments occurred through consultative meetings, with content validation conducted by a panel of experts, including executives from professional organizations, nursing scholars, and specialists. Pilot testing was carried out in primary care units that shared contextual similarities with the study settings to ensure relevance and applicability.

Data Collection

Data collection was conducted using separate demographic questionnaires for nurses and for patients/caregivers. For nurses, demographic data included gender, age, educational attainment, current work position, years of nursing experience, experience working in primary care units, and income derived from primary care unit employment. These data were obtained through self-report. For patients and caregivers, demographic data included gender, age, educational attainment, and duration of service utilization at primary care units, collected via structured interviews.

Semi-structured interviews with nurses were conducted using an interview guide including key contents related to their activities and responsibilities in the protection and care of stroke patients. The interviews explored nurses' roles, responsibilities in community-based care, interprofessional collaboration, network engagement, enabling factors and barriers to effective practice, perceived support needs, and additional perspectives or suggestions for enhancing stroke care within community settings. While the interviews conducted with stroke patients and their caregivers were designed to elicit detailed narratives

regarding their experiences with the condition and its management. The scope of the interviews included demographic information, clinical conditions of the stroke, obstacles, access to healthcare services, physical, psychological and socioeconomic impacts, and care-related needs. Each interview lasted approximately 30 to 60 minutes.

Focus group discussions (FGDs) were conducted with two distinct participant groups: nurses and stroke patients/caregivers. The FGDs with nurses aimed to explore their experiences in care management within professional healthcare teams, including aspects of interdisciplinary collaboration, stroke care planning, goal setting, care outcomes, facilitating factors and barriers to effective practice, and perceived needs in stroke patient care. Whereas, the FGDs with patients and caregivers focused on identifying and understanding their care needs. Each session was moderated by the primary researcher, supported by a note-taker, and audio-recorded. The discussions lasted approximately 60 to 90 minutes per group, with supplementary field notes documented throughout.

Data Analysis

Quantitative data were analyzed using descriptive statistics, while qualitative data were transcribed verbatim and subjected to content analysis. The transcripts were systematically categorized to derive findings aligned with the research objectives.

Trustworthiness

To enhance the trustworthiness and rigor of the study, member checks were conducted to validate the findings and enhance credibility. Audit trails maintained a transparent record of the research process, ensuring dependability. Triangulation, incorporating multiple data sources

and methods, was employed to cross-verify the findings.

Ethical Consideration

This study was approved by the Institutional Review Board, Faculty of Medicine Ramathibodi Hospital, Mahidol University (MURA2020/1130). The participants obtained details of research information and had the right to accept, or refuse based on consent. All data were kept confidential.

Results

Demographic Data of Stroke Patients and Caregivers In this study, most of the patients and family caregivers were female (71.64%) with an average age of 66.76 (SD 11.36), educational attainment in elementary education (75.4%), followed by secondary education (12.7%).

Care Needs of Stroke Patients and Caregivers

Content analysis was used to gain a deep understanding of care needs of stroke patients and caregivers, revealing five main themes.

Theme 1: Information regarding warning signs and treatment

Patients and caregivers articulated a pronounced need for clear, accessible, and comprehensible information concerning stroke and home-based care. The sub-themes emerging from this finding include:

1.1 Basic disease information: Patients and caregivers demonstrated limited understanding of the causes, clinical manifestations, and strategies for preventing stroke recurrence, which contributed to increased anxiety and suboptimal disease management. A patient said,

“I want to understand more about stroke because I didn’t really know what was happening to me when it occurred.”

1.2 Continuous home rehabilitation information: There was a substantial demand for information on appropriate techniques related to physical therapy, patient positioning, nutrition and feeding practices, personal hygiene, and the management of home-based complications. Caregivers reported uncertainty regarding how to effectively provide care following the patient's discharge from hospital. A caregiver mentioned,

"...I'm looking for guidance on how to prevent problems that can happen because of paralysis."

1.3 Accessible and reliable information sources: Participants expressed a strong desire for consistent access to reliable sources of information and consultation, such as guidance from nurses at District Health Promotion Hospitals (DHPHs) or user-friendly instructional manuals, rather than relying on fragmented and unverified information. A caregiver said,

"I'd like advice on exercise and simple guidance about what to eat especially how to reduce salt, fish sauce, and sugar."

Theme 2: Social support and care networks

Stroke patients and their caregivers required multifaceted support from healthcare professionals, the community, and family members to facilitate care and alleviate the caregiving burden. The sub-themes identified include:

2.1 Supports for welfare resources: Patients and caregivers need support or assistance that leads them to get access to and utilize available public or private welfare benefits and social support systems. A patient said:

"I would really appreciate it if nurses could help find ways to support my travel expenses. I don't have a job, and the elderly allowance of 600 baht isn't enough to cover the costs."

2.2 Support for rehabilitation and facilitating equipment: There was a significant need for medical equipment and home-based rehabilitation aids such as physiotherapy devices, specialized beds, wheelchairs, and assistive tools for daily living to support patient recovery and enhance their ability to live independently and comfortably. A patient mentioned:

"I have high blood pressure and weakness on my right side, and I have trouble speaking clearly. I would really like help with physical therapy and any equipment that could support me, so I can get better, take care of myself, and eat on my own."

2.3 Psychological and Social Support: Participants described experiencing psychological distress, including stress, depression, and social isolation, because of chronic conditions and continuous caregiving responsibilities. To manage these emotional challenges, they expressed a need for structured support mechanisms such as peer support groups, opportunities for experiential sharing, and access to professional counseling services. A caregiver said:

"When I felt stressed, the nurse gave me helpful advice. I felt comforted seeing the nurse because they were familiar to me and helped me feel more relaxed."

Theme 3: Emergency health care services
Stroke patients within community-based care settings have specific and urgent needs related to emergency health care services, which are critical for improving outcomes and reducing long-term disability.

3.1 Emergency management: Patients and caregivers are expected to receive prompt medical intervention and timely access to emergency healthcare services to optimize clinical outcomes during acute episodes. A patient said:

“I hope the staff can help manage things better during emergencies. I once had a seizure at home and really needed someone to help me.”

3.2 Community-level emergency care:

Patients and caregivers require robust and well-integrated linkages between emergency medical services and community-based care systems to promote continuity and coordination of emergency care. A patient mentioned:

“I fell at home. When I go to the health center for urgent care, I’d like them to check me properly before deciding whether I need to go to the hospital.”

Theme 4: Efficient service delivery and positive communication

In the long term, patients and caregivers expressed a desire for more comprehensive healthcare services and policies that support holistic care approaches, alongside effective communication within the community.

4.1 Smooth service linkages between hospitals and communities: Participants expected the coordinated and seamless integration of healthcare services across institutional and community settings. A caregiver said:

“I’d like to have blood tests done at home because the patient can’t get out of bed, and her husband isn’t able to carry her to the hospital.”

4.2 Positive communication: Participants expressed a preference for interactions with healthcare staff that are respectful, empathetic, clear, and culturally sensitive, as such communication fosters trust, promotes active engagement and cooperation in health-related decision-making, and strengthens relationships that support self-care practices. A patient said:

“The doctor at the health center speaks kindly and clearly. When doctors communicate well, it helps encourage patients to take care of themselves, like controlling their blood sugar and blood pressure.”

4.3 Adequate personnel and facilities:

There was a recognized need for an adequate number of healthcare personnel and improved facilities to enhance the efficiency and quality of service delivery. A patient said:

“I wish there were more doctors available for check-ups because this health center has a lot more people using the service compared to others.”

Demographic Data of Nurses

A total of 35 nurses participated in the study, all of whom were female, with a mean age of 43.06 years (SD = 7.58). The majority held a bachelor’s degree in nursing (80.00%), with 65.70% serving as nurse practitioners and only 5.80% identified as advanced practice nurses. Most participants reported a median monthly income of 38,000.00 baht. Their average overall nursing experience was 21.31 years (SD = 8.37), while the median duration of experience working in primary care units was 6 years.

Nurses’ Needs in Community-Based Stroke Care

This study delved into the needs of professional nurses involved in stroke care within the community. A total of three key themes emerged.

Theme 1: Emergency care skills

Nurses shared various experiences in managing stroke patients with diverse emergency conditions, highlighting the need for targeted capacity building, upskilling, and reskilling in emergency care.

1.1 Building emergency care skills: This refers to the process of enhancing healthcare

professionals' competencies in managing acute and time-sensitive medical conditions, particularly in settings where advanced interventions may be limited. A nurse said:

"I can do basic check-ups and use the FAST tool to assess stroke symptoms, but I don't know how to care for patients who received rTPA because our health center doesn't provide that treatment."

1.2 Upskilling and reskilling for emergency care: This includes reviewing both foundational and advanced clinical abilities, such as rapid assessment, decision-making, and post-intervention care, to ensure timely and effective responses to emergencies. A nurse shared:

"Stroke cases don't happen very often here, so it's easy to forget the steps. As community nurses, we need regular refreshers and to keep learning new techniques to provide safe and timely care."

Theme 2: Professional competencies in management and administration: This theme refers to the essential managerial and administrative skills required by nurses and healthcare professionals to effectively coordinate, plan, and sustain both routine and emergency services within community settings. It includes strategic decision-making, resource management, and leadership capabilities that support the delivery of timely and efficient care.

2.1 Budget plan for emergency medical services: This highlights the need for nurses to understand and participate in financial planning processes that ensure adequate funding for emergency care resources, equipment, training, and infrastructure. Effective budget planning enables the sustainability

and responsiveness of emergency services in resource-limited settings. A nurse said:

"We are expected to plan budgets to make sure emergency services are ready whenever needed."

2.2 Sufficient manpower allocation: Nurses emphasize the importance of appropriate staffing strategies to meet the demands of emergency care. It includes redesigning workforce planning, task delegation, and ensuring that trained personnel are available during critical situations to maintain quality and safety in patient care. A participant said:

"In emergency situations, having enough trained staff is critical. We need to plan ahead, assign roles clearly, and make sure the right people are available when urgent care is needed."

Theme 3: Efficiency of care delivery system

This theme refers to the ability of healthcare systems to deliver timely, coordinated, and high-quality care, particularly in emergency situations such as stroke management. It emphasizes the integration of communication, adherence to clinical guidelines, and availability of essential resources to ensure effective service delivery across all levels of care.

3.1 Appropriate communication systems: This refers to efficient communication that is critical for coordinating emergency responses, especially during patient transfers. This includes the use of emergency hotlines, digital tools like Smart COC (Continuity of Care), and clear protocols for inter-facility communication. A nurse said:

"When we call 1669 for emergency transfer, communication must be smooth and quick... Smart COC helps, but we need to make sure everyone knows how to use it effectively."

3.2 Compliance with practice guidelines and referrals: Nurses mentioned that adherence to established clinical guidelines and referral protocols helps to ensure that patients receive appropriate care at the right facility. Deviations from these standards can delay treatment and affect outcomes. A nurse said:

“Patients were referred to community hospitals, but it would be better for them if referral guidelines were followed properly.”

3.3 Medical equipment or medical support: Access to essential medical equipment and rehabilitation tools is vital for stroke care, both in health facilities and at home. This includes blood pressure monitors, physiotherapy aids, and educational materials to support recovery and self-care.

“To care for stroke patients properly, we need basic equipment like blood pressure monitors and rehab tools. Without them, it’s hard to support recovery at home or in the community.”

Discussion

The study findings emerged from an analysis of the care needs of stroke patients, their caregivers, and professional nurses within the context of District Health Promoting Hospitals. These findings are interpreted through the lens of Donabedian’s Quality of Care Framework, which includes three core components: Structure, Process, and Outcome, to elucidate the interrelationships and implications relevant to stroke care delivery in community settings.

Care Needs of Stroke Patients and Caregivers

The study findings indicate that stroke patients and their caregivers have diverse and complex needs, spanning all three dimensions of the quality of care framework.

Structure: Patients and caregivers emphasized the need for sufficient healthcare personnel and infrastructure, particularly in relation to emergency services, rehabilitation, and the provision of assistive devices for home use. These elements are regarded as critical components of a comprehensive and resilient community-based care system. This observation is consistent with findings by Johnson and Williams¹ and the World Health Organization,¹ both of which underscore that access to appropriate equipment is a key determinant of long-term recovery and quality of life among stroke patients.

Process: The expressed need for fundamental disease-related information and ongoing home-based rehabilitation care, alongside accessible and trustworthy sources of information, highlights a critical gap in the provision of knowledge and guidance to stroke patients and their caregivers. Inadequate understanding among these groups can significantly hinder their capacity for effective self-management and caregiving. The findings align with Donabedian’s framework, which emphasizes that effective care processes are contingent upon the availability of sufficient and appropriate information for service recipients.¹⁴ Furthermore, the demand for regular home visits and follow-up care by nurses at District Health Promotion Hospitals (DHPHs) underscores the pivotal role of nurses as essential agents in the delivery of continuous community-based care.^{19,20}

Outcome: The identified need for physical, psychological, and social support for caregivers, alongside the reported socio-economic impacts, suggests that their quality of life and psychological well-being remain insufficiently addressed, despite being essential outcomes of holistic care. The experience of substantial burdens has been linked to elevated levels of stress and depression, a finding

consistent with studies on caregiving,^{21,22} which consistently highlight the adverse health effects associated with prolonged care for patients with chronic conditions.

Nurses' Needs in Community-Based Stroke Care

The needs expressed by professional nurses in this study align with the quality of care framework.

Structure: Nurses identified the need to strengthen professional competencies for effective collaboration within multidisciplinary teams, alongside improved access to essential equipment and tools, and more efficient care delivery systems including adequate budgets and supportive policies. These elements represent critical structural components necessary for fulfilling their professional responsibilities. A lack of such resources inevitably impedes the provision of high-quality services. This finding is supported by previous studies, which emphasize that adequate staffing, readily available equipment, and policy-level support are fundamental to improving the quality of primary healthcare services.^{23,24} It also reinforces Donabedian's framework, which posits that robust structural foundations are essential for an effective healthcare system. In the Thai context, many studies have similarly highlighted persistent challenges related to human resource constraints and budgetary limitations within primary care settings.^{25,26,27}

Process: Nurses highlighted the need to develop specialized knowledge and skills for emergency care, establish seamless referral and coordination systems, and implement clear, standardized clinical practice guidelines. These elements are essential for optimizing the stroke care pathway. Nurses acknowledged that strong clinical competencies, streamlined workflows, and well-defined protocols are vital for ensuring accurate, safe, and high-quality patient care core attributes of an effective care process.^{28,29}

Outcome: Nurses expressed aspirations for improved patient rehabilitation and reduced complications, strengthened caregiver capacity and satisfaction, and enhanced community engagement through the development of care networks. These goals reflect a commitment to achieving tangible and sustainable outcomes in care delivery. Their expectations underscore a clear recognition of the nursing role in promoting the quality of life for both patients and caregivers within the community, aligning with the principle that favorable outcomes serve as key indicators of overall care quality.^{20,30}

One limitation of the study is the lack of clear differentiation between patients and caregivers among the participants, which may have led to divergent findings.

Conclusion

This descriptive qualitative research aimed to explore stakeholders' care needs in the community-based stroke care system. The participants were 35 nurses and 25 stroke patients/caregivers who were purposively selected based on inclusion criteria. Data were collected using semi-structure interviews and focus group discussions. According to the findings, stroke patients/caregivers had the following needs: 1) information regarding warning signs and treatment 2) social support and care networks, 3) emergency health care services and 4) efficient service delivery and positive communication. Nurses had the following needs: 1) emergency care skills, 2) professional competencies in management and administration, and 3) efficiency of care delivery systems.

Recommendation

This study recommends the development of comprehensive guidelines for stroke care management,

with particular emphasis on strengthening emergency care competencies among nurses in primary care settings. Additionally, it advocates for enhancing the efficiency of care management systems, interdisciplinary networks, social support mechanisms, and the availability of essential equipment to address the needs of patients and caregivers, thereby contributing to improved health outcomes.

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