CHAPTER 1

INTRODUCTION

This chapter provides a statement of the background of the study, as well as the research objectives, research questions, conceptual framework, definition of terms, and significance of the study.

Background of the study

Stroke, or cerebrovascular disease, currently is a major health problem, as it places a psycho-social and economic burden on the individual, his/her family and the healthcare system. Every year the cost of treatment dramatically increases. The incidence of stroke increases with advanced age, affecting an estimated 75% of elderly worldwide (Bots, Looman, & Kovdstal et al. 1996). In addition, the mortality rate resulting from strokes tends to double with cumulative age (Chernrungrote, 2007).

In Thailand, within any one year timeframe, the incidence rate of stroke has been reported to be 29.2 per 100,000 people (Health Information Unit, 2006). Stroke has been shown to be the leading cause of death of Thais over 60 years of age (Ministry of Public Health, 2006 Viriyavejakul, Senanarong, Prayoonwiwat, Chaisevikul, & Pongvarin, 1998). Prior studies have revealed that stroke is a high incidence rate disease as 61.8-86.4% of Thai people aged more than 60 years old (Meesuk, 2005; Natechang, 2002; Saengratsamee, 2004). Therefore, the steady growth in the older population, in Thailand, means that more people are at risk, and

that an increase in the number of individuals experiencing a stroke should be expected (Puangwarin, 1998). The most common type of stroke among Thai elderly is cerebral infarction or ischemic cerebral infarction; it was 70-85 % of all kind. (Charnnarong, 2006; Meesuk, 2005; Srithares, 2003).

Cerebral infarction is an ischemic condition of the brain, producing local tissue death and usually a persistent focal neurological deficit in the area of distribution of one of the cerebral arteries, it is caused by plaque or artheroma that comes of blood vessels walls (Suttipong, 2006 Yamamoto & Magalong, 2003).

Cerebral infarction causes the individual to encounter hemiparesis, fluctuating consciousness, confusion, and cognitive and neurological impairments. When an elder suffers from a stroke, he/she frequently experiences prolonged adjustment in activities of daily living. In addition, an elderly stroke victim may encounter complications secondary to hospitalization more so than do those who are younger. Such complications may include: pressure sores, peripheral nerve palsy, urinary-fecal incontinence, adjustment to disability, withdrawal of family support, depression, dementia, sensory deprivation, spasticity, contracture, shoulder problems, falls, physical de-conditioning, and drug toxicity which may lead to death or delayed successful rehabilitation (Bhalla Grieve, Tilling, Rudd, & Wolfe, 2004; Eladr, Ring, Tshuwa, Dynia, & Ronen, 2001; Puangwarin, 1998; Roberston & Mackinnon, 2002). In addition, an elderly stroke victim may be faced with social isolation and experience diminished ability in performing his/her previous social roles (Pound, Bury, Gompertz, & Ebrahim, 1995). Previous studies have suggested that the needs of the elderly are unique and different from those of other age groups. One cannot overlook the fact that the elderly are a high risk group who may suffer from a stroke,

experience numerous complications and have many unmet needs (Hafsteinsdottir & Grypdonck, 1997; Linde, 1993).

In general, the early management of ischemic stroke consists of management of risk factors, medical treatment i.e. thrombolysis, anti-platelets therapy, the general supportive treatment and the rehabilitation program. Rarely, surgery is required (Charnnarong, 2006; Takahiro & Yoshihiro, 2006).

Prior research findings suggest that caring for elders who have experienced a stroke should differ from the kind of care provided younger adults (Bhalla et al. 2004; Eldar et al. 2001). Various factors that are known to influence care for elderly stroke victims are comorbidity, limited social resources, goals of treatment, and the individual's preferences and specific needs (Eliopoulos, 2001; Kalra, Yu, Wilson, & Roots, 1995). Thus, providing care for an elder with a stroke needs to be more comprehensive than with a younger individual because of the elder's age and the possible consequences of the disease process.

Much of the mortality and morbidity that occurs after an ischemic stroke takes place during the individual's hospital stay and post-discharge, and predominantly occurs secondarily to complications that arise from one having a neurological deficit. Acute intervention therapies and quality care are considered most essential in order to improve one's survival, minimize impairment, encourage participation in the recovery process, and prevent recurrent stroke among the elderly (Eliopoulos, 2001; Health Information Unit, 2004).

Therefore, it is necessary to scrutinize the treatment and care provided to elderly stroke patients. Even though the paradigm for measuring the quality of care provided and the outcomes of such care have been widely investigated (Forbs, Duncan

& Zimmerman, 1997; Health Information Unit, 2004; Walsh, Gompertz, & Rudd, 2002), interest in measuring the quality of nursing care provided stroke patients is uncommon in all age groups (Radhika, 1995; Warner, 2000). Similarly, in Thailand, a review of research findings published between 1984 and 2000, found that investigations regarding the quality of nursing care provided for stroke patients, especially the elderly, has been limited (Chalermwonnapong, Peerawuth & Chukumnerd, 2002).

As a profession, nursing is intricately involved in providing care for elderly who have suffered a stroke (Pound et al. 1995; Warner, 2000). Nurses, especially nurse administrators, are in positions whereby they can ensure that the care patients receive is of a quality that is appropriate to the needs of the patients, and meets the hospital's requirements (Idvall, Rooke & Hamrin, 1997; Idvall, 2001).

The term 'quality' is defined as a peculiar, essential character and inherent feature (Neufeldt & Guralnik, 1994). Whereas quality of care is the degree to which patient care services increase the probability of desired outcomes and reduce the probability of undesired outcomes (Donabedian, 1966; The Joint Commission on Accreditation of Healthcare Organizations [JCAHO], 1993). The 'quality of care' concept is composed of various attributes**.** These include fitness for use, conformance to requirements, providing what customers expect, and zero defects, as well as apply to structure, process, and outcomes (Crosby, 1979; Deming, 1986; Donabedian, 1966; Juran, 1988). It is accepted that quality care is the right of all patients, and is the responsibility of all health care providers and managers who deliver care (Idvall, 2001; Redfern & Norman, 1990).

There are numerous reasons why quality of health care should be of concern. Perhaps, the most important reasons include the fact that patients and their families should be informed about the outcomes they should expect from the care provided; that the evaluation and measurement of quality is beneficial in improving the care that is provided; and, that the data concerning quality reflects one's professional autonomy (Idvall, 2001; Tapaneeyakorn, 2002).

According to Campbell, Braspenning, Hutchison, & Marshall (2002), specific measures may allow good performance to be rewarded in a fair way and facilitate accountability. This is the main reason why developing and applying measures of quality to the care provided is most important. To monitor, ensure and quantify the desired and undesired features of nursing care, quality indicators need to provide proper guidelines and answers (Idvall et al. 1997; Mainz, 2004).

Nursing quality indicators are quantitative measures. They are the essential tools for nurses and nurse administrators to use in evaluating, describing, monitoring, making value judgments, assessing policy relevance, diagnosing problems, and determining accountability of the care provided, as well as the related support services. Nursing quality indicators have been used for internal or external audits in the process of hospital accreditation (Campbell et al. 2002; JCAHO, 1989; Ogawa & Collom, 1998; Sharp, 2003; Sriratanabul, Potisat, Unsuroj, Tadadej, & Tomornsak,. 2000; Tapaneeyakorn, 2002). It is known that quality indicators can be a pointer towards achieving the quality desired in that if a particular target is reached, others would probably follow (Idvall, 2001). For example, quality indicators have been shown to lead to improved quality in various aspects of work force and resource

management, budgeting, and risk management (Chang, Chenoweth, & Hancock, 2003; Dickstein, 1989).

Using quality indicators require nurses and nurse administrators to determine the specific indicators they desire to measure (Idvall et al. 1997). By so doing, they can develop strategies for cost-effectively collecting information, and adopt approaches for using and interpreting the data (Tapaneeyakorn, 2002).

The quality of care often may be viewed differently by different people (Masso, 1989). In order to more accurately and thoroughly assess the quality of care provided, it is essential that the dimensions of care, as well as the indicators for measuring the quality of care, are established (Gagliardi, Fung, Langer, Stern, & Brown, 2005).

In Western countries, quality issues regarding care provided to non-surgical stroke victims have been a concern for some time. Stroke care institutes have sought to improve and ensure the quality of care provided through development of quality tools, quality packages and quality indicators. Their efforts have included reviews used in measuring the quality of nursing care provided to hospitalized individuals who have experienced a cerebrovascular accident (Peason, Chang, Lee, Kahn, & Rubenstein, 1997), and the Stroke Sentinel Audit Scale (Intercollegiate Working Party on Stroke, cited by Rudd, Hoffman, Irwin, Pearson, & Lowe 2005). Rudd et al. (2005) reported that most stroke audit tools usually impact on stroke care at both the organizational and individual care level.

In Thailand, although the quality of the heath care system has been discussed since the establishment of private hospitals, it has changed very slowly. The issue of quality came to the forefront after the 1999 economic crisis, when the Thai health care

system was reformed and the Hospital Quality Improvement and Accreditation Project was implemented. Subsequently, the quality of care has been discussed more broadly. This discussion has recognized the many stakeholders are involved in providing quality care. They include government organizations, non-government organizations, the private sector, the insurance industry, and consumers.

Another important issue that has lead to hospital administrators focusing on the quality of care provided within their facility has been the health care policy developed in 2001, that stated the length of hospital stays, throughout Thailand, should be shortened. This policy aimed to have hospitals send patients home as soon as possible after their condition stabilized (Potaya, 2001). With patients spending less time in the hospital, even though they may have serious problems and need more comprehensive care, it is crucial that providers deliver appropriate treatment and quality care.

Numerous projects, aimed at improving the quality of care provided, are being widely established throughout Thailand, especially for high risk groups, such as stroke patients. In 2001, the Division of Medicine, under the Ministry of Public Heath, assigned the Prasat Neurological Institute, to be the main organization in improving the quality of care provided hospitalized stroke patients. Since then, various projects regarding stroke prevention and care of stroke victims, both in the hospital and community have been implemented. Educational media, dealing with the subject of strokes were created and distributed throughout Thailand.

Among the nursing community, issues of the quality of nursing care also have arisen and indicators of the quality of nursing care have been proposed. The focus has been on indicators of the quality of general nursing care, based on the structure,

process, and outcome categories identified by Donabedian (Kunaviktikul et al. 2000; Nursing Division under Medical Department Ministry of Public Health, 2004; Tapaneeyakorn, 2002). However, no research studies directly related to the issue of stroke care, both in the hospital and community setting could be located in any of the available Thai or English language nursing journals. The results of meta-analysis of the findings of 39 research studies on stroke care conducted in Thailand, published between 1984 and 2000, revealed that they all focused on the patients' and their families' quality of life, stress, coping, and adaptation abilities, and the effectiveness of selected interventions and selected models for enhancing self-care ability (Chalearmwonnapong et al. 2002). The Nursing Organization of the Prasat Neurological Institute, in 2002, did arrange a meeting to develop nursing care guidelines for providing care to general stroke patients. This project, however, is still ongoing.

As greater demands of non-surgical stroke elders are placed on the health care system, it is essential that the quality of the care provided be examined. To enhance organizational capability and delivery of nursing care to non-surgical stroke elders, accurate knowledge regarding the quality of nursing care for this group is necessary. Nurses should know which dimensions of care meet the elders' health care needs and reflect the expected and required quality of care to be delivered. Although there are concerns about nursing care of elderly who have suffered strokes, there is a lack of research regarding the quality of the nursing care they are receiving. This issue presents a clear challenge to nurse administrators who are the main controllers of the regulation, monitoring, and improvement of the quality of nursing care being delivered (Koch & Fairly, 1993; Tapaneeyakorn, 2002). It is essential that nurse

administrators consider the quality of nursing care the nurses provide non-surgical stroke elders within their respective facilities during the acute, post-acute, and rehabilitative phases of treatment. In other words, from the time a non-surgical stroke victim is admitted to the hospital until he/she is discharged. In addition, nurse administrators need to establish the dimensions of physical and emotional care needed, the staff allocation desired, and the informational resources required to meet the health care needs and quality of care expected (Zwygart-Stauffacher, Lindquist, & Savik, 2000).

It seems one would expect nurse administrators to give priority to identifying the dimensions of nursing care to be delivered to elderly stroke patients within their facilities, and to develop nursing quality indicators, through use of a systematic approach, for the non-surgical treatment of hospitalized elders who have suffered a stroke. Thus, the comprehensive and well-developed nursing quality indicators are essential for monitoring and evaluating the delivery of nursing care to elderly stroke patients, and could lead to improve the quality of care delivered and increase support of the hospital accreditation process.

This study, therefore, was intended to establish perspectives on the quality dimension of care, and develop a set of nursing quality indicators for providing care to hospitalized non-surgical stroke elders.

Research Objectives

The purposes of this study are as follow:

1. To develop nursing quality indicators for hospitalized non-surgical stroke elders.

2. To examine the applicability of the identified nursing quality indicators for hospitalized non-surgical stroke elders.

Research Questions

Two main research questions were used as a focus for the study. These are as follow:

1. What should be the nursing quality indicators for hospitalized non-surgical stroke elders?

2. Would the identified nursing quality indicators for hospitalized non-surgical stroke elders be applicable in a hospital setting?

Conceptual Framework

The conceptual framework of this research study consists of two main concepts: 1) nursing care for non-surgical stroke elders, and 2) quality care assessment.

Nursing care for non-surgical stroke elders

The goal of nursing care for non-surgical stroke elders is to maintain life, prevent complications, and promote recovery (Burrel, 1992; Eliopoulos, 2001). Nursing care for stroke patients is divided into three phases: the acute phase, the post-acute phase, and the rehabilitation phase (Chantawatchai, 1999; Monahan, Drake, & Neighbors, 1994; Smeltzer & Bare, 2000).

During the acute phase, the nursing care provided is focused on stabilizing patients, maintaining vital functions, enabling survival, and preventing more brain damage. Nursing activities in this phase include maintaining adequate oxygenation, monitoring vital and neurological signs, monitoring intake-output and electrolysis, preventing aspiration, administering medication, providing information, and preventing complications.

During the post-acute phase, the nursing care provided aims to prevent complications from the disease including immobility, dependency, and lost of functions. Nursing activities in this phase include: monitoring vital and neurological signs, preventing aspiration, improving mobility, preventing joint deformities, changing positions, providing hygiene care, retraining bowel and bladder control, encouraging patient participation, providing fluids and nutrition, maintaining skin integrity, and preventing injury.

During the rehabilitation phase, nursing care should start from the first assessment upon the admission of the patient and continue until the patient has been stabilized and reaches his/her maximum level of functioning. Nursing activities in this phase include: establishing an exercise program, enhancing self-care, improving

communication, helping the patient and family cope with the residual from the stroke, educating the patient and family about the disease process, and preparing the patient and family for his/her continuing care.

In conclusion, the scope of nursing care for elderly who have suffered a stroke should be based on nursing management during the acute, post-acute, and rehabilitation phase of the patient's post-stroke process.

Quality care assessment

The concept of quality care assessment used in this study is the quality assessment framework proposed by Donabedian (1966). He developed a quality of care assessment framework based on systems theory. It is composed of three categories, including: structure, process, and outcome. This study, therefore, focused on these three categories.

According to Donabedian (1966, 1988), the three categories of quality measure are dependent and linked in an underlying framework. The essence of Donabedian's assessment framework is that good structure should promote good process and good process, in turn, should promote good outcomes (Donabedian, 1988).

The structure category represents the quality of care, with respect to the professional and organizational resources, associated with the provision of care. These include staff credentials, staff coordination, the organizational system and the facility's operating capacities and resources (Donabedian, 1966).

The process category represents what actually is done in providing care. It includes the patient's activities in seeking and obtaining care, as well as the practitioner's activities in making a diagnosis and recommending, or implementing, treatment. In addition, the process category includes two aspects, technical skill and interpersonal relationship, regarding the performance of the practitioner.

The "technical skill" aspect depends on the practitioner's knowledge and the judgment he/she used in arriving at the appropriate strategies of care, as well as on his/her skill in implementing the strategies. In other words, the quality of technical care delivered is proportionate to its effectiveness. The "interpersonal relationship", on the other hand, is viewed as the interpersonal exchange between the provider and the client. While providers supply information about the care being delivered, they encourage each patient's active collaboration in providing care. The interpersonal relationship, therefore, is the vehicle whereby this successfully is achieved (Donabedian, 1966; 1988).

The technical skill components were considered, in this study, during acute, post-acute, and rehabilitation phases of nursing care being provided during treatment of hospitalized elderly stroke patients. The interpersonal component focused on the interpersonal relationship. This study mainly focused on the nurses' activities, such as providing information, motivating patients, and being concerned for patients' rights (Donabedian, 1966). Moreover, communication techniques which appropriate to the elderly were added. These included intently listening, taking time, touching, using simple words, speaking slowly and clearly, being patient, and staying positive (Pittenger, 2001).

The outcome categories indicate the effect of care provided on the health status of the patients and others. They cover improvements in the patients' knowledge, their degree of satisfaction and productive changes in their behavior, as well as the clinical outcomes that come under a wide definition of health status (Donabedian, 1966; 1988). According to JCAHO (1993), the most significant tool used in quality assessment is the quality indicator.

Definition of Terms

The *nursing quality indicator* refers to the statement that reflects the quality of nursing care provided to the non-surgical stroke elders. The nursing quality indicators are composed of structure, process and outcome indicators.

The *structure indicator* refers to an indicator that reflects the characteristics of the service provided. This includes the distribution and qualification of nurses, characteristics of the unit, care policy, and environment of care.

The *process indicator* refers to an indicator that reflects the aspects of nursing care for elderly stroke patients, and focuses both on technical and interpersonal skills. Technical skills cover nursing activities in the acute, post-acute, and rehabilitation phase of care. Interpersonal skills cover the communication among nurses, elderly stroke patients and the families.

The *outcome indicator* refers to an indicator that measures the results of nursing care for elderly stroke patients.

Hospitalized non-surgical stroke elders are people over 60 years of age who are admitted to regional and provincial hospitals with their first episode of stroke from

a cerebral infarction that has been diagnosed by a physician, and who is in need of non-surgical treatment. For convenience, these subjects generally are referred to as 'non-surgical stroke elders'.

Significance of this study

Knowledge gained from this study will have implications for both nursing administration and nursing practice. With respect to nursing administration, this study provides a quality tool for nurse administrators to use in assessing, monitoring, and evaluating nursing care of hospitalized non-surgical stroke elders. Data obtained may assist nurse administrators in their decision-making process. In addition, the results may lead to improvements being made in both the nursing service and nursing administration.

The knowledge gained from this study also may offer guidance for nurses who provide care for hospitalized non-surgical stroke elders. The nurses may be able to use these new indicators in determining goals with the elderly stroke patients, as well as a framework for the care that should be expected. This is significant in that the indicators were developed from the suggestions of expert healthcare providers, patients and families regarding geriatrics' concerns and nurses' accountability.

Finally, the knowledge gained from his study provides an example of nursing quality indicators that may be useful in the development of quality indicators regarding other diseases and with other groups.