IMPLEMENTATION OF A CLINICAL PATHWAY IN THAILAND:
AN ETHNOGRAPHIC STUDY

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Clinical pathways have been identified as the tool of choice to deliver quality care through reduced practice variation, resource utilization, and length of hospital stay. Although they have been used effectively worldwide, many healthcare organizations have found that implementing clinical pathways is not entirely successful even when they are based on sound evidence and have been developed from the multidisciplinary team who work in the hospitals. Therefore, what factors contribute to successful implementation of clinical pathways and how institutional and unit culture influence implementation are still unknown.

The purpose of this study was to describe how institutional and unit culture influence the implementation of a clinical pathway for head injury in a tertiary hospital in northern Thailand. Spradley’s ethnographic methodology using participant observations, interviews, and document reviews was used to collect and analyze data and to illustrate the culture. Key informants included 5 surgeons, 2 neuro-surgeons, 8 nurses, and 5 supporting professionals.
A core theme of “Ma-No-Sum-Nuk” or conscientiousness best described the culture of the multidisciplinary team as they implemented a clinical pathway within the context of their unit and institution. The staff’s “Ma-No-Sum-Nuk” or conscientiousness toward doing one’s work to meet hospital goals was reflected through three major sub themes: holding up the flag, singing the march song drunk, and writing the Bai-HOIR.

“Holding up the flag” reflected the staff’s conscientiousness combined with their leader’s vision as a shared commitment to make pathway implementation successful. “Singing the march song drunk” demonstrated culturally appropriate methods used by the staff to conscientiously work to make pathways work. “Writing the Bai-HOIR” was a means to make the pathways work better and sustain the accomplishment.

This study offers insight into the institutional and unit culture that facilitates implementation of a clinical pathway. Nurse administrators and practitioners should consider cultural forces when implementing organizational change to assist group members to achieve unit and organizational goals.
BACKGROUND AND SIGNIFICANCE OF THE PROBLEM

Statement of the Problem

In the current health care environment, Thai governmental hospitals face a myriad of challenges related to advanced technology, globalization, shifting economic conditions, and governmental policies related to universal health care coverage. These intense pressures have effects on the quality of health care, health care costs, appropriate use of resources, consumer preferences, and expectations about the quality of health care services. These issues prompted the Ministry of Public Health (MOPH) of Thailand to reevaluate the way health care was delivered and to analyze more deeply the assurance of quality of healthcare. The governmental hospitals were also prompted to research ways to integrate evidence-based knowledge into practice, improve the quality of care, increase patient satisfaction, and deliver more cost-effective health care services. As a result, clinical pathways have become an appropriate choice for most health care providers as a tool for quality improvement purposes and for meeting requirements of the Institute of Hospital Quality Improvement & Accreditation (HA-Thailand) (A. Supachutikul, personal communication, March 19, 2005).

A clinical pathway is a care process that specifies goals or expected outcomes and the sequence and timing of necessary actions to achieve the goals with optimal efficiency (Cheah, 2000; Panella, Marchisio, & Di Stanislao, 2003; Uzark, 2003). There is empirical evidence that clinical pathways have been widely used and have proven to be
an effective means to improve the quality of care, increase patient satisfaction and reduce the cost while reducing the length of hospital stay (Chang et al., 2000; Cheah, 2000; Kirkman-Liff, Huijsman, Griten, & Brink, 1997; Luc, 2000; Panella et al., 2003; Uzark, 2003). The literature describes only how clinical pathways are developed and the benefits received from using them. Many health care organizations have also found that implementation of clinical pathways is not entirely successful even when they are based on sound evidence and have been developed by the multidisciplinary team working in the hospitals (Panella et al., 2003; Wilson Et al., 1999). To date, literature describing the implementation of clinical pathways in hospitals is scarce and little is known about what factors contribute to the successful implementation of clinical pathways and how organizational culture influences the implementation.

**Background and Significance of the Problem**

During the past decade, Thailand has undergone a series of rapid changes. The fast pace and drastic changes in economics, politics, culture, and technology have impacted the health care system. The MOPH faced challenges concerning the quality of the health services system in both governmental and private hospitals. Anecdotal evidence showed that patients’ satisfaction toward governmental health care services and quality of care decreased, while patients who preferred private hospitals were dissatisfied with the costs. This led to the pressure to restructure and redesign the work in the governmental hospitals for more efficient health services and to attempt to standardize the health care services (Ministry of Public Health, 2002; National Health Systems Reform, 2000). The policy of universal coverage for health care from the Thai government, effective since 2002, also led to the increase of the hospital costs and
negatively affected the quality of care because of the increase of patient/client load and the decrease in time for staff to provide direct patient care (Head nurse of Neuro-Surgery unit, personal communication, July 27, 2004). The patient or client who has a universal coverage health insurance card pays only thirty baht or seventy-five cents per health care visit or per admission. This universal coverage for health care has lowered hospital costs for patients and increased patient satisfaction, yet also decreased hospitals’ revenues. Although the government reimburses the money back to the hospitals, it takes time, and the reimbursement process is complicated. This has also lowered the public trust in the quality of the health services because the patients or clients were suspicious about the treatment they received compared to patients who pay out-of-pocket (A. Supachutikul, personal communication, March 19, 2005).

The concerns with the quality of health care, the rising costs, and the lack of a standard accreditation system prompted the health care providers from both private and governmental hospitals, the Health System Research Institute, and the MOPH to establish a new agency that is responsible for promoting, supporting, and providing training programs in quality improvement; setting the quality assurance standards for both governmental and private hospitals; and monitoring the quality of patient care (Institute of Hospital Quality Improvement & Accreditation, 2005; Ministry of Public Health, 2002). The HA-Thailand (the Institute of Hospital Quality Improvement & Accreditation) was established in 1999 to set the quality assurance standards for both governmental hospitals and private hospitals. Every hospital needs to pass an audit and receive hospital accreditation from the institute of HA-Thailand. One of the accreditation guidelines for quality of care requires that the governmental hospitals must show quality performance
by gaining high marks for the desired clinical outcomes, increasing patient satisfaction, and showing evidence that the care is provided by a multidisciplinary team. The strategy the HA-Thailand used to meet this goal of hospital accreditation and reduction of hospital costs was to promote the concept of quality management tools to the governmental hospitals. This was accomplished through providing short courses about quality improvement, including medical and utilization management, discharge planning, and case management with an expectation that the hospitals would develop and implement quality improvement tools such as care maps or clinical pathways. This caused practitioners to move toward improving the quality of care and to research ways to deliver more cost-effective health care services. Physicians started to address quality improvement issues raised by the HA-Thailand by reviewing current published literature and obtaining knowledge from both domestic and international conferences about quality improvement. Clinical pathways; therefore, became the management tool for the quality improvement process that caught the attention of most physicians (A. Supachutikul, personal communication, March 19, 2005).

A clinical pathway is defined as an optimal sequencing and timing of interventions that are developed by a multidisciplinary team, composed of physicians, nurses, and other staff members for a particular diagnosis or procedure. They are designed to better utilize resources, maximize quality of care, and minimize the delays (Coffey et al., 1992). Clinical pathways are based on empirical studies and a systematic approach of the multidisciplinary team. The multidisciplinary team develops a collaborative plan focused on the achievement of desirable patient outcomes in a reasonable time frame with satisfaction for both patient and health care provider. Clinical
pathways have been developed and implemented for particular clients or diseases with high volume, high cost, high risk, high length of stay, high practice variability, and high outcome variations. Settings with these characteristics develop and implement clinical pathways for improving or maintaining quality of care while trying to decrease resource utilization. Clinical pathways have been widely used in many countries, including the United States, Australia, New Zealand, United Kingdom, Italy, Japan, and Taiwan (Chang et al., 2000; Jones, 2000; Kirkman-Liff et al., 1997; Luc, 2000; Matsumoto, Kanda, & Shigematsu, 2002; Panella et al., 2003; Uzark, 2003; Wilkinson, Parcel, & Macdonald, 2000). Therefore, empirical evidence shows that the current trend is for clinical pathways to be launched throughout the world as a potential health care management tool for quality improvement and resource utilization.

Clinical pathway use in Thailand has been driven by the need to improve the efficiency of the health care services, to increase the effectiveness of resource utilization in a cost-effective manner, and to standardize the quality of care. However, the development and implementation of clinical pathways in Thailand has not been a smooth process. Some tertiary hospitals began developing and implementing clinical pathways because empirical evidence shows that clinical pathways are increasingly used as a potential health care management tool for quality improvement. The process of development and implementation of clinical pathways in each institution is mostly similar to the United States. It emphasizes the use of an interdisciplinary approach and promotes collaborative practice (Goode, 1995). Anecdotal evidence indicates that hospitals with effective steering committees and strong leadership continue developing and implementing clinical pathways into a variety of areas that meet the criteria of high
risk, high costs, high volume, and high lengths of stay. These anecdotes are congruent with empirical evidence that indicates that the factors contributing to successful development and implementation of clinical pathways include having a physician-expert leading the team, building a foundation of support among all clinicians (Lanska, 1998; Pearson, Goulart-Fisher, & Lee, 1995; Perez-Cuevas et al., 2003), and educating all hospital staff who will be involved (Cheah, 2000; Edick & Whipple, 2001; Pearson et al., 1995).

Some hospitals in Thailand have stopped the development and implementation of clinical pathways, mostly due to the lack of a key physician or coordinator to champion the process and to the lack of commitment to the project from the director and staff (A. Supachutikul, personal communication, March 19, 2005; Head nurse of surgery unit, personal communication, February 2, 2004). This anecdotal evidence is congruent with the literature in Australia, Taiwan, United Kingdom and the United States that describes experiences in developing and implementing clinical pathways in individual institutions. Findings from studies in these countries indicate that the development and implementation of clinical pathways failed in situations where there was a lack of medical staff leadership to champion the process, a lack of multidisciplinary involvement, resistance from clinicians, inadequate resources, unnecessary paperwork that increased workload, unrealistic time frames, and the burden from the variance reporting procedures (Cheah, 2000; Currie & Harvey, 2000; Emmerson et al, 2004; Jones, Day, Creely, Woodland, & Gerdes, 1999; Lanska, 1998). Therefore, in Thailand, as elsewhere, the effectiveness of clinical pathways and the success of development and implementation of clinical pathways remain in question.
One factor that may affect the success or failure of the development and implementation of changes like clinical pathways in an organization such as a hospital may be that of organizational culture. Organizational culture has been defined as a set of shared basic assumptions that have come to be taken for granted and that determine much of a group’s behavior and the rules and norms about the ways, and why, and how things should be done in a social unit or an organization. These behaviors, rules and norms are to be taught to newcomers in a socialization process that itself is a reflection of culture (Schein, 2004; Spradley & McCurdy, 1972). Organizational culture conveys a sense of what is valued including the norms, values and rituals that characterize a group or organization. In this way, culture serves as a social control mechanism that sets expectations about appropriate attitudes and behaviors of group members that guide and constrain behavior (Schein, 2004).

Culture plays an important role in an organization because the majority of activities are carried out by a group of people who have similar ideas, beliefs, values, norms, and knowledge. These perspectives are melded together into a unique pattern. The administrators of organizations often do not understand these shared meanings of the culture and do not take into account the organizational culture when planning initiatives (Kane-Urrabazo, 2006). Organizational culture is particularly complex in a health care organization where there could be as many different subcultures as there are professions. However, the most important aspect of an organizational culture is how these groups determine to solve the problems of their organization (Schein, 2004). Because organizational culture refers to a system of shared assumptions values, beliefs, and practices that shape and guide members’ attitudes and behaviors in the organization
(Hatch, 1993; Schein, 1990, 2004), the implementation of a clinical pathway is potentially influenced by the culture of the institution and the unit.

Schein (1990, 2004) has developed a model in which organization culture is conceptualized as comprising three levels: 1) artifacts consisting of the constructed physical and social environment of an organization. Artifacts can be seen from physical space, mottos, mission statements, artistic productions, and overt behaviors of members; 2) values and beliefs are an awareness sense of organizational members of what ought to be as opposed to what actually is. Values and beliefs are less visible than artifacts; 3) basic underlying assumptions that are patterns of behavior that evolve from the continuous use of a problem solution that has repeatedly been successful in the past and has unconsciously become taken for granted as the only way to solve similar problems. Schein’s conceptual model of organizational culture will be used as a frame for conceptualizing organizational culture in this study.

Specific Aims and Research Questions

The purpose of this study is to describe the implementation of a clinical pathway for head injury in a neuro-surgery unit of a tertiary governmental hospital in northern Thailand, with particular focus on how the culture of the institution and the unit influences the implementation. Four specific aims and their respective research questions follow.

The specific aims are:

1. To describe the implementation of a clinical pathway for head injury in a neuro-surgery unit by a multidisciplinary team.
2. To explain the patterns of the culture, the meanings and rules of the neuro-surgery unit and the hospital in both *emic* and *etic* perspectives.

3. To identify the factors that promote or impede the success of the implementation of a clinical pathway for head injury.

4. To explore the management and the collaboration of the multidisciplinary team in the implementation of a clinical pathway for head injury.

The research questions are:

1. How is a clinical pathway for head injury implemented by a multidisciplinary team?

2. What are the patterns of the culture in a neuro-surgery unit and the hospital in both *emic* and *etic* perspectives as they relate to the implementation of a clinical pathway for head injury?

3. What are the factors that promote or impede the success of the implementation of a clinical pathway for head injury?

4. What interdisciplinary problems does the multidisciplinary team encounter with the implementation of a clinical pathway for head injury?

5. How does the multidisciplinary team manage the interdisciplinary problems encountered with the implementation of a clinical pathway for head injury?
CHAPTER TWO
REVIEW OF THE LITERATURE

Clinical pathways represent a strategy to respond to the current health care environment that is focused on reducing costs, managing care, improving resource utilization, reducing the length of stay of the hospitalization, increasing patient satisfaction and improving the quality of care (Konety, Painter, & Bahnson, 1996; Litwin, Shpall, & Dorey, 1997; Ranjan, Tarigopula, Srivastava, Obasanjo, & Obah, 2003; Vitaz, Mcllvoy, Raque, Spain, & Shields, 2001; Wazeka, Valacer, Cooper, Caplan, & DiMaio, 2001). However, according to previous studies, clinical pathways often are not implemented successfully. Most literature describes only how they are developed and the benefits from using them, yet few studies have addressed the factors that influence the implementation. The factors influencing the success or failure of the implementation of clinical pathways are still unclear. Gaining an understanding of these factors would help health care providers to implement clinical pathways successfully and achieve the goals of clinical pathways.

This literature review has three sections. The first section will identify the state of current knowledge relating to the implementation of clinical pathways in a national context. The second section reviews the state of current knowledge about organizational culture. The third section specifically addresses factors related to organizational culture that facilitate or inhibit the implementation of clinical pathways. The review concludes with a summarized notion of organizational culture underlying this study.
Current State of Knowledge about Clinical Pathways

A clinical pathway is defined as the optimal sequencing and timing of interventions developed by physicians, nurses, and other staff members for a particular diagnosis or procedure, designed to better utilize resources, maximize quality of care, and minimize the length of stay of the hospitalization (Coffey et al., 1992). Clinical pathways have been developed worldwide in several health care organizations to improve quality and efficiency of health care and to reduce or control health care costs (Cushing & Stratta, 1997; Johnson, Blaisdell, Walker, & Eggleston, 2000; Konety et al., 1996; Litwin et al., 1997; Ranjan et al., 2003; Vitaz et al., 2001; Wazeka et al., 2001). This research has been conducted in the United States, Australia, New Zealand, the United Kingdom, Italy, Japan, and Taiwan (Berlowitz et al., 2001; Chang et al., 2000; Luc, 2000; Matsumoto et al., 2002; Panella et al., 2003; Smith & Gow, 1999; Wilkinson et al., 2000). Findings from the research about the development and implementation of clinical pathways in each country is reviewed in this section.

United States

The concept of a clinical pathway appeared in health science literature in the 1980s from the New England Medical Center in Boston, which had adapted the care path concept to the delivery of patient care. High health care costs, practice variation, and the emphasis on quality assurance of patient outcomes from the Joint Commission for the Accreditation of Health Care Organizations (JCAHO) led to the emergence of clinical pathways in the United States (Jones et al., 1999; Uzark, 2003; Weiland, 1997). Forkner (1996) reported that approximately 60 percent of United States hospitals use clinical
pathways with a wide range of patient diagnoses. Havighurst, in a nation wide survey (1996), reported that 81 percent of hospitals used clinical pathways.

Studies from the United States have shown that clinical pathways can have positive effects on length of hospital stay, without adverse readmission rates, and cost containment. Johnson et al. (2000) reported that using a clinical pathway for children with asthma decreased the length of stay. The costs associated with room and therapy charges were significantly lower for children in the intervention group that used a clinical pathway because the guidelines allowed more autonomy for nurses in weaning patients from therapy. Ranjan et al. (2003) also reported that congestive heart failure patients who were on the pathway had a shorter length of stay compared to patients who were not on the pathway. Ho and Huo (2007) supported these two studies with findings that use of a clinical pathway for total knee replacement effectively reduced costs and the operative time. In contrast, Wazeka et al. (2001) did not find a significant difference in the length of stay for children using a clinical pathway for asthma when compared to those who did not use it in the first year of the implementation of the pathways. But the length of stay was decreased significantly after continued use of the clinical pathway. The costs associated with asthma admissions and nursing and laboratory costs also showed a significant reduction each year the clinical pathway was being used (Wazeka et al., 2001). Johnson et al. (2000) and Wazeka et al. (2001) reported that there were no increased rates of readmission, although neither reported the clinical outcomes for patients.

The research findings from these studies reflected that the effectiveness of clinical pathways helped decrease the length of hospital stay and that this finding might depend
on the length of the time that clinical pathways were used. This was supported by Lee and Anderson (2007) who studied the association of five pathways for chronic obstructive pulmonary disease, myocardial infarction, diabetes, congestive heart failure, and pneumonia with the length of stay from 1999-2003. Lee and Anderson reported that only the clinical pathway for myocardial infarction significantly decreased the length of stay and suggested that clinical pathways might be effective in disease related diagnoses that have more routine treatment.

Some empirical evidence exists about using clinical pathways as a strategy to reduce the inappropriate use of resources and cost containment. Markey, Mcgowan and Hanks (2000) studied the effect of clinical pathways for thyroidectomy and parathyroidectomy. The data were collected from July 1998 through July 1999 and compared to data from the previous year prior to using clinical pathways. The results indicated that the average length of stay decreased from 2.4 to 1.5 days for patients on clinical pathways as compared to the patients who were not using clinical pathways. The average cost per case decreased, and the pharmacy costs and laboratory utilization were reduced. Similar findings have been reported by Cooney, Bryant, Haluck, Rodgers, and Lowery (2001) who studied the impact of a clinical pathway for gastric bypass surgery on resource utilization. They reported that the clinical pathway significantly decreased hospital length of stay, cost of care, and perioperative resource utilization. A clinical pathway for gastric bypass surgery reduces the use of room and board, the supplies for patient during the in-hospital stay, laboratory tests, and radiology exams.

Findings from these two studies by Markey et al. (2000) and Cooney et al. (2001) were inconsistent with those from Berenholtz, Pronovost, Lipsett, Dawson, and Dorman
Berenholtz et al. (2001) studied the effectiveness of clinical pathways on the overuse of laboratory tests in a surgical intensive care unit. The results supported that there were no significant differences in laboratory test utilization between the patients in the surgical intensive care unit who were on clinical pathways and those who were not on clinical pathways. The surgical clinical pathways were not effective in reducing resource utilization in the intensive care unit. Possible explanations for the inconsistent findings include the variations in patient acuity, failure to consistently follow the clinical pathways, physician variation on test-ordering, and the method in selecting the patients to be on or off the clinical pathways.

New Zealand

Clinical pathways have been found to reduce resource utilization in New Zealand. Smith and Gow (1999) examined the effectiveness of a clinical pathway for myocardial infarction on resource utilization after it had been used for two years at Middlemore Hospital, Auckland, New Zealand. These researchers contend that a clinical pathway for myocardial infarction improved patient care and utilization of resources by providing a structural framework and educational guide that assisted in the delivery of care.

Japan

Clinical pathways have also been successfully implemented in Japan, showing improvement in length of stay and patient satisfaction while minimizing costs (Matsumoto et al., 2002; Takegami, Kawaguchi, Nakayama, Kubota, & Nagawa, 2003; Uchiyama, Takifuji, Tani, Onishi, & Yamaue, 2002). Matsumoto et al. studied the effectiveness of a clinical pathway for abdominal aortic aneurysm on rate of recovery and adverse outcomes. The results indicated that there was a reduction in length of stay after
surgery from 25.6 days to 19.1 days and a decrease in the prevalence of adverse outcomes. These findings are consistent with Uchiyama et al. and Takegami et al. Uchiyama et al. examined the effectiveness of a clinical pathway for laparoscopic surgery. The length of stay and the total costs during hospitalization were reduced significantly in the pathway group. In Kikkoman Hospital, Japan, Takegami et al. studied the impact of a clinical pathway for acute appendicitis on the length of hospitalization, postoperative stay, hospital costs, and length of the operation during the years before and after the implementation of a clinical pathway. The mean length of hospitalization and postoperative stays between the control and the pathway groups, and the associated hospital costs, decreased significantly for the pathway group while the mean of operation time showed no significant differences. The researchers concluded that the clinical pathway standardized treatment for acute appendicitis. It was effective for treating acute appendicitis patients, minimizing the costs and maintaining the quality of care.

**Australia**

The success of using clinical pathways to ensure the best standard of practice was demonstrated in Australia. Wilkinson et al. (2000) reported that a clinical pathway for cerebrovascular accident significantly decreased the length of stay and improved clinical outcomes and utilization of resources. The success of this clinical pathway has been recognized nationally as a benchmark for other health care facilities and has been transferred to other health care organizations (Wilkinson et al.). Similar findings have been reported by Browne et al. (2001) in research that examined the effectiveness of clinical pathways for gastroenteritis, asthma, and croup in children. They found that these three clinical pathways significantly decreased length of stay in the emergency
department, inpatient admission, and the re-presentation after discharge. Parents also had high levels of satisfaction throughout the study (Browne et al.).

Clinical pathways not only enhance patient care, but patients in some studies express satisfaction with the procedures or processes of the application. Litwin et al. (1997) found that patient and family satisfaction was high and did not vary with the length of stay and the duration time of surgery in clinical pathways for radical prostatectomy. In studying the effectiveness of clinical pathways for managing acute care pediatric illness in an Australian emergency department, Browne et al. (2001) also reported high parental satisfaction using a follow-up survey administered by the discharge nurses.

In contrast, Emerson, Frost, Fawcett, Ballantyne, Ward, and Catts (2006) reported that clinical pathways for psychosis and depression did not support the cost-effectiveness of clinical pathways due to the complexity and variability of mental disorders. The researchers provided a possible explanation that compliance to the pathways was related to the pathway coordinator. The compliance was high when the pathway coordinator was present and reduced to 50 percent when the coordinator was on leave. This reflected that the success of a clinical pathway implementation depended on the commitment of the team.

United Kingdom

The results of research by Litwin et al. (1997) and Browne et al. (2001) research were inconsistent with Luc’s research conducted in the United Kingdom (UK). Luc (2000) examined clinical pathways for maternity and breast disease in the British National Health Service Trust. The investigators reported that patient satisfaction was
only slightly different between the two groups who were on clinical pathways and those who were not. This inconsistent finding might relate to the differences in survey questionnaires and data collection methods. Luc also reported that the results of the clinical outcomes indicators were mixed. Possible explanations for the mixed clinical outcomes might be from the lack of variance monitoring in the clinical pathways. Luc contends that these results highlight the importance of the role of the change agent in clinical pathway development, and of issues of cultural change in the development processes. Luc concludes that cultural change needed to be required by all clinical staff. Luc’s insight on the influence of the organizational culture will be specifically examined in the section on current research in organizational culture.

In a prospective study of a clinical pathway for femoral neck fracture in older people in the UK, Roberts et al. (2004) found that the length of stay was increased and associated with improved clinical outcomes and increased use of occupational therapy. The researchers explained that longer hospital stays were due to the fact that local nursing and residential homes were closed, and the social services had a shortage of home care providers during the implementation.

**Canada**

Clinical pathways have also been applied to optimize the use of resources in Canada. Results from two Canadian studies (Sherman, Matthews, Howard, & LeBlanc, 2001; Wong et al., 2000) supported research findings of at least one study conducted in the United States. The first Canadian study evaluated the clinical pathway for oxygen therapy and was developed and implemented in a 28-bed medical clinical teaching unit in a hospital in Hamilton, Canada. The findings indicated that the oxygen clinical pathway
consumed more resources than standard management and was not associated with changes in patient outcomes (Wong et al., 2000). This study supported research results of the U.S. study conducted by Berenholtz et al. (2001) that found no significant differences in the overuse of laboratory tests in the surgical intensive care unit between patients who were on clinical pathways and those who were not.

Two studies, one conducted by Sherman et al. (2001) in Canada and the other by Levin, Ferraro, Kodosky, and Fedok (2000) in the United States, documented the effectiveness of a clinical pathway for laryngectomy. These researchers provided evidence of a significant decrease in length of hospital stay and hospital cost per case without increasing surgical complications and readmission rates. In addition, Levin et al.’s study found that a clinical pathway for laryngectomy optimized allocation of medical resources.

*Italy*

The development and implementation of clinical pathways in Italy was driven by the variation in health care systems, the scarce use of medical evidence, and the phenomena of practice variation. Clinical pathways were identified as a way to reduce variation problems and health care costs without reducing the quality of patient care (Panella et al., 2003). Research examining clinical pathways for inguinal hernia repair, strokes, chronic renal failure, chronic heart failure, and total hip replacement (Panella et al.) showed that the clinical pathways for inguinal hernia repair, heart failure, and total hip replacement reduced in-patient mortality and outcome variations. Reductions in length of stay and costs were significant for inguinal hernia repair and chronic heart
failure. Length of stay for total hip replacement was not reduced significantly, although costs were significantly decreased.

Panella et al. (2003) also reported on implementation of clinical pathways for stroke and chronic renal failure and discussed the challenges encountered. A clinical pathway for stroke was stopped after three months because the physicians refused to use the clinical pathway, resulting in incomplete documentation. This decision combined with a small sample resulted in unusable data. Further, the early discharge planning program in the clinical pathway was not implemented, although the researchers could find no explanation (Panella et al.). Nevertheless, the strength of this research is that the clinical pathways were based on sound evidence and were developed by a committed group of people in the organization. Panella et al.’s research highlights how work group culture might influence clinical pathways effectiveness within the organization. Not all professionals (e.g. some physicians) were committed to the project, and therefore, did not follow through with implementation.

**Taiwan**

In Taiwan, Chang et al. (2000) reported on the effectiveness of a clinical pathway for radical nephrectomy. Outcomes included costs, length of stay, and quality of care. Length of stay was significantly decreased from 11.4 to 9.8 days in the first year and from 9.8 to 9.6 days in the second year. Hospital charges were reduced in both years, but the reduction was not significant. Findings suggested that a decrease in length of stay may result in a decrease in hospital costs as well. It is still unknown whether continued implementation of the clinical pathway would continue to reduce hospital costs (Chang et
al.; Jones, 2000). However, this clinical pathway significantly improved the quality of care and reduced variations in physicians’ practice.

In summary, the literature has shown that many countries have been successful in the implementation of clinical pathways. However, the results in achieving the goals of clinical pathways are varied. The outcomes of reduced lengths of stay and associated hospital costs, which have been major purposes in adopting clinical pathways into an institution, achieve the goals of clinical pathways, but the goal of improving resource utilization is still uncertain. This raises the question of whether clinical pathways can facilitate cost-efficient management. Most clinical pathways reported advantages in reducing length of stay and costs of care without sacrificing the quality of care, but the costs of care could have been simply reduced because physicians discharged the patients sooner in accordance with the timelines for the clinical pathways. In other words, clinical pathways that reduce hospital costs through restricted lengths of stay may be just shifting the costs onto other services such as the community and outpatient setting (Cheah, 2000; Jones, 2000). Consequently, the stated advantages of reducing costs and improving resource utilization through the use of clinical pathways remain questionable. In addition, broad generalizations beyond the research sites are difficult to make because of the differences in diagnoses and clinical outcomes indicators, characteristics of patients before and after clinical pathways implementation, the circumstances of work group culture in the institution, and the measurements that are used to measure the clinical pathways outcomes. This might be one explanation for why not all research studies reported improvement of quality of care, but indicated that their clinical pathways had no adverse outcomes.
Current State of Knowledge about Organizational Culture

Since the early eighties, the construct of organizational culture has attracted attention from both academics and practitioners. Empirical evidence has been reported that indicates that cultural dimensions are varied across organizations. The term *culture* refers broadly to a related set of beliefs, values and behaviors that are commonly held by the society. It is derived from social anthropology as a framework for understanding prehistoric societies (Hatch, 1993; Hofstede, 2001; Hofstede, Neuijen, Ohayv, & Sanders, 1990; Schein, 1990). Culture is the broadest force that influences behavior, involves beliefs and behavior, and exists at various levels. Culture is not innate. It is transmitted through others in the environment and is shared among the group. Its nature is the culture of groups rather than individuals, and it develops strength through time (Duncan, 1981; Hofstede et al., 1990).

The concept of culture has been widely used in the context of organizations particularly as corporate or organizational culture. It has been identified as an important aspect of organizational behavior and as a concept that is useful for helping us to understand how organizations function (Hofstede et al., 1990; Kim, Lee & Yu, 2004; Silverthorne, 2004; Smircich, 1983). Organizational culture also has been viewed as holistic, historically determined, and socially constructed (Hofstede et al.). Schein (1990) defined organizational culture as a pattern of basic assumptions that a group discovered or developed in learning how to cope with problems from an external environment, how to adapt and integrate that pattern of behavior into its organization, and how to teach the pattern to new members.
Culture plays an important organizational role, because the majority of activities are carried out by a group of people who have the same ideas, beliefs, values, and knowledge. Therefore, organizational culture refers to the shared values, beliefs, and norms of the organization. These cultural norms, values, beliefs, and assumptions provide unconscious guidance and direction and lead to the subsequent behavior of organizational members. Schein (1990, 2004) stated that organizational culture is primarily about the deeply held beliefs and assumptions of an organization, which are integrated into a consistency pattern. Spradley (1979) and Wilkins and Dyer (1988) suggested that the underlying cultural themes are at the core of a group’s culture and are based on a paradigm of tacit assumptions referred to as the cultural pattern of an organization. Organizational culture can be found at every level of an organization and it affects both internal operations of the organization and how it relates and adapts to its external environment. Therefore, organizational culture is a key variable in the success or failure of organizational innovations such as reengineering and quality improvement implementation (Detert, Schroeder & Mauriel, 2000; Shortell et al., 1995).

Organizational culture has incorporated a set of assumptions, beliefs, and values that organizational members share and use to guide their functions; therefore, it has been expected that these assumptions, beliefs, and values influence people’s attitudes toward organizational behavior. Rachid, Sambasivan and Rahman (2003) investigated the influence of organizational culture on attitudes toward organizational change in Malaysia. The researchers used Goffee and Jones’s cultural typology (fragmented culture, network culture, mercenary culture, and communal culture) to categorize the types of their organizations. They found their organizations had mercenary culture that emphasized
strategy and winning in the market place. They also reported that the type of mercenary
culture had strong positive influences on cognitive attitudes toward organizational
the relationships between transformational leadership, organizational culture and
innovation in a nonprofit organization. The researcher found that there was a strong
relationship between leadership and organizational culture that was also related to
successful innovation in an organization. These two studies highlight the important role
of organizational culture in the success of the organizational change process.

Empirical evidence has shown that organizational culture is a dominant factor
affecting organizational performance (Corbett & Rastrick, 1999; Kim et al. 2004).
Corbett and Rastrick examined management culture and quality performance in New
Zealand manufacturing organizations by using an organizational culture inventory to
measure the types of culture with six quality indicators. They reported that there were
significant correlations between the culture of aggression/defensiveness and quality
indicators of warranty claims and delivery in full on time to customers, and concluded
that the type of management style tended to create specific quality characteristics in a
work group.

Kim et al. (2004) examined the relationship between corporate culture and
organizational performance among Singaporean companies. They found that corporate
culture had an impact on a variety of organizational processes and performance across
organizations. Strong cultures strengthened performance among members through the
social control of the organizational values of commitment and loyalty. This evidence
showed that the more members have shared assumptions and values in an organization, the stronger the behavioral norms and organizational culture.

Strong organizational culture can also increase employees’ satisfaction and organizational commitment. Silverthorne (2004) studied the relationships between organizational culture, job satisfaction, and organizational commitment in Taiwan. The results revealed that the bureaucratic organizational culture had the lowest level of job satisfaction and organizational commitment, while an innovative organizational culture had the next highest level of job satisfaction and organizational commitment. The highest level of job satisfaction and organizational commitment was a supportive organizational culture. This evidence strongly supported the notion that culture plays an important role in the level of job satisfaction and organizational commitment. Therefore, strong organizational culture has been the key to improved performance, and can assure high satisfaction, organizational commitment, and performance among members (Saffold, 1988; Yin-Cheong, 1989).

Organizational Culture and Clinical Pathways

Organizational culture has been shown to be a key ingredient in successful managing of strategic change initiatives. Organizations that are successful in managing change tend to actively integrate organizational culture into their planning process. Researchers of systematic change initiatives, such as the implementation of quality improvement processes of clinical pathways, have concentrated only on the visible practices or in other words the artifacts, yet they have generally paid little attention to the values, beliefs, and underlying assumptions that support or impede the patterns of behavior. Therefore, health care organizations that have to transform themselves into
responsive, participative organizations that are capable of implementing new practices that produce improved results in both quality of care and services at the reduced costs, should have forethought in the management of the change process.

Coeling and Simms (1993) identified organizational culture as the major factor in facilitating or restraining innovation at the nursing unit level. These researchers characterized organizational culture that impacts innovation into four characteristics: its broadness, subtlety, power, and pattern. Culture is a broad force because it involves the majority of activities carried on in an organization; yet, it is subtle because it involves basic assumptions and shared meanings. Culture is a powerful force because it develops as a solution to problems and it is embraced strongly. And culture is a pattern of behavior unique to each group. There can be as many different subcultures within a hospital as there are different professions. In order to facilitate or implement an innovation in an organization, Coeling and Simms recommend that organizations must assess the unit culture, identify cultural elements of the innovation, determine which forces will drive or restrain the innovation, strengthen forces that drive innovation, and decrease resistance to change. The cultural factors that may influence implementation of clinical pathways were examined in this study.

Research about quality improvement projects shows that organizational culture influences quality improvement programs and their outcomes. Tzeng, Ketefian, and Redman (2002) used Pearson’s correlation and regression analysis to test a conceptual path model depicting the relationship between staff nurses’ assessment of organizational culture and patient satisfaction with nursing care received. The results demonstrated that the strength of an organization’s culture had an effect on inpatient satisfaction with
nursing care through staff nurses’ job satisfaction. This evidence showed that staff nurses’ perceptions correlated to inpatient satisfaction and organizational culture. Berlowitz et al. (2003) examined the relationship between quality improvement implementation in 35 nursing homes and organizational culture and its effects on pressure ulcer care. They separated culture into four types: 1) group culture that emphasizes teamwork and shared decision making, 2) developmental culture that emphasizes innovation, 3) rational culture that emphasizes planning and productivity, and 4) hierarchical culture that emphasizes rules and regulations. The results indicated that quality improvement implementation is most likely to be successful in nursing homes that had group and developmental cultures that promoted teamwork and innovation. The combination of group and developmental culture was also related to employees’ job satisfaction, but the association with improved care was uncertain. Similar findings were reported by Silverthorne (2004) who examined the relationships between organizational culture and organizational commitment and job satisfaction in Taiwan. The results indicated that organizational culture had a positive impact on job satisfaction and organizational commitment and a negative impact on turnover rates.

The literature revealed that clinical pathways are most successful when there is a strong support from the hospital leadership and a shared commitment among the staff (Roberts et al., 2004; Shortell et al., 1995; Smith & Gow, 1999). Communication effectiveness and positive working relationships among physicians, nurses, and other staff have been shown to promote commitment to collaboration and clinical pathway utilization. Clinical pathways also clarify each person’s role within the clinical team, which increases satisfaction among staff members (Cooney et al., 2001; Johnson et al.,
These findings suggest that the successful implementation of quality improvement tools such as clinical pathways requires significant commitment to a culture that emphasizes empowerment, autonomy, and team culture. Team culture consists of an emergent and simplified set of rules and actions, work capability expectation, and member perceptions that individuals within the team will develop, share, and enact after mutual interactions. An effective team is a team that has a strong team culture because shared member expectations will facilitate individual and team performance and communication (Early & Mosakowski, 2000; Shortell et al., 1995).

These elements of organizational culture also create a sense of ownership, which enhances the effectiveness of clinical pathways by minimizing resistance in integrating clinical pathways into practice (Cheah, 2000; Luc, 2000; Panella et al., 2003; Wilkinson et al., 2000). Thus, the success of the clinical pathway application may be strongly influenced by the readiness of the multidisciplinary team and staff members to embrace clinical pathways, accept them, and cooperate in implementation. The existing empirical evidence suggests that organizational cultures that lack a collaborative multidisciplinary approach, have inadequate education of staff, lack support from the management, and lack a clinical pathway coordinator role may have a negative impact on clinical pathways outcomes (Chang et al., 2000; Luc; Panella et al.; Wong et al., 2000).

There is a scarcity of qualitative research discussing the impact that organizational culture may have on the implementation of clinical pathways. However, there was one qualitative study that directly mentioned the implementation of a clinical pathway. Jones (2000) conducted an action research study on the implementation of
clinical pathways for patients who were diagnosed with schizophrenia. The findings indicated that the major problem in the development and implementation of clinical pathways was poor staff engagement related to staff turnover and low morale. The staff lacked motivation and understanding in implementing the clinical pathways. The clinical pathway was unsophisticated and lacked a role model or leader to champion the process. The procedure of admitting patients onto the clinical pathway was also unclear.

Cultural differences among countries were another factor that may have influenced the success of the implementation of clinical pathways. In Japan, for example, patients are hospitalized until they are well, resulting in longer hospital stays (Matsumoto et al., 2002). In contrast, in the United States a shorter length of stay is valued. Different cultural values related to length of stay will influence the type of clinical pathway designed and implemented, as well as eventual effectiveness.

In summary, organizational culture is an increasingly important component of an organization. It influences how individuals perceive and react to their environment, which contributes to the organizational outcomes. However, there is no indepth information about how organizational culture influences the implementation of clinical pathways. Further investigation is needed to understand how cultural factors contribute to the development and implementation of clinical pathways. This study will begin to fill the void in the literature.

Summary of the Review of Literature

The literature about the development and implementation of clinical pathways is growing. Much is known about the effectiveness of the clinical pathway application while less is known about the factors that contributed to the success of implementation.
This review of the literature validates claims that clinical pathways are effective in reducing lengths of stay and associated hospital costs. Only one study in the UK demonstrated an increase on length of stay, but this finding may have been due to an unusual situation at the time the study was conducted (Robert et al., 2004).

Most studies about clinical pathways document the advantages of clinical pathways in reducing lengths of stay and costs of care without sacrificing quality of care. However, clinical pathways that reduce hospital costs through restrictions on length of stay may be shifting costs onto other services such as the community and outpatient setting. Therefore, concerns regarding total patient costs may be an issue that needs to be investigated in a longitudinal study that tracks patients’ costs from hospital to community.

The empirical evidence is mixed about the impact of clinical pathways on resource utilization. For instance, the research studies that were conducted by Cushing and Strata (1997) and Cooney et al. (2001) reported that clinical pathways for simultaneous pancreas-kidney and gastric bypass surgery decreased resource utilization. This finding was not consistent with reports from Johnson et al. (2000) and Berenholtz et al. (2001). Johnson et al. reported that clinical pathways for asthma in children had little impact on laboratory tests. This finding was supported by the study of Berenholtz et al. who reported that clinical pathways did not reduce the use of laboratory tests in surgical intensive care unit. These four research studies were conducted in the United States. One explanation for these mixed results may be related to the measurement of cost. The majority of the research reviewed reported that length of hospitalization and total hospital cost decreased without mentioning declines in ancillary service charges such as the charges for ICU beds, operating rooms, anesthesia, respiratory therapy, and pharmacy.
The decline in these ancillary services would lead to the reduction of total hospital costs (Konety et al., 1996; Levin et al., 2000). Future investigation is needed to measure cost associated with ancillary services.

Few studies have been conducted examining patient satisfaction as an outcome of clinical pathways utilization. From this review there were two studies that measured patient satisfaction and the results were dissimilar. Overall, the empirical evidence documents that use of clinical pathways leads to better care by ensuring coordination of care from the multidisciplinary team and other staff. The pathways reduce unjustified clinical variations, length of stay of hospitalization, and ultimately cost.

The success of clinical pathways implementation also depends upon clinician cooperation, commitment to using evidence-based information in practice to improve quality of care, and implementation of ongoing education during the use of clinical pathways. However, there were few research studies that described how clinical pathways are implemented and what factors increase the likelihood of a successful clinical pathway implementation. Beyond this, there is no literature that addresses the impact of organizational culture on the implementation and the use of clinical pathways.

In summary, this literature review about organizational culture supports that organizational culture is a dominant factor affecting organizational members’ attitudes and organizational performance. Therefore, organizational culture influences individual’s work behavior, which results in an increase in organizational effectiveness (Kim et al., 2004; Rashid et al., 2003; Yin-Cheong, 1989). This review also validates claims that organizational culture is an important influence on organizational innovativeness (Jaskyte, 2004; Rashid et al.).
Few studies have been conducted examining the effect of organizational culture as an important factor that can increase employee satisfaction, organizational commitment, and performance among members (Berlowitz et al.; Tzeng et al., 2002). The results of this literature review demonstrated that organizational commitment, which is a work attitude, is related directly to job satisfaction and organizational performance. Organizational commitment is the factor that helps employee participation and intention to remain within the organization (Berlowitz et al. 2003; Corbett & Rastrick, 1999; Lim, 1995; Silverthorne, 2004).

The literature review also shows that the successful implementation of quality improvement tools into an organization requires a supportive organizational culture (Silverthorne, 2004), a combination of group and developmental culture (Berlowitz et al. 2003) and significant commitment to a culture that emphasizes empowerment, autonomy and team culture (Shortell et al., 1995). Within an organization, if most members share similar patterns of needs, values, and assumptions, they will in turn have a strong culture in an organization. In addition, organizations that value collaboration as a means to better decisions are likely to foster teamwork and organize tasks around groups of people rather than the individual (Saffold, 1988; Yin-Cheong; 1988). Therefore, organizations that have strong culture will provide members with organizational structure, standards, consistency, and organizational values that influence the pattern of internal relationships, internal productivity, and effectiveness (Saffold).

In reviewing the literature about organizational culture, it has been noticed that most organizational research has been conducted to identify which cultural dimensions are most related to the implementation of change programs and the importance of human
resource and organizational outcomes. Therefore, the literature that attempts to describe and develop thick description of organizational culture is scarce. Results of a study with thick descriptions could facilitate a more comprehensive understanding of the existence of complementary and paradoxical behavior and activities that comprise organizational culture.

Based on this notion of organizational culture and the gaps in the literature review about clinical pathways and organizational culture, this study was designed to fill the void in the literature of organizational culture related to the implementation of systematic quality improvement initiatives in an organization. The study will address this gap by using ethnographic research methods to uncover the meanings, the cultural patterns of people’s behavior, the hidden principles of their organization, and the crucial factors and strategies that enhance the success of clinical pathways implementation.
CHAPTER THREE

METHODOLOGY

The aim of this study was to understand how the culture of the neuro-surgery unit at a hospital in northern Thailand influences implementation of clinical pathways. To understand the culture of a social unit, one must understand the systems of meaning from patterns, the relationships among parts, and their connection to the whole of that culture. This is best done by learning from the perspectives of the people in that social unit. Thus, personal attitudes, motivations, and the meanings of work for the multidisciplinary team are best learned from interviews, observations, and conversations with the people of interest. Therefore, ethnography was the research method used for this study. While the results cannot be generalized to other groups, they provide a depth and breadth of cultural information on the multidisciplinary team implementing a clinical pathway for head injury and on the hospital’s organizational culture at the AA hospital.

Method

Ethnography is a research process and the product of a systematic qualitative inquiry into the culture and social organization of groups (Agar, 1986; Fetterman, 1989, 1998; Germain, 2001; LeCompte & Schensul, 1999; Spradley & McCurdy, 1972). The major purpose of ethnography is to gain an understanding of the cultural meanings that organize and explain the experiences of a group of people within a particular culture by learning from them rather than studying them (Agar, 1980;
Spradley, 1980). Thus, the goals of an ethnographer are to describe, classify, compare, and explain the similarities and the differences in human behavior across the society or group (Spradley & McCurdy). The end product of the ethnography is an in-depth description of a particular culture of a group of people. Therefore, ethnography based on the Spradley’s approach (1979, 1980) was the research method used in this study. Through the processes of gathering information, creating descriptions, and studying how people categorize and create the meanings within their worldview, an ethnographer discovers and is able to interpret the meanings, cultural patterns of behavior, and hidden principles of the group’s way of life (Spradley, 1980). Concepts that reflect the characteristics of ethnography and guide an ethnographer in fieldwork are 1) culture, 2) a holistic perspective and contextualization, 3) emic and etic perspectives, 4) reflexivity, and 5) the cyclic nature of data collection and analysis (Boyle, 1994; Fetterman, 1989, 1998; Roper & Shapira, 2000; Speziale & Carpenter, 2003; Spradley, 1979, 1980). Discussion of each of these concepts follows.

1) Culture. Culture was addressed from the behavior/materialistic perspective and ideational/cognitive perspective (Fetterman, 1989, 1998; Roper & Shapira, 2000; Spradley & McCurdy, 1972). This behavior/materialistic perspective focused on behaviors or patterns of behavior of the group and their customs and life ways. The ideational/cognitive perspective focused on the ideas, beliefs, and knowledge that characterize a group of people (Fetterman, 1989; Spradley & McCurdy).

With the aim to understand these shared meanings of culture, an ethnographer needs to understand and distinguish three aspects of the human experiences of
culture. These aspects are cultural behavior, cultural artifacts, and cultural knowledge. Cultural behavior is the way people act and do things. Cultural artifacts are the things that people make and use. Cultural knowledge is what people believe, know, and say. Cultural behavior and cultural artifacts are the superficial aspects of culture that an ethnographer will see when conducting fieldwork. Cultural knowledge is the knowledge people use to generate behavior and interpret the experiences that people in the culture share. Cultural knowledge has two levels of consciousness: explicit knowledge and tacit knowledge. An ethnographer can learn explicit knowledge from observing and talking with the informants. Tacit knowledge is the knowledge that people have but do not talk about or express in the same way as explicit knowledge. This ‘understood’ behavior relates to aspects of culture that are deeply ingrained in daily life. An ethnographer discovers this tacit knowledge by making cultural inferences based on careful listening, observation of behavior, and study of artifacts (Spradley, 1979, 1980).

The concept of culture is based on the underlying premises of symbolic interactionism. The first premise is that the way people act toward things depends on the meanings that the things have for the person. The second premise is that the meanings of things are derived from past social interaction. The third and last premise is that people grasp meanings through an interpretive and interactive process (Spradley, 1979, 1980; Spradley & McCurdy, 1972).

The concept of culture helps an ethnographer understand the meanings, relationships among patterns, and the context surrounding cultural perspectives. This cultural understanding is associated with the time that an ethnographer stays in the

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field, their understanding of the native language, and their adeptness at interpreting and describing what is heard and seen within the reality of the informants’ worldview.

2) Holistic perspective and contextualization. The holistic perspective is a comprehensive and complete picture comprising the breadth of knowledge of human behavior, activities, categories, patterns, and relationships that an ethnographer attempts to capture. The contextualization of explicit in-depth information learned in the field is reconstructed into meaningful patterns, categories, and relationships to achieve this perspective (Bolyle, 1994; Fetterman, 1989, 1998; Roper & Shapira, 2000). Therefore, a holistic perspective is a conception of a cultural group within the relevant and in-depth contexts of meaning and purpose. Participant observation, long term engagement, and cultural immersion are crucial approaches for an ethnographer to gain a holistic understanding of the totality of the culture.

3) Emic and etic perspectives. The emic perspective is the insider’s view or the informant’s perception of reality (Boyle, 1994; Fetterman, 1998). Through the process of participant observation, an ethnographer will gain understanding of what is seen and by asking participants the meanings of their behaviors, the beliefs of the group will become clearer. The goal of the ethnographer is to identify people’s categories of meaning and the way they define the life ways of their group. The etic perspective is the outsider’s view that an ethnographer sees or observes about the event, and tries to guess or make reasonable sense of what he/she has seen by identifying the patterns of behaviors (Roper & Shapira, 2000; Spradley, 1980). The method used for gaining the emic and etic perspectives is the ethnographer’s use of self as an instrument for collecting data. That is, the ethnographer records cultural
data through his/her perceptions as he/she observes. These two perspectives provide deep insights into the culture’s experiences and its life ways.

4) Reflexivity. As an ethnographer performs fieldwork and conducts participant observations, he/she tries to become a part of the group with the intention of gaining the native’s point of view (Boyle, 1994; Delamont, 2004; Speziale & Carpenter, 2003). The purposes of doing participant observation are to observe the activities, people, and physical aspects of the situation and to engage in the activities within appropriate timing of the situation. By acting this way, an ethnographer will simultaneously gain experiences of being both an outsider and an insider, and be able to understand human behaviors from the *emic* perspective. Thus, a reflexive vantage point emerges. As the participant observation progresses, the ethnographer will become a member of the culture. This will cause stress to the ethnographer as he/she tries to remain objective to reduce biases relative to process and outcome. Manias and Street (2001) suggest that the researcher has to be aware of the way self affects the research process and outcome. This is congruent with Pellatt’s study (2003), which suggested that the researcher include the reflexive account in the report in order to increase the rigor of the ethnographic study. Thus, an ethnographer needs to be concerned about reflexivity and cautiously self-aware and cognizant of the relationship between an ethnographer and the environment.

5) The cyclic nature of data collection and analysis. The vital key to ethnographic study is that the ethnographer always has questions in mind. An ethnographer asks questions to corroborate observations that he/she thinks he/she understands (Agar, 1980). An ethnographer also focuses on similarities and differences in human
experiences. Spradley and McCurdy (1972) stated that looking for cultural differences in human experience is a priority for the ethnographer. Thus, as data from the field are analyzed to look for similarities and differences, this leads to other questions about the culture. This explains why the ethnographer moves back and forth between data collection and analysis.

Research Design
This study used the design and methodology of the systematic ethnographic approach as proposed by Spradley (1979, 1980). The aims of systematic ethnography are to discover the native point of view and cognitive maps that shape the behavior of a particular group and to build a systematic understanding of culture from the perspectives of the people. The product is a description and explanation of the structure of culture and the schema that characterize the people’s knowledge and their way of life (Spradley, 1980; Spradley & McCurdy, 1972).

Spradley (1980) asserted that there are four arguments supporting use of ethnography to study a particular culture. First, the researcher records in explicit documents all of the cultural descriptions and the realities that existed. These documents are useful for understanding human behavior, patterns, and relationships of the culture. Second, the ethnographic method is one strategy for discovering grounded theory. The theory can emerge from the empirical data of cultural description that is comprised of cultural rules, beliefs, and practices of the individual and people in the group. The researcher gains a deeper understanding of the processes from cultural descriptions and is able to develop a beginning substantive theory of the processes of interest. Third, ethnography is useful for studying subgroups within larger cultures. This will help one to understand the maze of overlapping cultural groups of complex societies (Spradley &
McCurdy, 1972). Fourth, the ethnographic method helps clarify the “what” and “why” of human behavior or the meanings of the behavior. Because all human behavior is influenced by cultural background; therefore, ethnography is the appropriate research method for this study. Use of ethnography helped the researcher to develop an in-depth description and rich understanding of the experiences and life ways of the multidisciplinary team in implementing a clinical pathway for head injury within the Thai governmental health care system.

Setting

This ethnographic study was conducted over three months in 2006 at a 38 bed neuro-surgery unit of a regional hospital that belongs to the Ministry of Public Health (MOPH) of Thailand. In Thailand, MOPH hospitals are classified into three levels based on the complexity of health care services provided: primary, secondary, and tertiary (Ministry of Public Health, 2002).

1. Primary care level. Services at this level are provided at a health center and cover a population of 500 to 1,000 people and are provided by health care workers including a midwife, a registered nurse, and a technical nurse. The emphasis is on health promotion, primary care, disease prevention, and curative care.

2. Secondary care level. Services at this level cover a population over 10,000 and are provided in a community hospital with 10-150 inpatient beds. Curative, out- and inpatient care is provided by mostly general practitioners who are responsible for supplying technical supervision and support to the health centers in the district. The number of generalists in the community hospitals depends on the number of beds in the hospital.
3. Tertiary care level. Tertiary health care is provided in general hospitals equipped with 200 to 500 beds and regional hospitals with over 500 beds. The general and regional hospitals are also responsible for facilitation and supervision of health care providers in the secondary level and are staffed by medical and health professionals, including expert specialists.

The hospital in which the researcher conducted this study was recommended by the director of the Institute of Hospital Quality Improvement & Accreditation (HA-Thailand). It is a 756-bed regional tertiary care hospital located in a province of northern Thailand and serves almost 2 million people in two provinces and border areas (See Appendix A: Map of Thailand). The staff is comprised of medical specialists in all fields including medicine, surgery, OB-GYN, pediatric, ophthalmology, ENT, radiology, orthopedic, physical medicine and rehabilitation, anatomical pathology, psychiatry, dentistry, and alternative medicine. There have been eight directors of the hospital to date and each remained in the position an average of eight to ten years. The directors of nursing were elected every four years and each remained in the position for eight consecutive years. Moreover, most of the head nurses and nurses were born and raised in this province.

The neuro-surgery unit has thirty-eight inpatient beds, with eight beds for trauma patients and thirty beds for neuro patients. It is laid out in five sections with a nursing station in the middle section. Section one (beds #1-8) admits trauma patients and female patients, which are not as many as male patients. Section two has six beds (beds #9-14) and admits patients who need close observation. Section three, which is in the middle of the ward, is the nursing station, medication and IV fluid room, staff’s toilet room, head
nurse office, and a supply room. Section four has beds numbered 17-26 and admits head injury patients who are critically ill, have low glasglow coma scores, and need close observation. The last section has beds numbered 27-40 and admits recovery patients who will be discharged, or sent to rehabilitation. The patient rest rooms are at the both ends of the building (See Appendix B: Diagram of the unit).

The criteria for admitting patients to the unit include patients being over 15 years of age with all types of brain tumors, head injuries, and hematoma. For male patients, the additional criteria are spinal cord injury that has affected neurological signs, multiple injuries, multiple injuries with at least two internal organs injured with shock, trauma with shock, burns, maxillo-facial injury, plastic surgery, and hand surgery in non-orthopedic patients.

The unit is served by three staff shifts: a day shift from 8am-4pm, an afternoon shift from 4pm-12am, and a night shift from 12am-8am. The staff of this unit is composed of thirty-four positions including 25 registered nurses, 6 nurse aids, and 3 house keepers. This unit emphasizes multidisciplinary teamwork and uses a combination of team nursing and functional assignment to provide care.

The researcher collected data at the neuro-surgery unit by observing on the unit 6-7 days per week with an average of 4 hours per observation. Furthermore, interviews were conducted with key informants. Each in-depth interview lasted between 45-120 minutes.

Sample and Sample Size

The sample of key informants included, but was not limited to, both male and female members of the multidisciplinary health care team who were involved in the
development and implementation of a clinical pathway for head injury. This sample provided the richest possible data and was representative of the multidisciplinary team that implemented and used the clinical pathway for head injury. The informants from this multidisciplinary team included neurosurgeons, general surgeons, nurses, pharmacists, dietitians, and physiotherapists. To be included in the study, the informants had to be a) over 18 years old, b) able to communicate, read, and write in Thai language, and c) a member of a multidisciplinary health care team or involved in the implementation of a clinical pathway for head injury.

In ethnography, the determination of sample size cannot be pre-determined precisely because it depends on the availability of people who can share their perceptions of the culture that is under study (Munhall, 2001; Parse, Coyne, & Smith, 1985; Roper & Shaipra, 2000). The sampling technique used was snowball or network sampling. This approach helped the researcher access a sample of members of the entire population of the culture under study who could explain the implementation of the clinical pathway from diverse perspectives. The advantage of this sampling method was that competent informants offered deep and rich descriptions from their knowledge of the cultural group. In addition, this technique helped the researcher to gain the acceptance of key informants because they knew and trusted the person who had recommended them to the researcher. The researcher held in-depth interviews with twenty informants: five general surgeons, two neuro-surgeons, eight nurses, and five supporting professionals. Ages ranged from 29 to 60 years and informants had 7 to 29 years of experience in the hospital. Eleven informants were born and grew up in this province. All informants considered this
province to be their hometown. Informants were interviewed until data saturation was achieved.

Data Collection

The following section describes three levels of culture manifestation and the methods used for data collection. According to Schein’s (1990, 2004) conceptual model of organizational culture; culture manifests as artifacts, values, and basic assumptions. These manifestations require that several methods be used to collect data and distinguish the three levels of culture.

1) Artifacts are the most visible expressions of culture and represent the physical construct of the organization, its environment, structures, and processes. Organizational artifacts are language, technology and products, rites and rituals, myths, physical environment, dress code, mission and value statements, organizational stories, behaviors, and the manner in which people address each other. Artifacts are observable, although they provide only a superficial glimpse of an organization’s culture. The true meaning that lies behind how people react can be difficult to decipher and interpret. The method used at this level is observation. A researcher may see and feel how members of the organization react, but cannot tell anything about why and what meanings these artifacts and reactions have to the members (Spradley, 1979, 1980).

2) Values are the second level of organizational culture manifestation. Values provide organizational members with a sense of what ought to be as opposed to what actually is. Values are a deeper level of culture and provide guidance to the underlying meanings and interrelations by which the patterns of behaviors and artifacts may be deciphered. By using interviews, questionnaires, or survey instruments, a researcher can
study the culture’s espoused and documented values, norms, ideologies, and
philosophies. However, these instruments will limit the dimensions of culture that are to
be studied. Therefore, the ethnographic methods of observations and open-ended
interviews are useful in discovering how people feel and think (Spradley, 1979, 1980).
Organizational values provide a greater level of awareness of organizational culture;
however, the true scope of the culture still remains hidden.

3) Basic assumptions are the deepest level of organizational culture manifestation.
These basic assumptions represent underlying values that have developed unconsciously
over a period of time. These underlying values are transformed over time and are taken
for granted as an organizationally acceptable way of perceiving the world. These basic
assumptions are the most difficult to change and relearn. Therefore, the true depth and
breadth of an organization’s culture lies at this level and is difficult to recognize through
superficial analysis. By using more intensive observations, increasingly focused and
probing questions in the interviews, and involvement with motivated members of the
group, a researcher can seek out and decipher the taken-for-granted, underlying
unconscious assumptions that determine perceptions, thought processes, feelings, and
behavior (Spradley, 1979, 1980).

The methods used for data collection congruent with the three levels of culture
were observations, interviews, review of documents about hospital accreditation, and
reports of the multidisciplinary team (Patient Care Team) meeting.

*Participant Observations*

Participant observation is the most common method for conducting ethnographic
research. The researcher took the role of a participant observer. The researcher is Thai
and has lived in central region of Thailand for 35 years. She is fluent in both written and verbal Thai. However, she has never lived in northern Thailand and was not personally familiar with the northern Thai dialect spoken in this region.

In the role of participant observer, the team members of the neuro-surgery unit knew the purposes of the research study. The researcher interviewed informants recommended to her by the previous informants, observed team members during their work in each shift, attended their clinical pathway meetings, and had meaningful conversations with team members about what they did, what they knew, and how they felt about the implementation of the clinical pathway. As time passed, the researcher became more familiar to the team members, which resulted in the team members initiating conversations or small talk with the researcher rather than the researcher initiating interactions. However, the researcher did not become involved in nursing tasks in order to maintain a balance between being an insider and an outsider and between participation and observation. These roles not only helped the researcher access a broad perspective of information, develop rapport and relationships, and become immersed into the cultural group, but also reduced personal biases and prevented the researcher from “going native” (Agar, 1986)

Participant observation data were written in English as ethnographic records or field notes. These field notes described the interactions the researcher saw during observations, overheard in conversations, and experienced in informal conversations with the team members on the neuro-surgery unit. These field notes included the exact words of the informants or staff. This helped to remind the researcher of not only the factual information but also the informants’ and staff members’ feelings, thoughts, and intentions.
toward the clinical pathways. The field notes were confirmed later with the person who had been observed and were used in data analysis.

*Interviews*

Two different types of interviews provided data for this study: informal structured interviews or conversations and in-depth interviews. The researcher engaged in structured conversations with the informants or team members so as to gain meaningful insights that related to the culture of the unit while she observed the team members in a neuro-surgery unit. The questions related to the topics under study and corresponded to the types of observation (See Appendix C).

The researcher conducted in-depth interviews with the recommended informants who met the inclusion criteria in a private or a conference room chosen and arranged by the informants. The interviews were conducted in Thai and lasted from 45 to 120 minutes. These interviews were semi-structured and probing questions were asked based on the circumstances and in relation to the research questions (See Appendix D). Interviews were audiotaped, transcribed verbatim, and checked by the informants after transcription to verify the information. Most of the informants described at length the topics that seemed to be important to them and for which they thought that their answers might be helpful or related to the study. This helped the researcher tune into issues not considered a priori, and to focus future interviews and observations on clarifying and obtaining more in-depth information. Thus, the informants’ responses guided the researcher’s questions for subsequent interviews and observations.
Review of the Documents

The researcher reviewed hospital documents about accreditation, auditing processes, and clinical pathways (including minutes of the multidisciplinary team meeting and reports on clinical pathways). These documents helped the researcher understand the auditing process, structures, requirements of the HA-Thailand, and the hospital context and goals. This review enriched the researcher’s understanding of the structure of the culture and the multidisciplinary team life ways and confirmed the information that the researcher obtained through observations and interviews.

Procedures

The setting of this study is a single social institution that is a limited entry setting (Spradley, 1980). With approval from the IRB of Kent State University and the IRB of the Hospital Research and Development department, the researcher described the purpose, potential risks, and benefits of the study and asked the recommended informant to sign the informed consent form (see Appendix E: Thai consent form) and the audiotape consent form (see Appendix E: Thai consent form) and to complete a brief demographic data sheet (see Appendix F). The participants were informed that they could change their mind at any time if they did not want to be audiotaped or did not want to participate in the study. Each informant was given a code number and no identifying information was included in the transcripts. The code list that linked to the informants was kept in the researcher’s home office. Consent forms and other forms with identifying data were kept in a locked file cabinet in the dissertation advisor’s office at Kent State University.

The questions were open-ended to encourage the informants to freely describe their experiences and knowledge. Although the questions were outlined and congruent
with the types of observation (see Appendix C), the interviews were still guided by the emerging data from the interviews and the observations that derived from ethnographic data analysis. The interviews were audiotaped and transcribed verbatim, and given to each informant to check for accuracy. The researcher shared with the participants that the findings from the study would focus on the culture of the multidisciplinary team who had implemented a clinical pathway for head injury in a neuro-surgery unit and the organizational culture of the hospital that had influence on clinical pathway implementation. Informants were told that study findings would be disseminated in healthcare professional journals and presentations and informed that participant confidentiality would be maintained even though individual anonymous quotes may be used as to illustrate the examples in the findings. All informants expressed their interest in hearing about the findings when the results are available.

The researcher described the research project, purposes, process of participant observation, and benefits of the study to the head nurse of the neuro-surgery unit. At a monthly staff meeting, the head nurse introduced the researcher to some of the team members, officially announced the study, and reviewed the permissions that allowed the researcher to conduct observations at any time and any shift. The researcher entered the neuro-surgery unit quietly with smiles, performed the Thai greeting to the head nurse and sub-head, responded back to the team members who did the ‘WAI” (a Thai greeting explained in depth in the Findings section) to the researcher, and gained familiarity with team members through brief social conversations. It took the researcher three to four weeks to understand the layout and functions of the unit, the routine work, and the way the staff worked in the unit.
Data Analysis

The data from this study mainly came from formal in-depth interviews, informal conversations, and participant observations (field notes). Supplemental data came from reflexive journals. In ethnography, the processes of data collection and data analysis are simultaneous. The data from informal conversations and observations were constantly analyzed during the data collection process. Data analysis consists of domain analysis, taxonomic analysis, componential analysis, and theme analysis (Parse et al., 1985; Spradley, 1980).

The data analysis began as soon as the researcher conducted observations and began to understand the layout and function of the neuro-surgery unit and what team members were doing in the neuro-surgery unit. The participant observations helped the researcher develop more focused questions in terms of dimension and depth of topics, and to have better quality interviews with future informants. At the same time data from the interviews clarified the information that the researcher collected during observations at the neuro-surgery unit.

Domain analysis was performed with the data from observations and informal conversations. The domains, cover terms, and relational patterns between domains and cover terms were identified and arranged into categories. This step generated structural questions for the researcher to ask team members during focused observation.

Taxonomic analysis identified internal organization relationships of each domain and the similarities of the relationships among the categories. Contrast questions emerged from this step and were used in selected observations in order to obtain more in-depth
descriptions. These structural questions verified the information provided by the informants and the team members in the prior step.

Componential analysis was performed to identify the attributes associated with the cultural categories and the dimensions of contrast among all categories and relational patterns. This step gave a picture of the relationships of the domains among the parts and the relationships to the whole culture of the PCT team. Cultural themes began to emerge at this level such as the compelling leader and passionate role model, relationships among the group, the hospital core values of a harmonious community, making it work for the sake of the beloved leader, how they make it work, etc.

Data analysis was conducted in English and was iterative using the existing codes that the researcher labeled as closely as possible to the meaning that the informant used, while seeking cultural patterns and themes from the interviews, field notes and notes that the researcher jotted down. Preliminary analysis done during data collection was accomplished with assistance from two Thai doctorally-prepared nurses (doctorates were obtained in the United States) who had experience in conducting qualitative research and who are working in Thailand. These nursing faculty members at Burapha University advised the researcher about underlying issues the researcher had overlooked or had not considered. For example, these researchers pointed out that the staff members were open-minded and enthusiastic in seeking information or opinions from an outsider. Field notes were sent electronically and discussions were conducted by telephone with these two doctorally-prepared nurses.

The interviews with key informants were transcribed verbatim in Thai. The field notes, reflexive journals, and memos were written in English. The researcher performed
line-by-line coding in English for the English documents and the Thai language documents. The documents created in Thai were subsequently translated into English by the researcher and the translation was confirmed by two Thai-born nurses who received their doctoral education in the United States; one is an American citizen.

New data in the interviews were coded according to categories that appeared in the initial interviews. New codes were added only when the data did not fit with existing codes. Data analysis was iterative. As new codes were added, early transcripts were re-examined. Domains, cover terms, and semantic relationships were thus identified and arranged into categories. As the researcher performed line-by-line coding on field notes, reflexive journals, the twenty interviews, and the results from the preliminary analysis, the results were sent to two bilingual Thai-English nursing educators who were doctorally-prepared in the United States. One was the same person who assisted the researcher during the data collection and data analysis in Thailand and the other is an American citizen who works at the University of Kansas in the United States. This peer debriefing was to confirm the researcher’s translation from Thai to English and confirm the preliminary analyses that was conducted concurrent with data collection. These two bilingual researchers ensured that Thai meanings were captured in English and helped reduce loss of nuance by translation. Thus, the emerging cultural patterns and the themes from the interviews were defined and corroborated. Simultaneously, the researcher performed line-by-line coding on the field notes, and reflexive journals with her dissertation co-chair who is not bilingual (English speaking only).

All the identified domains and categories from the interviews, field notes, reflexive journals, and memos were managed with computer program NVivo 7. The
NVivo 7 program helped in organizing and managing the data and was used to retrieve quotes to illustrate examples. According to the ethnographic data analysis process, the categories were analyzed for main ideas. When the categories were grouped around similar domains, the patterns of behavior and cultural patterns and cultural symbols of shared meanings emerged. As the researcher and her dissertation co-chair moved through the process of data analysis, the dissertation co-chair selected two interviews to translate from Thai to English and directed the Thai-English bilingual dissertation co-chair to select five interviews on which to perform line-by-line coding. The identified domains and categories were discussed and compared for similarities and differences with data and codes from the prior data analyses.

Theme analysis was performed with data from the interviews, field notes, reflexive journals, and memos to identify recurrent patterns. Following the identification and analysis of the cultural domains, the researcher with the English-speaking dissertation chair and the bilingual dissertation co-chair further analyzed data and defined the cultural themes. As the cultural categories and relational patterns among categories were iteratively defined by repetitively reading and writing; the cultural themes emerged and were expressed in the words of the informant or behavior patterns of the informants, which represented the culture of the people under the study. Therefore, defining the cultural patterns moved the emerging themes to a higher level of abstractness.

Evaluative Criteria

Lincoln and Guba (1985) identified that a qualitative study must address quality criteria by using trustworthiness to evaluate the rigor of the study and to establish the
validity and reliability of the study. Trustworthiness is composed of four elements: credibility, transferability, dependability, and confirmability.

In this ethnographic study, trustworthiness and credibility of the study were enhanced through the use of multiple methods, data sources, and a variety of informants in collecting the data. Prolonged engagement, persistent observation, peer debriefing, and member checks were used to ensure the credibility of the study. The strategy of the researcher continually asking the same questions to different informants and consistently getting the same data ensured the consistency. The thick description of the field notes and the confirmation with the staff of the neuro-surgery unit ensured the credibility of the data. Member checking was used to validate the information in the interviews with the informants who provided data. Interviewing a diverse group of key informants from the group and describing the group in detail ensured transferability. The thick description of the field notes and the use of verified verbatim transcripts may allow the findings to be transferable to other clinical pathways that have similar characteristics when used by similar social units and in a context with similar environmental factors. This thick description allowed for the possibility of the applicability and transferability of a successful implementation of the clinical pathway in other units. Peer debriefing was accomplished through meeting with the three research consultants and the dissertation co-chairs, one of whom is bilingual. A reflective journal recorded daily by the researcher reduced the researcher’s biases and was used to enhance dependability and confirmability. Memoing and maintaining an audit trail including all transcriptions, diagrams, and other documents ensured confirmability.
CHAPTER FOUR

FINDINGS

MA-NO-SUM-NUK: Working Hard to Make It Work

The culture of people in a northern Thai hospital and the team members on the neuro-surgery unit who were implementing clinical pathways (CP) is best described by the term: MA-NO-SUM-NUK. From the analysis of field notes, reflexive journals, and twenty interviews with key informants, the conscientiousness (MA-NO-SUM-NUK) of the neuro-surgery unit staff emerged as the core concept. Three major sub themes support the core theme of MA-NO-SUM-NUK: Working hard to make it work. These themes were identified as: (1) holding up the flag, (2) singing the march song drunk, and (3) writing the BAI HOIR.

The data illustrated that through the underlying value of MA-NO-SUM-NUK or conscientiousness toward one’s work combined with working together for the sake of a beloved leader, the team made the CP work. The charismatic former leader of the hospital had insight into where and how the hospital should be headed and a compelling well-articulated vision that she provided to the staff. This vision encompassed the leader’s expectations of the group and of the hospital. Through organizational development programs and activities supporting this vision, a collective purpose was generated that led to greatly reduced resistance to change. This leader was able to create a high level of excitement and enthusiasm among the staff and also to build strong personal emotional
attachments with individual staff members. This enthusiasm and passion compelled the staff to move forward with conscientiousness in order to meet the leader’s goals and to overcome organizational challenges. In doing so, benefits for both the patients and the organization were derived leading to sustained pride among the staff. This pride and mind-set are retained by staff of that era including the quality manager, the head nurses, and some senior doctors.

Culture is something that reflects an organization’s distinctiveness. It does not develop overnight, but naturally and gradually over time. Through time, conscientiousness, or MA-NO-SUM-NUK, has developed in the health care staff at this hospital and reflects the uniqueness of this cultural group. Charismatic leadership and vision would not be sufficient to sustain a change like clinical pathways. The state of mind that enables sustained change has been shaped and formed from the conscientiousness (MA-NO-SUM-NUK) of the hospital staff. Working hard to make it work is embedded in the blood stream of the organization.

This hospital was founded in 1937 with governmental financial support and the donation of money and land by people in the province. This hospital encompasses an area of twenty-one acres and became a regional hospital in 1988. This 756-bed tertiary care facility employs medical specialists and serves the population in Chiangrai and Payao provinces and bordering areas of Myanmar (See Appendix A). Among the people groups in this area are Hilltribes, who live in highlands, such as Karen, Meo, Yao, Lisu, Akha, Lahu, and Lawa. The north of Thailand is a mountainous region with many hills and valleys and is located at the high latitude, which enjoys a cooler climate than other parts of the country. Data contained in field notes and informal conversations illustrated the
cultural view that was patently seen and heard in this hospital. This identified culture encompasses the core values of the hospital.

The hospital’s core values were first communicated by the founding director of the hospital and were included in every hospital presentation and displayed in the hospital’s main meeting room. One head nurse told the researcher, “The first hospital’s director had built a good foundation of values in the staff at the beginning, and these values were still in everybody.” (Reflexive Journal 5: 63-64)

The hospital core values consist of ideologies and underlying beliefs and values based on Buddha’s teachings. These core values have become the basic underlying assumptions for the hospital staff and are transmitted from generation to generation. The core values were the beliefs of:

1. The serenity of body and mind of the staff members.

2. The togetherness of staff by becoming one.

3. The development of clinical services for the greatest benefit to patients rather than themselves and staff development of knowledge and research through conscientiousness (MA-NO-SUM-NUK).

4. The essence of life being that we come into this world with nothing and go out with nothing.

5. Not taking advantage of others, holding on to the four sublime states of consciousness (PROAM-WI-HAN-SEE) to live life, be honest, and have justice in mind.

The four sublime states of consciousness are the four qualities of the heart that would lift a person to the highest level of being. They are composed of,
1. MET-TA: love, caring, or loving kindness. The desire to make others happy and generate friendliness without desire to do harm or cause suffering to anyone. It is the action of being kind in body, speech, and mind.

2. KA-RU-NA: Compassion. The desire to help others who endure under their sufferings. Ka-Ru-Na builds up a person’s character of generosity.

3. MU-TI-TA: sympathetic joy. It is a quality of heart of not being envious or jealous of others, or to not wish to bring someone down to a lower level. It builds up a person’s character to have an openness to the possibility of sympathetic joy.

4. U-BEG-KHA: equanimity. This means being serene in the oneness of all things. It includes accepting the limitations of the universe and the way things are and the limitations of oneself or others. This quality trains the heart to transcend limitations and builds up a person to consider everything from the point of view of right or wrong and eventually will lead that person to have a sense of right doing in all things. (Pringpuangkaew, 1996)

These four qualities of the heart are the underlying mind-set of MA-NO-SUM-NUK, which shape individual characteristics and behaviors of how each person lives one’s life. These organizational values created the hospital milieu of a harmonious community based on religious beliefs and rituals. The values shaped the members’ state of mind of MA-NO-SUM-NUK in providing health care services and behaving in ways that support the overall success of the organization and contribute to long term effectiveness.

Persons who are high in conscientiousness (MA-NO-SUM-NUK) are more likely to be reliable, responsible, persistent, persevering, and oriented to being hard-working to fulfill their professional duty. These individuals express the greatest commitment to
achieve both their own and organizational goals. These patterns of behaviors and cultural transmission will be expounded in the emergent themes of 1) holding up the flag, 2) singing the march song drunk, and 3) writing the BAI HOIR. These three themes underpin the core theme of MA-NO-SUM-NUK: Working hard to make it work.

Sub-Theme: (1) Holding Up the Flag

To understand the process of the implementation of a clinical pathway for head injury at the neuro-surgery unit it is necessary to grasp the cultural forces that give the staff on this unit reasons to conscientiously labor to make clinical pathways work. Among these reasons are external economic and national health agenda forces, visionary and respected leadership, shared core values, and collective pride in the organization. The term “Holding up the flag” was chosen to reflect the leadership of the hospital director who held up a flag at hospital staff meetings in order to encourage staff to join together and to conscientiously (MA-NO-SUM-NUK) make changes in the hospital that would answer the challenges facing the hospital.

Due to the financial crisis in Asian economies and a national agenda for Health Systems Reform in 1997, the Thai governmental hospitals faced a myriad of challenges. High health care costs and consumer expectations for high quality health care put pressure on public hospital organizations to become more efficient, and on leaders of governmental hospitals to quickly respond to the challenges. One informant reflected that:

We were in an IMF (International Monetary Fund) situation, a financial crisis. We, as a big hospital, might have been forced out from the governmental system, received less money, and we might have to
downsize our hospital. If we received a little amount of money from the government, it would not be enough shares among 1700 people [hospital employees]. We didn’t want anyone to be dismissed or go away so if we were not good enough and we got a small amount of money how were we going to survive? We, all the administrators, worked hard. We did not have any weekends and we worked for you together. (11N: 152-163)

Thus at AA hospital they make clinical pathways work because of a desire to conscientiously (MA-NO-SUM-NUK) meet the challenge of high competition in the health care market due to the pressure of the national financial crisis and the movement to national hospital accreditation. Hospitals that could provide the highest quality of care with minimal risk to patients while meeting concerns of efficiency, effectiveness, accessibility, and satisfaction for both patients and practitioners would be the hospitals to survive and increase their share in the health care market. In particular, hospitals passing audits and receiving certification from the Institute of Hospital Quality Improvement & Accreditation (HA-Thailand) would obtain a reputation of assured excellence in health care services.

Understanding these challenges led the director of the hospital to join the quality improvement pilot project of the HA-Thailand in 1997, and become one of thirty-five hospitals in the pilot project. HA-Thailand distributed knowledge about quality improvement to the governmental hospitals through training courses on quality improvement programs. These programs included information on medical and utilization management, discharge planning, care map or clinical pathways, and case management. HA-Thailand helped the hospitals prepare for auditing by both internal and external
reviewers. This process was revolutionary for hospitals in the public sector. Statements of informants reflect the influence the hospital accreditation (HA) had at their hospital:

Oh, this was a national policy. The hospitals that met the standards needed to pass an audit from a well-known agency. …So for the accreditation of health care services, the HA-Thailand was the best agency for auditing health care delivery. So from the idea of the Ministry of Public Health (MOPH) that wanted the governmental hospitals to receive an audit and guarantee their care from a well-known agency, we brought in the HA-Thailand to audit our health care services. (06N: 99-106)

One doctor said:

AA hospital was the first hospital who did the HA. It was the policy from the MOPH that wanted the governmental hospitals to have assurance in quality of care and have a standard accreditation system. (07D: 25-35; 43-46)

In addition to the strong force from a national movement for hospital accreditation, the vision and insight of the former director was the second primary reason why these members of the neuro-surgery unit worked conscientiously to make clinical pathways work. In order to meet the challenges facing the organization, the leader needed to create and communicate a new vision and convince others to share and commit to the same vision. To do this effectively the leader had to possess vision for the organization, charisma, an effective leadership style, and the ability to evaluate and transform the organization. However, the most important challenge at AA hospital was communication
of a vision so as to gain cooperation and support of the staff. One informant explained more about the HA policy:

HA was a policy, since the hospital director accepted it, the goals and the policy of the HA had to be clear to the staff first... (03N: 216-221)

A major force behind why they made it work was the respect, loving passion, and trust the staff strongly held toward their leader. The respect made them willing to take a risk and make every effort to accomplish the leader’s goals. This heartfelt feeling of the staff at all levels toward their leader could be seen and felt from their interviews and was noted in the reflexive journals.

One informant stated about his former leader who brought HA into the hospital that:

We have to give credit to the former director of the hospital. She was an excellent leader. All of the hospital projects’ accomplishments came from her management. (05D: 243-244)

One doctor stated:

It was the vision and insight of the director of the hospital who saw what our hospital could be like and what benefits the hospital would receive while no one saw it at that time. (07D: 307-309)

Another doctor stated:

We have to give credit to the hospital administrative committee and the former director of the hospital. If she didn’t bring the HA into the hospital and didn’t have foresight of what was going to happen to the hospital, and if we refused the HA-project, which she could do that, and we would not have to do the HA, but no, she accepted everything that came out or had
been recommended; …. So I think it was her vision and insight, and the cooperation from the team. (17D: 362-367)

One head nurse shared as noted in the researcher’s reflexive journal:

Most of the success in implementing new things on the unit or ward came from leadership, and the role modeling of the former director of the hospital, the attitudes and appearance of the leader, and the unity of the profession. (Reflexive Journal5: 60-63)

Another excerpt from the researcher’s reflexive journal also supported the importance of the leader:

A leader and role model really had affected these people. They were really impressed and had passion and faith in their leader, which had motivated them to love the hospital and made them willing to do any new work that their leaders brought in. The quality manger and some other senior nurses and physicians received this mind-set directly from the previous director of the hospital and the former director of nursing. They still had this mind-set in them. (Reflexive Journal9: 27-32)

This leader was not just visionary. She also took tangible steps to move the hospital forward with the HA-Thailand process. One key informant who is an administrator pondered about how they had arranged the meeting for 1,700 staff in preparation for the HA-Thailand program wanted. The leader’s concern and respect toward the staff, and her determination to place the importance on staff members equally at all levels, was demonstrated:
We (the previous former director and I) wanted 100% of everyone to know and understand the situation and make our own choice together. We had 1,700 staff at that time and we wanted everyone to be in the meeting, but they were all busy. How are we going to arrange to get everyone to the meeting? So we decided to hold 17 meetings outside the hospital at a nice resort because, if we held the meeting in the hospital, the nurses or other staff would call them out from the meeting. We planned to do this for them even though we were going to be very tired and we used more money. We provided all the accommodations and support in every meeting and we had professionals mixed with staff at all levels including physicians, nurses, LPNs, housekeepers, nurse aids, janitors, security, etc., from the administrators to janitors. We arranged schedules and let them choose the day that they preferred. If they did not show up on the day that they had signed up for, the director of the hospital would call back and respect their answers, and asked for cooperation to join the meeting on other days, especially in the physician group. (11N: 109-121)

One key informant who was a member of the supporting staff revealed his impression about the concrete actions taken by the leader to facilitate the HA-Thailand process:

I accepted that the director of the hospital was the most important factor. She would be the chair of the committee and stayed with us in every meeting. If she had to be with another meeting, she would have the quality manager or the vice director take her place. And if we had any problems, she would make decisions and told us what to do and what should be done
first. She always knew which work or system was slow or delayed; she
would come to give us an encouragement and asked how she could help or
what the problem was. She never blamed us. (12PT: 287-292)

The MA-NO-SUM-NUK displayed by the former leader through conscientious
dedication and devotion impressed the staff and gave them motivation to succeed with
the clinical pathways project.

One informant said:

The director gave everybody days off to attend the meeting and she would
be the person who called everybody to remind them about the meeting,
and stayed in the meeting in every round. If they could not come on that
day, she would encourage them to attend the next meeting or the next
round. She was the person who held a flag in the opening ceremony so as
to show commitment to the staff and inspired them that we were going to
work together as a team to achieve our hospital’s goals. (11N: 109-129)

Therefore, hospital employees were endeared to the leader because of her interest
in their welfare.

The director of the hospital or the administrators gave them freedom and
autonomy in doing the quality work and provided sufficient resources for
them, whatever resources they asked for, the leaders would never refuse.

(07D: 260-269)

Although the national financial crisis, movement to national accreditation, and
love of a visionary leader are keys to understand why the staff on the neuro-surgery unit
at the AA hospital made the clinical pathway work, core values that had been planted
with every staff during the initiation process were equally as important. These core values were patient-centered care and multidisciplinary teamwork aimed at providing the greatest benefit to patients.

One informant who was an administrator emphasized that:

> We had to focus on our customers, customer centered or patient-centered, and we were concerned about patient safety, how we are going to provide care without any risk and with safety for the patients. So our goal is patient-centered, and we will work as a team. We are not only wanting the hospital to survive, having safe patient care and receiving satisfaction from the patients, but we will look after each other for the happiness of our people too. (11N:68-72)

Furthermore, through development of shared values of commitment, involvement, responsibility, and responsiveness in providing good patient care with desirable outcomes, the staff of this hospital strengthened their MA-NO-SUM-SUK (conscientiousness).

One head nurse stated:

> We had the same goal of patient-centered in mind, so if the doctor is busy, did it match with our goal of patient-centered? If we said patient-centered is our goal. We will talk; we will come to the meeting for the benefit of the patients, not for the benefit of practitioners. So we will have collaboration and work together as a team. (03N: 48-52)

Another head nurse supported this attitude that:
Every professional focused on patient-centered care, and if we provided care with patient-centered in mind, we would receive a desired outcome. Our workload will reduce because we do things right, and we have the same goal of patient-centered. (06N: 307-309)

A physician agreed:

I think it was our attitudes of the determination to look after the patients and provide the best quality of care to patients and we wanted to work as a team of multiprofessionals. (17D: 226-229)

If you asked whether we do it for the hospital; we think we do it for the patients, and eventually the results would be for the hospital as well. (17D: 399-400)

These shared values would be foundational in the staff members’ approach to future clinical pathways development. One of the surgeons said to the researcher that:

Most work succeeded from the collaboration of the team and their attitudes toward clinical pathways. They did not refuse to come to the meeting, or refuse any work. And that everyone had the same goals of patient-centered care and to reduce workload, and valued teamwork. …

He said everyone was doing for the best of the patients, and there was a lot more to do. (RJ 9: 94-99)

Perhaps the most striking aspect of conscientiously following the flag held up by the beloved leader was the fact that staff members on the neuro-surgery unit saw themselves as obedient civil servants whose responsibility it is to serve patients. One
young staff nurse stated to the researcher when the researcher did the participant observation that:

As a consequence, there would be more work to do, but they would give benefit to the patients and the hospital. I asked her whether they ever had any resistance with this. She said mostly the staff would not have any resistance if the head nurse brought any new projects in. They were just staff and it was also policies from nursing department, and they thought that they would do it for the patients because it gives benefit to patients by increasing patient safety and quality of care. (FN wk5: 141-146)

Other staff nurses in the neuro-surgery unit also had the same beliefs and attitudes:

They said they were just only staff. So anything or projects that were brought into their ward, they would accept it rather than reject it. Because they saw that it would be beneficial to the patients. (FN wk9:82-84)

One of the professionals stated that:

We never think about doing it for ourselves, but we do it for the patients.

We are civil servants; we never think of taking any advantage. We are satisfied of what we have. (08Pha: 300-302)

Although patient care benefits were a striking reason to conscientiously follow the flag held up by their leader, some informants’ statements in their interviews revealed benefits that they would also receive from the CPs:

CPs are the shields that protect liability for practitioners. We will feel secure in defending the care that was provided to a patient, if it turns out to account for a bad outcome. The benefits of our CPs are that they
standardize our practice at an acceptably high level. (11N:103-105; 16D: 86-88)

These shared values and ideologies of excellence in patient care through teamwork created a bond between people that both set the tone of the hospital’s environment and created a culture that supported them to achieve the common goals. Therefore, it was not only the leader’s beliefs, values, vision, and actions that set the tone and standard for organization, but the staff who had all conscientiously put their hearts into the shared goals of quality of care for the greatest benefit for the patients.

The final reason for following the flag held up by the leader to conscientiously make clinical pathways work is the collective sense of pride in the organization. With conscientiousness (MA-NO-SUM-NUK), determination and perseverance, three years and eight months of hard work resulted in the hospital passing the 2000 HA-Thailand audit and becoming the first tertiary hospital to receive HA-Thailand hospital accreditation. This brought pride to every member of the organization and created an image of a well-known hospital that demonstrated good will to patients and the community. Thus, its reputation was increased among hospitals across the country. The hospital became a model for other hospitals that were in the same pilot project of the HA-Thailand. Many hospitals in both private and public sectors visited this hospital to see how they did it and admired the accomplishment. Enormous pride is illustrated in many interviews.

One neuro surgeons said that:

This AA hospital was always good since the beginning, and it will continue to be like this. (15D: 339-340).
...like the patients around here said if they come to this AA hospital; that’s it, they are definitely satisfied. (15D: 313314).

One head nurse said:

Some visiting doctors asked me, you did this; what did you get from this?
I received happiness and good karma, and am proud of my hospital. (03N: 236-237)

One neuro surgeon stated with a pride that:

We were the first hospital that passed the hospital accreditation from the HA-Thailand in tertiary level of care…. (16D: 156)

...and we are also proud of our hospital’s name. (16D: 366-367)

…like the people in the MOPH looked as us; they trust us and believe that if they have anything new or a new innovation, our director of the hospital will definitely accept it. We’d all be ready to do it; you will get this new project. (16D: 376-377)

Holding up the flag began in response to crisis and was turned into an opportunity through the director’s insight, vision, and skills in engaging people. The director of the hospital compelled her staff members with a view of the future about where the hospital should be headed by holding up the flag showing shared commitment that together we are going to make it work. At the same time she stirred MA-NO-SUM-NUK, excitement, and enthusiasm among the staff. The shared values and ideologies that had been planted and grew among the staff affected their perceptions and drove a shared generation of
solutions. A sense of belonging contributed to organizational successes. They make it work on account of the trust and respect for their leader who held up the flag and who demonstrated enthusiasm and confidence in what they are achieving. The HA process reinforced that the staff shared a commitment to achieving for the patients rather than themselves. Their contribution was critical to the hospital accomplishment of HA certification and foundational to future endeavors including clinical pathways development.

Sub-Theme: (2) Singing the March Song Drunk.

Ethnographic field notes and key informant interviews provided an understanding of how individuals in the neuro-surgery unit of this hospital make clinical pathways work. One informant captured the core idea of how the team made clinical pathways work when she said:

We held the meeting outside the hospital in a nice resort and we had everyone one hundred percent prepared for the HA. Everyone could sing the hospital’s march song even when they were drunk. (11N: 126-132)

This metaphor captures major ways the team makes the clinical pathways work by conscientiously marching in step together in a culturally appropriate routine that can be accomplished under almost any circumstance. The initial way in which clinical pathways were made to work was through the preparation for the HA process. The activities generated from the organizational development (OD) work had provided a framework for building an organizational culture of continuous learning and continuous improvements in effectiveness and quality of care. After the OD activities had been accomplished, the neuro-surgery unit team conscientiously works to make clinical pathways work through
use of the patient care team (PCT), development of written clinical pathways, use of routine work, and through transmission of organizational and unit cultures. Each of these activities helps hospital staff members learn the hospital march song so well that they can conscientiously sing it even when they are not at their best.

The Patient Care Team

In preparing for clinical pathway development, team building was needed. The patient care team (PCT) is a group of people, who voluntarily agreed to join the team. Among the team members are physicians, nurses, pharmacists, and other ancillary staff. The function of the PCT includes analyzing, prioritizing, and identifying problems and cause of the problems in clinical settings, making operational decisions, implementing the decisions or solutions in clinical practice, and monitoring performance and clinical outcomes. The PCT team knows the hospital march song and is able to sing it together chorus style.

The words PCT team and a multidisciplinary team have been used interchangeably by the key informants. At the beginning there was some confusion about what the PCT team was. Confusion existed about how the team would operate and what reporting lines would be established. As one informant explained about the beginning of the PCT team:

At the beginning we all were confused about the patient care team and the roles of the patient care team. The doctors thought that the nurses would be under their control, but the nurses said firstly, how it could be that way. And secondly nurses had their own nursing profession, so nurses still had their own director of nursing. The involvement that we might have
together was how we are going to deliver care to patients. Then we did a lot of studies about the patient care team. Every profession studied about it. Then we learned that it was a multidisciplinary team to provide care to patients. It was not the doctors controlling nurses, but we delivered care together as a team. (06N:112-119)

A second source of initial confusion about the PCT team was related to why teamwork was important:

There was some misunderstanding about forming a team. They didn’t see the importance of why we have to work as a team and they felt that working by themselves in their own group was convenient already. So we had a meeting about how to work as a team and how it linked to the patients and their professionals. We have to talk to each other and have guidelines as a tool for us to do brainstorming together so we won’t have any conflict or any non-compliance about the plan, or else our work will get stuck. So we worked together as a team and cooperated with each other as a way to preserve and increase our professional autonomy. (11N:79-91)

One nurse explained what different PCT teams were developed across the hospital.

The hospital developed seven PCT teams, obstetric and gynecology, surgery, medicine, pediatric, orthopedic, eye, and ENT. (06N:125-128)

Another informant described how a multidisciplinary team was formed.

Our multidisciplinary team was composed of physicians, physiotherapist, dietitian, pharmacist, OR nurse, anesthetist. At the beginning it was like a
duo, we had only physicians and nurses, then after we discussed about the plan we found that the clinical pathways had to be involved with other units/departments so we invited them to join us. At first we invited everybody, and they sat quietly listening and they didn’t get useful things from the meeting. So next time we invited only professionals and ancillary staff who had involvement with the patient to the meeting. For those who didn’t have any involvement we wouldn’t invite them, so it depended on the context and situation. And we talked about how we are going to provide care to the head injury patients. (03N: 80-84)

One surgeon provided an example of a PCT team for a clinical pathway for head injury:

For example a multidisciplinary team for clinical pathway for head injury, the team is composed of neuro-surgeons, a radiologist physician, a medical technologist, a neuro-surgery nurse, an OR nurse, an ER nurse, etc. We will look at the patient flow and see who has involvement with the patient. (16D:72-76)

The PCT team in surgery subspecialties holds a monthly meeting in which an atmosphere of creativity and transparency in the organization could be seen by the members. As one key informant stated:

Our monthly PCT meeting will have a clear agenda, which showed who is responsible for it, and what their roles are. See, it is very clear and understandable to everybody. So the PCT team will know where and what that person is doing regarding the patient care plan. (06N: 401-403)

The purposes of these meeting were described by one informant:
Most of the PCT committee are head nurses of all surgery wards and the doctors in surgery subspecialties. They will meet for a discussion and find solutions together or to find a way and gain commitment on how we are going to do our clinical practice in the surgery area. (01N: 118-121)

Having involvement and commitment were important elements for team members because they needed to understand why they were part of the team, the purposes of the team, and to share and to gain knowledge through the processes of problem solving. It was through involvement on the PCT that team members learned the “words and tune” of the “hospital march song.”

*Development of Written Clinical Pathway*

*Development of Standard Operating Procedure*

Before the development of the clinical pathways, HA-Thailand required every unit and department to engage in continuous quality improvement (CQI) by implementing Total Quality Management (TQM) on their units. The TQM concept involved people in the unit examining their purposes, work processes, and work flow. They looked at the work flow to determine ways to improve the outcomes and to eliminate redundancy or unnecessary steps in the work flow. This strategy resulted in every unit/department developing standard operating procedures (SOP) as guidelines for all staff in the unit and as a method to increase interdepartmental understanding of the how each unit functions.

The development of SOPs was fundamental to staff members learning to sing the hospital march song drunk. SOPs became a kind of written “march song.” One nurse stated about the SOP in their unit:
In the past we had short SOPs for new patient admissions, SOP for discharging. SOP is a Standard Operating Procedure. It provided guidelines or protocols for practice. At that time we had a very short SOP. Now we improved our nurses’ roles of what we should do, such as teaching, counseling, etc. (06N: 219-247)

Field notes reveal a physiotherapist’s thoughts about SOPs:

The quality center and the PCT team were working on clinical pathways and each department had to develop SOPs in their departments. She felt that they had more paper work and more documents to do at the beginning, but once they had them into SOP (Standard Operating Procedure), it helped them work more easily. (FN8: 69-72)

This was also supported by another informant:

If we didn’t have SOPs, it was like we didn’t have guidelines for our work. We have a system that we can evaluate and that everyone follows the SOPs, and we have to keep updating the SOPs because sometimes we change the chemical substance or machine. We have to look back and revise them. The SOPs were developed by all the staff here. (19MT:207-217)

Normally, it was the staff’s habit that we don’t like to write or put [a record of one’s work] in a document, but SOP is to put our work process into a document. It was a requirement in the HA-process. These SOPs were one section of the HA, ten items in the HA and SOP was one of
them. If you’re going to do the HA, you must have SOPs. (19MT:474-478)

From the interviews, most of the informants talked about how the use of SOPs improved and developed their work in the units, and the connection of their work to other units or departments. Some units/departments had to redesign their work processes, which led to increased efficiency and effectiveness. After each unit had completed quality improvement in their units, they began to integrate the unit work processes into the hospital systems.

Once SOPs were developed the introduction of clinical pathways was the next aspect of helping staff members to be able to sing the hospital march song drunk. Clinical pathways were a quality improvement tool that had been adopted to coordinate care through collaborative practice. The development and implementation of a clinical pathway requires involvement from cross functional areas.

*Development of the Clinical Pathway*

The clinical pathway development process was full of doubts at the beginning. It was considered to be an innovation for the hospital staff members because it would affect the daily clinical practice and outcomes. One surgeon talked about variations in daily clinical practice that led to the clinical pathway development:

At first we developed a clinical pathway without any understanding, and we didn’t see the importance of the clinical pathway. We developed the clinical pathway following our basic understanding of variety in clinical practice because physicians graduated from different medical schools. For example, we could see clearly in surgery areas, some diseases have many
varieties in practice. For example, patients with cancer, the physicians will have different styles in treating the patients from wound care through preparation for the OR, operating method and post-operative care. I gave an example of breast cancer because we could see it clearly. It doesn’t finish after we have done the operation, the patient still has to receive chemotherapy, or radiotherapy. At that time we had variation in practice, many different styles. (07D: 63-70)

As the main purpose for the HA-Thailand was to provide just a basic idea of a quality improvement tool, the knowledge and material about clinical pathways that was provided by HA-Thailand was very broad. Each hospital was given freedom to make choices that were most appropriate within its context and milieu. Besides using the material provided by HA-Thailand, the multidisciplinary team members had to conscientiously do their own research to review what clinical pathways look like and how to create and implement them.

The first task for the multidisciplinary team was to select what disease entities might be most appropriately addressed by a clinical pathway. One key informant described the criteria used in selecting particular diseases for a clinical pathway development:

We focused on diseases that had high volume; any diseases that are high volume will have high risk. There were four criteria: high cost, high volume, high variation, and high risk. We chose high volume first because it was easy for everybody to understand. (04D: 54-56)

Another key informant elaborated by stating:
In selecting a particular disease, we look at the top five diseases or high risk, high volume or other criteria that the hospital wanted to use. For example, if the hospital aimed at high risk and our goal or our policy wanted to reduce high risk and increase patient safety, we will look at which clinical area has high risk and we will work on that one first. Or if we wanted to reduce the high volume, we have to look at a large group of patients and look at the patient safety. If they have less staff and they develop a clinical pathway, it can help to cover their population. For example, cataract patients, a clinical pathway for cataract can cover the patients up to 80%. You have freedom to choose what you would like to do with an explanation of why you selected this disease. It might be from high risk, high volume, high cost, or whatever. The HA-Thailand gave us freedom to choose, so we can do so with happiness. The HA-Thailand also gave us the same criteria, high risk, high cost, high variation. For a clinical pathway for head injury, the criteria were high risk and high volume because we have a high number of motorcycle accidents. (11N: 298-313)

Another key informant, a head nurse, explained why the team selected head injury as the first clinical pathway:

After we got the concept of the patient care team, we had to identify diseases and what criteria we are going to use. So we thought about our care services. Our hospital provides care at the tertiary level, so the patients who are admitted to our hospital have a critical illness and need intensive care. So we thought about diseases. We asked the census
department to study the top five diseases. The census department told us that head injury was one of the top five diseases of the hospital and motorcycle accident was the number one. So we looked at who was responsible for this area, it was the PCT team in the surgery area. (06N: 122-128)

The selection of head injury as the topic of a clinical pathway was followed by the development of the pathway. The same head nurse went on to clarify:

After the team decided that head injury was the most important clinical problem in neuro-surgery unit and should be the focus of the first clinical pathway, the team decided how to proceed with the development of the clinical pathway. Normally, each profession would work on their own part, but the PCT team would like the nurses to create a whole picture of the clinical pathway first. So it was a kind of the team (actually, it was the doctors) who put their trust in us. They kind of trusted our scholarly knowledge. The nursing department was very powerful at that time. Some parts in the clinical pathway, we did not know who would responsible for it, the doctors or the physiotherapists, and where nutrition was suppose to be, where we were going to put it. So we just tried to solve the problem and put them together into a prototype. We submitted them in the PCT meeting, which was composed of doctors, nurses, pharmacists, X-ray technician, etc. We asked each profession to look at their part and what information or care or treatment that they wanted to put in it, for example the treatment; what treatment that the doctors would...
like to put in. They would tell us what they wanted to add, or sometimes
they wrote in the clinical pathway’s draft. So we did the plan together and
adjusted them into a form. (06N: 136-161)

As the clinical pathway was developed, it became apparent that the plan should
display goals or expected patient outcomes and provide specific detail about the sequence
and timing of necessary actions to achieve the goals with optimal efficiency. The
development of such a clearly articulated plan was foundational to the ability of staff to
sing this hospital march song drunk. The “words of the song” had to first be written so
that they could be memorized and “sung while drunk.”

One informant described the specific items in the clinical pathway for head injury:

In a clinical pathway for head injury, we divided the pathway into several
major parts of head injury. For example, in the craniotomy we have four
major parts. The first item was about the activities that we used to evaluate
patients’ symptoms at the beginning, for example, we did the lab
investigation or X-ray. We will do these lab tests in every case. The major
lab tests for head injury were CBC and blood for alcohol to evaluate
drunken patients. They have the same neuro signs and symptoms, and we
check for anti-HIV in every case because some cases might have to have
an emergency operation. And we have to do a chest X-ray, and skull
series. If the patients have criteria for CT scan, we will do the CT scan too.
(01N: 145-155)

From observing activities on the neuro-surgery unit, it was discovered that the
clinical pathway was a one page sheet containing items for treatments and care activities
that needed to be given to the patients (See Appendix I). Only doctor’s treatments were not rigidly prescribed but could be altered at the discretion of the physicians. All other activities were rigidly prescribed and staff members conscientiously learned the prescribed treatments and care activities almost as if they were the words to the hospital march song.

*Use of Routine Work*

The implementation of a clinical pathway was done through an announcement in the PCT meeting. After all the items in the clinical pathway had been approved by all team members and implicit commitment from everyone was gained, the clinical pathways were implemented. As one informant described the process from clinical pathway development to the announcement of the clinical pathway for implementation:

> It was still in what we call...we developed a prototype and gained comments from other professionals, then we used the comments to adjust the clinical pathway, and brought into the PCT meeting, gained commitment from everybody and made an announcement that we were going to use it. We announced it in the PCT meeting and then we used it.

(01N: 379-385)

In bringing policy into practice, one head nurse talked about the processes of clinical pathway announcement and implementation:

> Actually, we had a policy of an announcement of the implementation of the clinical pathways. For example, we had a major PCT team of the hospital [hospital administration committee], composed of every area of the PCT teams, and the PCT team for surgery area was one of the
committee. Every PCT team will report to the major PCT team about their projects or clinical pathways in what diseases and what the guidelines were about. So the major PCT team will know about them and they would become a policy, and the major PCT team would announce it to everyone. …the multidisciplinary team will be the persons who bring the guidelines into practice. At this phase we knew that it was a policy now, so everyone will use it, the guidelines have to be carried out by a variety of professions, (06N:242-250)

Team members were given the whole picture of a clinical pathway for head injury and how a patient moves through departments from the beginning of the admission to arrival on the neuro-surgery ward. The items of care in a clinical pathway that belonged to each profession have supporting SOPs to standardize practice in each unit/department; singing the hospital march song drunk was facilitated on this way.

A head nurse of the neuro-surgery ward explained how the clinical pathway was implemented into her ward and emphasized that communication and supervision were important in the implementation phase:

The head nurse will receive and bring in the policy to the ward, the policy about the PCT team in providing care to patients. We will tell our nurses and make sure that they understand it so we can bring it into practice. We have to teach the nurses and demonstrate how we are going to do it. The important role is supervision. We have to supervise them, probably closely supervise at the beginning. We have to explain to the nurses clearly that supervision was not about catching them doing something
wrong. So I have to make sure that they understand the concept of supervision. Supervision means to teach, demonstrate, and sometime demonstrate back, and we have to give them feedback and provide information for them. We have to let them know what their roles are in the clinical pathways that they are not only just a checklist and check them off, but they have to know that this clinical pathway will provide guidance for their practice of how they are going to deliver care to patients and achieve the ultimate goals of expected outcomes. (06N: 290-302)

Singing the hospital march song drunk was made possible through the SOPs becoming routine work that was linked to the clinical pathway. One informant, a support staff member, stated that:

We did our work following the SOPs; they turned out to be our work culture. They were our routine work. At the beginning they were new to us in developing the SOPs, then we improved and used [them] for a while, and then they became our routine work so that we can monitor the outcomes every month. (10N:245-248)

One informant explained how her SOPs and clinical pathways were connected to routine daily work.

Clinical pathways let us know what happens from the time the patient is admitted to the hospital. It was like a flow chart. We knew who was involved with the patient care, what had been done to the patient, all the documents and what lab investigations they needed for the patient, how
we did it, what the result was, and when the practitioners would get the
results. We followed the steps 1, 2, 3, 4 in the SOP procedure. This
ensured the accurateness of the result. (19MT:65-73)

The neuro-surgery head nurse explained:

We have to tell them [the nurses] and let them know how important it is
for them [to use the clinical pathways], and it would be more convenient
for them to work. So when the head injury patients are admitted to the
ward, they could close their eyes and did it right away, like having rules
that they could do it automatically as a routine work. So if the nurses did
not do it this way, they would know that they did not follow the
guidelines. (06N: 307-312)

The strategy the head nurse used to help the staff sing the hospital march song
drank was to routinely share information about what was going on to both provide
knowledge and raise awareness about quality of care. This reduced staff resistance,
prepared the staff to welcome the new project, and helped them be able to do the work
routinely. In an informal conversation with the researcher, a staff nurse supported the
head nurses’ interpretation of how she helped the nurses in the unit to accept the
challenges:

The in-charge nurse also added that her head nurse always informed them
and asked for staff members’ opinions before bringing in any new
project. A male nurse, who was behind the computer, said that was the
way to let everybody know and get ready for it [any change]. (FN9: 84-
87)
This was congruent with what the neuro-surgery ward staff members told the researcher about how their head nurse brought a new project into the ward, as excerpted from field notes:

We never had any resistance with this. She said mostly the staff would not have any resistance if the head nurse brought any new projects in. They were just staff and it was also policy from the nursing department, and they thought that they would do it for the patients because it gives benefits to patients, and increases patient safety and quality of care. One good thing was they usually know ahead of time or have some involvement already because the head nurse talks about it before bringing it into the monthly meeting. (FN5: 142-148)

Another strategy the head nurse used that reduced staff resistance was to be conscientious in efforts to obtain resources to make the staff feel comfortable with the work and to create a supportive working environment:

So every time I receive any new policy, I will tell them, communicate with them, and put the policy into practice by supporting and facilitating everything that is going to be a convenience for them and for their work. I think the most important thing is the facilitation and the support that helps them to work more easily. (06N: 361-364)

*Transmission of Organizational Culture and Unit Culture*

In order to make clinical pathways work all staff members have to be able to “sing the hospital march song drunk” through working as a team to implement the pathway as a part of routine daily work. Another way in which team members make
clinical pathways work is through an understanding of the hospital and unit cultures. Culture illustrates life ways of a group of people through a symbolic, shared system of values, beliefs, attitudes, and rituals. This system is transmitted through social communications and behavioral modeling. It influences group perception and behavior.

The interviews and field notes illustrate clear shared values including MA-NO-SUM-NUK, togetherness, patient-centered care, teamwork, and shared rituals. These govern individual behavior and generate a sense of collectivism, emotional attachment, and unity focused on hospital goals. Indeed, the hospital and neuro-surgery unit culture were not distinguishable, indicating a strong harmony of organizational culture. A clear sense of what the hospital and neuro-surgery unit’s values and rituals is necessary for team members to conscientiously work to make clinical pathways work. Transmission of the values, beliefs, attitudes, and rituals of the hospital and unit to new group members is essential.

The first director of the hospital provided a foundation of written hospital core values that is still used in daily work by most staff members. As reinforced by informants, most veteran staff members still hold on to these core values as their norms and pass them along to the next generations through their behavior and communication. Explanation of how the hospital core values developed and have been maintained with hospital staff was succinctly described by a veteran staff member:

We all have the loving kindness (MET-TA) in ourselves, but we have selfishness as our shell too. If we crack some of that shell out we will see what inside is. This MET-TA was one of the PROAM-WI-HAN-SEE (the four sublime states of consciousness). It was one of the hospital core
values and each hospital director put these values into action in a practical way. We could see it concretely, especially when Dr. A (the name of the previous former hospital director) brought in the HA policy. (03N:420-427)

Another informant expanded on the role of the founding director and provided insight on the meaning of the core value of serenity of body and mind:

   The hometown of the first director of the hospital was in Bangkok and he came to work as a doctor here. Then he sensed our culture and wrote about them, like five to six items and they were passed along to us. Like I said the serenity of body and mind of the staff; it means that we did not have an aggressive resistance. I think everybody has these values of serenity and conscientiousness (MA-NO-SUM-NUK) in their bloodstream. It just remains unconscious and has not been activated yet. I want to see their hearts again. I’m going to ask them whether they will come together and do it for our hospital on our 70th hospital anniversary, as a present for our ancestors. (11N: 450-460)

   Transmission of the core values of the hospital to new hospital employees is essential to making certain that everyone conscientiously works together to make clinical pathways work. Shared values can be transmitted to new generations of staff through modeling behaviors of persons who are highly respected in the culture. These individuals serve as role models and pass on values to the staff through the processes of coaching, mentoring, and supervising. Some informants talked about how they transmitted the value of conscientiousness (MA-NO-SUM-SUK) to new staff. One
informant talked about how she worked hard and demonstrated conscientiousness to her staff.

I had my own experience too. They gave me their hearts, gave me a chance, and accepted me as part of their group without thinking of anything else, and being brothers and sisters with me. ... I devote myself to them too. I want to do it for them. It does not matter about the time or how hard the work is, I won’t avoid it. I would like to do it for them. (06N: 508-512)

Some informants verified that the cultural value of MA-NO-SUM-NUK had been transmitted to them.

A culture at this hospital, as I told you before, the director of the hospital, the director of nursing, a head of the surgeons, this senior doctor, they all worked hard. Whatever was good for the patients they did, all of them were patient-centered and worked as a team. Some doctors asked me why I worked hard, what I got from working hard. I said I received a proud feeling in return, got knowledge and achievement. (03N: 233-237)

One informant stated, in reference to the head of the department, that:

My head nurse was a very great motivation for me. She was very strong about our profession and she worked a lot, much more than us and all the staff. She worked harder than us, like she did not have any available time, even on weekends. Her life has only work, sacrifices to work. (08Pha: 312-319)
An excerpt from field notes supported the shared values of working hard. A nurse in a neuro-surgery unit was noted to have said:

She said good things about the staff here and about how they did not have much resistance, just some complaining at the beginning, and then they worked out together very well. She said it might be from the head nurse. The head nurse had a lot of work and worked harder than them, so they would work hard too. (FN9: 106-110)

These quotes show that staff members have devoted themselves to hard work. The shared value of conscientiousness (MA-NO-SUM-NUK) has been accepted through imitation of model behavior and gradually became embedded into the staff members’ mindset.

Likewise, the shared value of “togetherness” has been transmitted. One informant illustrated clearly how she transmitted the core value of togetherness of staff in becoming one and the four sublime states of consciousness:

We have to look at our friends with love, caring and compassion. We have to tell them and ask them to join us [to make the HA and clinical pathways work]. We will do HA for our hospital together. We will do it together with love, care of each other and looking after each other; even our hospital director and the quality center devoted themselves to this quality improvement project. We prefer to work hard for you so our brothers and sisters don’t have to go away [be let go if the hospital were to be downsized]. If one of our friends could not catch up with our quality; we
will help them not to get laid off and to pass the evaluation. (11N:193-201)

An excerpt from an ethnographic record demonstrated the “togetherness” in the relationships among the staff in the neuro-surgery unit:

The thing that I recognized from this work group was their closeness of friendships to each other, the responsiveness and their willingness to help each other to finish their job together in the same time, then they would come to the nurse station chatting and teasing each other while doing some paper work or something around these desks such as, cutting paper, writing something in a sheet, kardex or doing something with the charts. They were always busy and there were always some work to do around these desks at the nurse station (FN6: 192-198)

Most informants stated that the hospital value of “togetherness” extended across the group of hospital employees, and made them like a large extended family. One informant described the relationship:

Everybody here in general, is brother, sister, cousins or relatives. So we know that if this person is older than us we will call them “PEE”; the person who is younger than us is called “NONG.” While the culture in other places, if we called them “NONG” because he/she is younger; they might think that we are looking down at them, but if we called them “PEE” they might think that we said they are old. The person who is younger here will all be “NONG,” and it creates a sense of caring for each other. (02N: 105-109)
Another informant talked about their relationships among the group:

At our department, we stay together as brothers and sisters. We have closeness and caring for each other, not only for work, but we share happiness and sadness together in our personal life, work and other areas. So we care for each other and we do not have to worry about crossing the line. When our relationship is as a family; we help each other. Like our head [nurse], we feel that she is [like] our aunt or elder cousin, so we are willing to help in some other things and other times as well. (08Pha: 377-384)

One excerpt from the field notes clearly showed the shared value of being together as family:

There were some teasing among them about the work that she did not do, but the other nurse did it. She argued that she was not good with the computer and the male nurse was an expert with it. I saw that their relationships were more like brother and sister, and little brother could not refuse the elder sister. There was a little bit more teasing. (FN8: 222-226)

That this value of the togetherness of the staff as a family is transmitted to new staff is illustrated by the following quotes:

In our daily work, we are more like a family, cousins, brother and sister to each other. For example, when we have new staff, we will teach them like an older sister teaches a younger sister, and look after each other. (06N: 355-357)
One doctor stated that living together in hospital housing increased the feelings of respect and that everyone is family:

Most of the doctors live in the hospital housing so we see each other every day. All the houses are next to each other so it is easy to gather together. Um..it is like we are neighbors, living together and looking after each others’ families. The houses are close, townhouses, like at the back are flats for single persons. Families will stay in the houses, which are in the front. This highly affects seniority or paying respect to elders. It makes the younger doctors have respect toward the senior doctors. (07D: 343-351)

Several informants feel that togetherness that is manifested as family-like is unique to northern Thailand. One informant identified the regional culture as the source of this value:

I think our culture, northern people are more like cousins and relatives, we live together like brothers and sisters. If we have any problem we will solve the problem together, or if there is a crisis we will help each other out.

(12PT: 325-329)

A second informant agreed:

Most people in the north are modest. We have been taught to be gracious, put other’s heart in our heart, took care of others as your own family. I don’t know. I think all of these have influences on us very much, these home cultures. (06N: 514-517)
One way to pass along the value of conscientiousness and togetherness was through teaching the hospital march song. Singing the song maintains staff motivation to carry out quality projects in the unit. One informant stated:

At the beginning we thought of how we were going to keep the team together and create togetherness. When we said we have some work about quality to do; all [the hospital employees] will scatter out. So we used a strategy of singing the hospital march song together before we went home. At first I wondered if it was too demanding or not, but everybody came. So we were the first team that could sing the hospital march song.

(19T:505-512)

One informant, who was an administrator and a key person who drove the HA process, stated:

We emboldened everyone’s heart for togetherness by singing the hospital march song. It was so forceful that some doctors speculated about why one of the staff sang the hospital march song every time he was drunk.

(11N: 129-130)

These excerpts demonstrate how the values of conscientiousness (MA-NO-SUM-NUK) and togetherness have been transmitted to group members through communication and symbolism. These core values illuminate the fundamental beliefs about human nature and the purposes of this hospital and the neuro-surgery unit held by staff members at this hospital.

Shared values can be learned as evidenced by the transmitting of the core values developed years ago by the first hospital director. Shared values can also be created and
then transmitted. This hospital adopted and embraced the concept of TQM/CQI as part of the HA-Thailand process. This adoption of TQM caused a shift in philosophy where quality became the anchor on which patient-centered care and teamwork were valued. Some informants strongly emphasized how the ideology of the work group as family affects how the group accomplishes quality patient-centered care.

We are the same family. We always said that we are the same family, and there is no differentiation between doctors or nurses. We are a family and we have the same goal of patient-centered care. Our goal is to provide effective care to patients. (06N: 451-454)

One informant shared how she taught her staff about quality patient-centered care:

The nurses would be the most important person in providing care and giving information to patients. Nurses stay with patients for 24 hours. I always emphasized to the nurses that they are important people in providing care to the patients. If doctors order treatments, but the nurses don’t do them, don’t take care of the patients, the patients won’t get better. I want them to feel that they are important. Doctors are important and nurses are important as well. If doctors order five injections and nurses don’t do them, but just sign their names in the medication sheet, are the patients going to get better? So I use this point and have them think of the patients as their own family, as their baby, as their grandchildren, as their mother, father; if nurses don’t do it, what is going to happen to the patients? I let them think this way. (06N: 569-578)
The organizational development seminars in the beginning of the HA process reduced members’ resistance to change, built awareness of the need for change, and inspired a shared compelling vision of the future. Although “togetherness” had been a core value, multidisciplinary teamwork had not. Through the HA process, the concepts of both patient-centered care and a multidisciplinary team became shared values. One informant shared:

The main concept of providing care from the HA-Thailand emphasized a multidisciplinary teamwork. In the past we worked and focused only on our own profession. We did not have any cooperation of care together. When HA came into the hospital, the processes of care have to be given by the multidisciplinary team, and we emphasized teamwork. We could not provide care by ourselves. So they [the HA-Thailand] let us think as a team. (06N: 43-48)

The HA-Thailand emphasized teamwork and the HA-Thailand would not be happy if we are going to work without cooperating with others. The HA-Thailand also emphasized patient-centered care. So every profession needs to think together of how we are going to deliver care to the patients. These were the concepts that we got from the HA-Thailand and they became the policy for us. (06N: 91-96)

One doctor observed:

We all have attitudes of the determination to take good care of patients, and we like to work together as a team, a multidisciplinary team. Most
work succeeded from the collaboration of the team and their attitudes toward clinical pathways. They did not refuse to come to the meeting; they knew that we were going to do a patient care plan, or they never refused any work when we delegated the work. Everyone had the same goals of patient-centered care and valued teamwork. (17D: 226-232)

This evidence is congruent with the observation in the neuro-surgery unit. The head nurse described the roles of the multidisciplinary team in the clinical pathways:

She said everybody knew that they had clinical pathways and that they could succeed by collaboration from every profession or in other words a multidisciplinary team. Every profession had their roles in it and they valued teamwork. (FN8: 129-132)

Another excerpt showed the caring toward each other of the staff nurses in the neuro-surgery unit, and also illustrated the shared value of collaborating work:

I recognized one thing that nurses who finished with the charts on time, were mostly those who had a family and children. They were married. So as soon as the incharge nurse finished the patient rounds with the next shift, they would go home. I asked a nurse there if they had to wait until finishing patients round every time. She said no, but usually no matter how late the change of shift report was, they would wait until the incharge nurse finished because sometimes they might have a new admission during that time. The nurses, who went home late, mostly were single. (FN6: 177-183)
Rituals are another representation of culture. They are collective, social activities that have particular meaning to people who share a particular culture. The Thai way of greeting (WAI) and a social ceremony based on the religious ceremony of ROAD-NUM-DUM-HUA (DUM-HUA) were both clearly seen in both the neuro-surgery unit and the organization. These rituals foster a sense of respect, teamwork, and reconciliation that is necessary to conscientiously work as a group to make clinical pathways work.

The Thai greeting of “WAI” has implicit meaning as a prayerful offering of respect to a person who is older than oneself. Performing the WAI was not a hospital mandate but it was unit ritual that has extended to other departments and eventually became part of the organizational culture. Most of the staff at this hospital and the unit performed the WAI when they first met in the morning and at shift change. This behavior was highly visible as we entered the hospital each morning. Field notes describe how the group performed the WAI:

When I came in they greeted me with a Thai word of “sa-wad-dee-ka” and put their hands together at their chest with a little bit of bowing down their heads to their fingers. We call it “WAI” in the Thai language. WAI is a way of greeting or saying thank you in Thailand. It shows the respect to another who is older or more senior than that person. The person who does the “WAI” first is mostly younger than the other. I responded back by saying and doing the same thing to them. (FN3: 5-10)

The evening shift started at 4:00 pm and went to 12:00 am. The nurses on the evening shift came into the ward and did the “WAI” to the head nurse
and everybody who was older than them. I asked the head nurse whether the “WAI” was an organizational mandate. The head nurse said it was a culture of the nursing organization. We “WAI” when we first meet each other in the morning and “WAI” again when we leave for home. They not only do the “WAI” to the head nurse, but to others as well. The younger will do the “WAI” first. It enhanced a sense of unity and seniority in the group. It also made them have a feeling of caring toward each other. (FN3: 97-102)

One informant succinctly describes the process, purpose and impact of the WAI:

A culture of Thai greeting, paying respect to an older person; sometimes a senior doctor comes in, the nurses will “WAI” him. I think this is a way of building a good relationship. I think it has happened for such a long time. I do not know how and when it started. For example, when you came in here, you would notice that the staff did not WAI only me as a head nurse, but they would do the WAI to other people and to whomever the head nurse did the WAI to as well, or sometimes if they have had contact with this doctor before, or this doctor was their teacher before, they would still WAI that person, which leads to EN-DOO-SONG-SAN the feelings of receiving a good fatherly feeling and compassion from that person. So it was like a family. The younger nurse does the WAI to the older person and that would make that person be aware of his/her own maturity and be careful in expressing his/her manners because they receive respect from the nurses. They would be careful not to express the manner in an
inappropriate or aggressive way. I think it has a lot of influences from it.

(06N:429-441)

Another ritual that many key informants described was the Thai New Year ceremony (Songkran), which is observed on the thirteenth of April. The meaning of the ritual of ROAD-NUM-DUM-HUA on the Thai traditional New Year was to give blessings to elders and to ask for forgiveness for inadvertent behaviors that might have been done to offend that person. One informant stated:

For instance, ROAD-NUM-DUM-HUA is given to the elders on Songkran day; it was not like in central Thailand. In northern Thailand we will rinse a little bit of water that is mixed with Thai antique perfume and rose petals on the elder’s open hands as to give a blessing to the elders and to apologize to and ask for forgiveness from them. We do this in the hospital, among our professionals and subspecialties. (02N:121-128)

Another informant expounded on the experience and scale of this ritual:

One of the cultural practices here is DUM-HUA on Songkran day. Sometimes when we work together we get mad at each other, Songkran day is a day that we go to apologize, ask for forgiveness, and ask for blessings from the administrators. Sometime they came to do the DUM-HUA to me which I don’t like because I’m not old yet. For us we will gather our group to do the DUM-HUA for apologizing to and forgiving to the director of the nursing department, the head of the doctors’ organization, and the director of the hospital. We do it every year. It is a
tradition here. In a big hospital like this it takes about one week. (03N: 259-267)

Another informant discussed how this ritual affects the organization:

Like for the surgery PCT, on the New Year we will have ROAD-NUM-DUM-HUA on the Songkran festival. We will do the DUM-HUA. It is a culture that builds collaboration and a sense of unity in the surgery department. (06N: 443-451)

These rituals of the WAI and ROAD-NUM-DUM-HUA unconsciously reinforce the core values of loving kindness and compassion to the group and guide people to define and have appropriate manners in a variety of situations. The excerpts cited from field notes, reflexive journals, and key informant interviews illustrate the shared values of hard work (MA-NO-SUM-NUK), togetherness, patient-centered care, teamwork, and a strong culture of respect for elders, which lead to a harmonious working environment and respectful relationships between professionals, staff, patients, and patients’ families.

Thus, how the staff on the neuro-surgery unit in this hospital make clinical pathways work is a complex combination of routinized activities enacted in cultural context. In some respects, clinical pathways are an activity that has been imposed by external forces especially by HA-Thailand. However, the staff at the CR hospital made clinical pathways work by conscientiously creating PCTs, and transferring written clinical pathways into routine work. The enactment of the clinical pathways is enhanced by the cultural values of conscientiousness, togetherness, patient-centered care, and multidisciplinary teamwork reinforced through the cultural rituals of the “WAI” and “ROAD-NUM-DUM-HUA.” Through values and rituals that are the reinforcement of the
values, the clinical pathways are successfully used. In this setting, clinical pathways can be carried out by the team members conscientiously marching together in a culturally structured routine that can almost be done while drunk.

Sub-Theme: (3) Writing the BAI HOIR:

Ways to Make Clinical Pathways Work Better

The clinical pathways at this hospital were developed and implemented within the context of northern Thai culture. The implementation of a clinical pathway (CP) was initiated through an announcement in a patient care team (PCT) meeting. The purpose of this was to gain commitment from the team and to communicate that the CP would be put into practice through team efforts.

Enactment of the clinical pathway at this hospital was not without problems. Patient care team professionals experienced a long trial and error period as they used the clinical pathways. During implementation, the head nurses served a critical role in encouraging and reinforcing use of the clinical pathways because nurses served as critical links among multidisciplinary team members. Therefore, nurses made the CP work through learning-by-doing and solving problems as they arose. Primarily, problem solving involved determining ways to make the clinical pathway process work better. The PCT made the clinical pathway process work better by revising the clinical pathways when necessary and most commonly by recording non-compliance with clinical pathways on a format called BAI HOIR (HOIR: Hospital Occurrence Incident Report). One informant expounded his pride about and his view toward the clinical pathway:
It was like we got on a tiger’s back, and we could not step down. We have to be consistent in the care that we give to our patients or else it would raise question to the patients about why they didn’t receive the same things like the last time. The only thing that we could do was to move on and think about what should have been done to make things better. (12PT: 162-167)

Many factors necessitated revisions to the pathway. These included a lack of attention to clinical risks and clinical outcomes in the CP, overly specific activities that over time no longer matched current practice, and lack of compliance by PCT professionals and physicians.

One informant stated:

We developed the clinical pathway for head injury and then used it for some time. Then we revised it in 2001. I think about one year after the first development. We implemented it and used it, and then everybody began to see some problems and added more activities to the clinical pathway. So we revised it in 2001. And we continued using it until 2005, and we revised it again in 2006. We revised it because we did not have expected outcomes, so we added them to the clinical pathway. (01N: 157-166)

Support for this lack of clinical relevance driving revision was echoed by another informant:

Head injury was my responsibility and I did the second revision. The first clinical pathway was used in 1997. I came back in 1999 and analyzed the
information that I had. At that time we did not have expected outcomes yet, until in the year of 2006 we began to see the expected outcomes because we were working on clinical risks, and we felt that we overlooked the clinical risks. So we revised the clinical pathways by adding the expected outcomes with a focus on clinical risks such as IICP (Increased Intra-cranial Pressure). (06N: 214-219)

The specificity of some activities and doctors’ practice variation led to other problems that required attention:

There were some activities that needed to be revised. For example, in the doctor’s part in the pathway, some activities, or some medications we did not use any more because there were some changes in medication procurement or drug names, and some doctors moved away and some new doctors came in, and their treatment or practice styles were not the same.

(01N: 176-179)

One informant provided an example of how revisions were made to accommodate changes to medication formularies and provide physicians more autonomy in directing details of care:

Yes, the change in medication procurement, some medication in the pathway, such as in the Cimetidine group. This medication was used for protecting from side effects of peptic ulcer by using Dexamethasone, and we used them together, but right now the hospital does not use Cimetidine anymore. We changed to Ranitidine. And…about the antibiotic drugs, some cases [Some doctors] used many more antibiotic drugs than one, so
we changed the wording in the pathway to “antibiotic as indicated, IV as indicated” instead of specifying the names. (01N: 205-210)

Furthermore, physician practice variability was noted:

Mostly the problems came from the doctor’s organization [doctor’s group]. As I told you, the doctors wrote his treatment without following the standard protocol, or the doctors did not use those medications as we specified in the pathway. So this was one reason for revising the clinical pathway. We changed to “Antibiotic as indicated,” so the doctors can choose what they want. Some doctors gave too many antibiotics to the patients. (01N: 328-332)

However, changes to accommodate drug changes and promote physician-directed care did not eliminate noncompliance by all physicians. Perhaps the most common reason for needing to revise the pathways was physicians’ non-compliance, which created inter-departmental problems that were tracked. The “BAI- HOY’’ was a term in Thai language that was used among this group and has particular meanings for them. This term referred to the HOIR sheet, as explained by the head nurse of the neuro-surgery unit,

It was a sheet for recording an incident, which they called “Bai Hoy.” In the Thai language “Bai” means a leaf of a plant or a sheet and “Hoy” means a shell, so together it means a leaf of a shell, which has a very funny meaning in Thai language because it could be implied as the female genital organ. The head nurse laughed at me and clarified it for me that these words came from the abbreviation of the full words of Hospital Occurrence/Incident Report = HOIR. The pronunciation of the word
“HOIR” sounds similar to “Hoy” in Thai language so the term “Bai Hoy” stands for the HOIR sheet. Everybody in the hospital knows and uses this word when talking about incident reports. (RJ: 47-54)

Physician noncompliance was most common in the Emergency Room department for patients who were then sent to the neuro-surgery unit:

Mostly, we will cooperate with the Emergency Room (ER), because the ER was the first place to use the clinical pathway for head injury. We would ask them why they did not follow the criteria or the guidelines. If the doctor still said that he would not do it, we would use the HOIR system. It is an incident report between departments. I cannot remember the full name. We called it “BAI- HOY.” HOIR is an abbreviation. Everybody knows “BAI- HOY.” Everybody in the organization in this hospital knows “BAI- HOY.” We will write a HOIR report, and this HOIR report will be collected at the quality center. And the quality center will distribute all problems from the HOIR reports to the departments or professionals who are responsible for it. (01N: 341-351)

Even with HOIR in place, gaining understanding from and collaboration among the staff was a responsibility of the department heads and head nurses. As one head nurse explained, she played an important role by scrutinizing how she could support, motivate, and create empowerment among the staff to use the clinical pathways effectively.

I will look after them too if they have any problems with the clinical pathway. For example, if they did not receive collaboration from the team, what is the role that the head nurse should take, and how is the head nurse
going to get involved with it? I think these are the most important things. And about the collaboration, if the doctors did not follow the guidelines, how are my nurses going to do it? They could do nothing, but as a head nurse, I can tell them that it is OK, and I will bring it to the PCT meeting and we will adjust it. Any problems that I receive from my staff, I will have to fix it and find a solution for them, cooperate...collaborate...in anyway to get a solution out for them, and let them see the changes. (06N: 386-394)

Thus, the combination of conscientious work by members of the PCT team and use of the HOIR system was an efficient means to make the clinical pathway work more effectively in this hospital. The HOIR was a tool for the head nurse or members of the team to push the clinical pathways forward and make them work better. One head nurse shared her experience of using the HOIR system combined with informal communication when the practitioners did not use the clinical pathways:

We try to fix the problems for them, and it will always be like that. We would not try to create a problem, but we collaborate with each other to find a way out and get to the outcomes that we want in the PCT meeting. We solve the problems together in the PCT meeting. Sometimes we have informal conversations with other head nurses. For instance, if my staff told me that the ER did not follow the guidelines last night, I will call the ER [and say] that the doctor admitted a patient to the ward, and why didn’t the doctor do that, are there any problems, did your nurse tell the doctor about the clinical pathways? The nurses would tell me that they had told
the doctor about that, and I would tell them that it is OK, but I will have to write a HOIR report. I will tell them in a positive way that an incident report or the HOIR sheet was just a record of not following the guidelines, and I will explain to them why I have to write the HOIR report, so we can put the issue in the meeting and have it solved by the team. Then they won’t have to feel uncomfortable with this kind of situation again and that will help them work more smoothly. And they understood after I told them this. (06N: 396-408)

This was congruent with the observation of one of the nurses in the neuro-surgery unit who talked about the clinical pathway for head injury and how they managed a problem that occurred from using the clinical pathway:

The nurse at the ward said that the standing order for head injury at the ER department was one part of the CP for head injury. Sometimes, they had problems with some physicians who did not follow the guidelines in the protocol. For instance, a physician did not follow the criteria of sending patients to do the CT scan before admitting the patient to the ward, or the nurses at ER did not send patients’ blood to the Lab department, etc. The nurse at the ward might call the ER department for confirmation or an explanation of why they did not do the treatment in the standing order so that they would understand the reason. These problems had to be reported to the head nurse, and the head nurse would make a decision whether to bring these problems into the PCT meeting or just write an HOIR report. (FN6: 217-226)
Staff nurses were observed to recognize the positive outcomes created by collaborative efforts to make the CP work:

A nurse who sat at the second desk said that usually the problems occurred when they did not follow the guidelines in the ER department, like they did not do the skull series or CT scan before they sent the patients to the nursing unit. And sometimes the Glasgow coma scores from the ER and at the neuro-surgery unit were different. This usually happened with a referral case. The ER just wanted to get the case out of the ER and expected that the patients already had the CT scan. I asked them how they managed the problems. One nurse said they had to admit the patients, and sometimes they called the ER to ask them for clarification. If this happened on weekdays, her head nurse would give a call and ask for an explanation. If it happened on night shift or weekends, they just let it pass by. However, the head ward often found out when they did the change of shift report. And the head ward would talk with the ER head nurse or the doctor, whoever have been involved with the problem, and would write a report. So there would be data for the PCT team when the team evaluated the clinical pathways. Another nurse said that the HOIR reports were good because now they did not have many problems like that anymore. (FN9: 64-78)

As reflected in observations, the PCT team and the PCT meeting were effective routes for making the clinical pathways work better. One informant stated:
Everyone knows that we will bring any conflict or anything to the PCT meeting to make decisions and gain solutions as a team. We are not going to make decisions with personal information, or information from the department only. If we have a problem, we will look at who is responsible for it. Is it the team’s responsibility? If the problem is about providing care to patient; it is the team’s responsibility. If the problem is about professional behavior; it is your boss’s responsibility. We have this system and everybody knows it. For instance, this doctor has a bad manner, no one could contact him/her, my nurses would tell me, and I would give feedback to the doctors’ group, or a senior doctor….for example “Dr.(a senior doctor’s name)….this intern doctor did not put your name after his name. It created a problem for us because we did not know whose responsibility it is.” (06N: 456-466)

The informants also stated that they have put core systems into place that support effective functioning among departments such as the laboratory department, the blood bank, radiology, etc. These services help make the clinical pathways work more smoothly.

Frankly speaking, I think the system helped us work more easily than before. We can talk with the person directly. In the past, when someone told you to talk with this person, we would shake our head, we don’t want to contact this person…we were frustrated with this person…we knew that we could not change his/her behavior. But right now, we do not fix the problem by fixing people. We fix the system. This is the system. You are
new and you come into this system. You have to follow the system. So we will give feedback to the doctors’ organization, to the PCT meeting that we found this problem. This is what this doctor did, was it right to do it that way? If it was not right, how are you going to do it? And please take this into your consideration for your practice or your orientation program.

(06N: 476-484)

This system focus was congruent with the statement from one informant who indicated that staff now can communicate to each other directly and more easily than before having the CP.

If there is any urgent problem we will cooperate directly with that department. For example, if we have something that involves patient safety; we will call the ward and ask them and solve the problem together in advance. (19MT: 346-350)

The use of both the clinical pathway and the focus on the system supports professional autonomy.

It has to be a system that supports professionals. I mean that nurses should work according to our nursing profession. And we are not saying that the system does not let us do it, but we should think where our profession is in the system and we will do our best. Each profession has some role in taking care of the patients, and each profession has to do their own best. We will look at the results because our goal is patient-centered care; so we can see the results from patient outcomes whether the doctors and the
nurses have done their job or not. Patients’ outcomes will tell you. (06N: 556-565)

Despite the myriad problems encountered in developing, implementing, and revising the CP, it is clear from the informants that when a problem is encountered, a focus on the systems and the working processes is used to arrive at effective solutions that improve patient-centered care decisions while reinforcing the PCT and professional autonomy. Writing the BAI HOIR is one way to bring the attention to the PCT regarding the fact that something about the clinical pathway is not working well. Whether there were too many steps or processes that were unclear or unknown to the staff, blame is not placed on individuals, but rather on the cause of the problems. The PCT members do not view the problems as a problem, but they view them as incidents to be addressed in a quality improvement process. As a result, the team members feel that it is their responsibility to do the CQI at all times so as to help them work more easily, take care of all the patients, reduce risks to patients, and increase quality of care or services. The multidisciplinary team members also show a shared belief of conscientiously working well with each other in accordance with cultural expectations of professional conduct. They do this through following of visionary leaders, using written clinical pathways and routine work, transmitting cultural values and rituals, and using culturally appropriate practices like the BAI HOIR that constantly improve the system.

This leads to the challenges of how they are going to sustain the cultural values that are consistent with making clinical pathways work successfully and maintaining their good reputation. The hospital accomplishments came from the conscientious (MA-NO-SUM-NUK) commitment and determination of the leader and staff in this hospital. The
process of the hospital accreditation has created a culture that values team work, collaboration, patient-centered care, staff involvement with each other, respect, openness, participative management, and public responsibility of the staff. Some staff who hold these cultural values still work at the hospital and some have retired. The hospital itself also has core values, which are held by the veterans, who are now the head nurses, senior doctors, and others in the administrative positions. The concern is how they are going to sustain and pass on these cultural values and norms to the next generation.

The pride and the reputation of being excellent in health care service can be maintained through the reaccreditation every three to four years. The cultural values and the hospital’s core values are in the unconscious level. They are nonverbal and are in the deepest feelings of the hospital staff members. In order to pass on these values or underlying assumptions to the next generation, they need to be identified and stated clearly to the staff. Both shared values and the hospital’s core values must be integrated into every process that involves personnel development. After they have been ingrained in to the systems, they need to be continuously promoted to all staff. These values can also be acquired through role modeling and explanation. Once they have been embedded into the organization, they can be conscientiously reinforced by colleagues or team work.

Summary

The findings of this study provided answers for the five research questions.

Research question 1. How is a clinical pathway for head injury implemented by a multidisciplinary team?

Based on field notes, reflexive journal entries, and interviews with twenty key informants, the development and implementation of clinical pathways at this hospital
began for two major reasons. First, concern for financial stability was generated among
the staff due to events at both the local and national levels. A national financial crisis
contributed to fears that AA Hospital might be downsized. National healthcare reform in
quality assurance and a national movement toward hospital accreditation aimed at
leveling the playing field for competition among private and public hospitals created new
risks and opportunities for AA Hospital. Because these challenges and concerns affected
staff members of all disciplines, through the visionary leadership of the director of AA
Hospital, a cohesive team environment was established to ensure the future of AA
Hospital as a leader in healthcare delivery.

Thus, data from this study support that clinical pathways at this hospital are
implemented by the multidisciplinary team in at least eight ways:

First, the patient-centered goals and the multidisciplinary team concepts must be
fully understood by those who participate in the pathway. This was accomplished at AA
Hospital with a series of organizational development (OD) activities during which team
members were brought together and the desired nature of the team and its goals were
communicated.

Second, the director of the hospital was a dynamic leader who was able to
articulate and share her compelling visions with the staff, spurring them to move forward
with enthusiasm and passion. This leader’s assumptions and organizational goals were
taught to the group through a combination of charisma, socialization, role modeling, and
exuding confidence.
Third, the foundation for development of a clinical pathway was laid in the SOPs with an aim of achieving excellent clinical care. The process of clinical pathway development and implementation thus became formally structured and conceived.

Fourth, clinical pathways were implemented into the routine work of a neuro-surgery unit by appealing to an ideology that clinical pathways help the team work more easily and effectively. The team members of the neuro-surgery unit understood their roles in the clinical pathway as their routine work in the context of the entire care episode. This understanding came through the efforts of the head nurses and senior nurses during coaching, supervising, and orientation activities.

Fifth, the structure of the hospital also supported the role of clinical pathways and the ongoing utilization of the pathways. The connection of the department’s SOPs to the pathways showed an obvious and practical system.

Sixth, the regular monthly meeting of the PCT provided an opportunity for the team members to discuss the care provided and problems resulting from pathway utilization and reach consensus solutions.

Seventh, while the concepts of teamwork and patient centered care were planted in original team members, these concepts were transformed to be shared values of the group. This appears to have occurred through formal and informal communication as well as social learning.

Lastly, compliance with and deviations from the clinical pathway were recorded and actively monitored for use in revising the pathway.
Research question 2. What are the patterns of the culture in a neuro-surgery unit and the hospital in both emic and etic perspectives as they relate to the implementation of a clinical pathway for head injury?

From an etic perspective, the researcher was struck by the core values of the hospital and the unit related to MA-NO-SUM-NUK (conscientiousness). Through the narrative of interviews, field notes, and reflexive journal, the magnitude of the importance of conscientious hard work among the staff was revealed. This conscientiousness was the primary means through which the hospital values, achievements, and successes were generated and are sustained. Shared values are togetherness, everybody is our relative or family, being modest, respecting seniority, and paying respect to elders.

The idea of “togetherness” was further demonstrated through the plethora of meetings held to get and keep everyone going in the same direction to institute the clinical pathway for head injury. Field notes and reflexive journal were written from an etic perspective about the obvious cultural value placed on camaraderie among fellow workers. A deep sense of family and brother/sister relationships was clearly evident at this hospital.

Other deeply ingrained shared values were the respect for seniority, being modest, and paying respect to the elders. These show in a pattern of behavior, performing the WAI that is plainly seen every morning at this hospital and at each shift change. This behavior was also noted during the researcher’s first interaction on the unit; staff members greeted the researcher with the WAI.
The core value of MA-NO-SUM-NUK was clearly understood and explained from an emic perspective by a key informant who was an administrator and continues in that role today. This informant strongly believed that “this value of MA-NO-SUM-NUK is still retained deeply in the blood stream of every staff member. It was just waiting to be activated.” Informants who mentioned the hospital core values of MA-NO-SUM-NUK and togetherness were most often hospital veterans, who conscientiously drove the clinical pathway development and implementation. These informants demonstrated their MA-NO-SUM-NUK toward the work through their patterns of behavior of conscientiously working hard and devoting themselves to achieve the hospital goals.

From an emic perspective, data obtained from narratives of interviews with key informants provided further insight that those who work on the neuro-surgery unit at this hospital value togetherness, respect for others, and the serenity of a harmonious community that are based on traditional rituals and their life ways. The implicit meanings of WAI were articulated clearly to the researcher by the head nurse, as was the ritual of ROAD-NUM-DUM-HUA. These rituals were used as means to transmit the hospital’s underlying assumptions and core values of MA-NO-SUM-NUK and togetherness in providing health care services with the serenity of body and mind of the staff in this harmonious community. This ritual of ROAD-NUM-DUM-HUA implies the meanings of forgiveness and blessing to the hospital staff and reinforced the shared values of respect to the elder and the feeling of “we are the same family.”

Research question 3. What are the factors that promote or impede the success of the implementation of a clinical pathway for head injury?
The data illustrated that the factors that promoted successful implementation of a clinical pathway came from the MA-NO-SUM-NUK of the hospital staff, their willingness to work together as a team and help each other, and the BAI HOIR system. First, it could be seen that the staff’s deeply held cultural value of MA-NO-SUM-NUK was the primary factor for successful clinical pathway implementation. The interviews illustrated that conscientiousness could be seen through the team members’ behavior of hard work, and that this behavior arose from motivational processes that were influenced by the leader’s personality and the perception of the work environment.

Conscientiousness (MA-NO-SUM-NUK) was consistently linked to the task performance of the team members. Therefore, conscientiousness was an important attribute for successful performance, and in fact was recognized as such by one of the key informants. The second factor was that the team members placed value on being willing to work together and help each other. Data demonstrated clearly that the shared value of helping each other came from the team members’ perception that other people in the unit valued such helping behavior and they typically engaged in helping behavior. And lastly, the obviousness and rigor of the BAI-HOIR system was an important foundation of the evidence-base that guided quality improvement of clinical pathways. This system provided a basis by which other shared values could be applied, both to improve the care and reinforce the culture of the unit and hospital.

Field notes and reflexive journals showed that the factors that seemed to impede success of the implementation of a clinical pathway for head injury were the practice variation among physicians and the busyness of the staff at the unit. One possible
explanation for the staff’s busyness may come from the detailed processes in their work, and that everything was put into a routine work that the staff could do spontaneously.

Research question 4. What interdisciplinary problems does the multidisciplinary team encounter with the implementation of a clinical pathway for head injury?

The main aim of the clinical pathway was to continually improve healthcare delivery by measuring patient outcomes or use of staff and other resources. If the desired outcomes are not being met, then it is important to determine whether the pathway is not being used or if the content in the pathway needs to be revised. From interview and field note data, the major problem that the team encountered was the physician’s non-compliance with pathways in the ER department. Much of this variance came from the resident doctors who had various styles in practice. This practice variation led the team to question the content of the clinical pathway, and required a pathway revision as part of the continuous quality improvement process. Other minor problems were that the team members forgot to cross out the items in the pathway once completed, admitted a referral patient from the ER to the neuro-surgery unit without doing the CT scan or matching blood group, or forgot to insert the pathway sheet in the patient chart because the unit was very busy with a new admission. However, the compliance with the clinical pathway for head injury at this neuro-surgery unit was considered by the team adequate at 80-90 percent from the monthly retrospective completion of the clinical pathway document.

Research question 5. How does the multidisciplinary team manage the interdisciplinary problems encountered with the implementation of a clinical pathway for head injury?

The findings revealed that the multidisciplinary team used the BAI HOIR as an effective tool in managing the interdisciplinary problems that occurred from pathways
utilization. Causes of interdisciplinary problems were identified and possible and reasonable solutions were discussed in the regular PCT meeting. If there was a problem with a specific patient, a consultation with an appropriate multidisciplinary team member would occur. For instance, the clinical pathway for head injury would prompt the nurses to consult the physiotherapist if a particular patient showed extremity weaknesses.

The minor problems that occurred from the implementation were solved through systematic channels within the hospital structure, collaboration and informal communication based on relationships among the team members, and the culture that facilitated work toward the shared common goals.

The BAI-HOIR was important to the PCT because it contained data that provided consensus concerning the necessity for pathway revision, the reasonableness of goals and possible solutions to recurrent problems. The BAI HOIR was helpful to the PCT because the team members used data from the BAI-HOIR to gradually improve the pathways, which reinforced patient-centered care team members’ efforts.
CHAPTER FIVE

DISCUSSION

The findings of this study present the culture of the staff members in a neurosurgery unit in a northern Thai hospital framed by the core theme of conscientiousness (MA-NO-SUM-NUK). The staff’s MA-NO-SUM-NUK combined with the founding leader’s vision were important keys to enabling and facilitating the creativity and innovation necessary for successful development and implementation of clinical pathways.

Informants in this study described their cultural values, norms, beliefs, and rituals and their experiences of developing and implementing a clinical pathway in the unit. These themes supported the value of MA-NO-SUM-NUK in helping the staff to work hard to make clinical pathways work. MA-NO-SUM-NUK emerged from the narratives of twenty interviews, twelve weeks of field notes, and reflexive journals. These data also revealed the dominant cultural factors that answer the questions of why and how the multidisciplinary team of a neuro-surgery unit made the clinical pathways work. These themes of 1) holding up the flag, 2) singing the march song drunk, and 3) writing the BAI-HOIR illustrate a picture of the group’s life ways including ways of thinking, behaving, and believing in this cultural group.

The major purpose of this study was to describe the culture and life ways of the multidisciplinary team related to the implementation of a clinical pathway for head injury
at a neuro-surgery unit of a Thai tertiary level governmental hospital. Related goals included identification of patterns of culture and norms of the unit and organization, the values and beliefs that are held by the team members that are related to facilitation or impediment of clinical pathway implementation, and how the group retained and transmitted these cultural values, norms, beliefs, and rituals to the next generation in order to sustain the organizational accomplishment. Ethnography was used to elucidate the culture of this group.

Conscientiousness (MA-NO-SUM-NUK)

Cultural values were defined in this study as the influential directive forces that guide people’s thinking, behavior, and action of how they live their life and respond to daily problems in a cultural group (Russell, 2001). These cultural values play an important role in how people weigh choices and make decisions in everyday life.

Informal conversations and interviews with hospital administrators and veteran employees yielded the information that the hospital core values had been identified and instituted by the founding director of the hospital in 1973. These values have been passed on from one generation of organizational members to the next through verbal means and role modeling by the subsequent directors of the hospital and key administrators such as attending physicians, chiefs of specialties and sub-specialties, residents, directors of nursing, administrative nurses, head nurses, and other supporting administrators. The average stay of key administrators has been eight to ten years. Having tenured administrators may have promoted endurance of hospital development efforts and sustained pride in the hospital.
The core values have been transformed into an unquestioned, organizationally acceptable way of perceiving, thinking, feeling, behaving, and taking action. Transmission has occurred through modeling behavior, social norms, and stories told about the founding director under the leadership of each subsequent director. The founding director was held as an important person deserving respect and gratitude from every practitioner. This showed in informal conversations and was even presented in introductions during hospital presentations and was published in hospital annual reports. This demonstrated to hospital staff a strong organizational culture and social identity.

The major concept of the hospital core values was focused on mode of professional conduct and is best described as conscientiousness in performance of the functions and meeting the goals of the organization. The core values of this institution were developed to remind people in the organization that the essence of life is that we came into this world with nothing and we go out with nothing. Therefore, we should be honest, maintain justice in mind, not take advantage of others, and live one's life based on Buddha's teaching of the four sublime states of conscious. These values were applied particularly to the administrators as role models within the organization and governed people's interactions toward others. All these values were the foundation that underpinned the value of MA-NO-SUM-SUK; conscientiousness guided the conduct of organization members in providing health care services.

No existing studies explored or even reported the cultural value of conscientiousness and how it became an underlying value of the culture. However, Jones (2000) found that lack of motivation of the staff (the opposite of MA-NO-SUM-NUK)
was attributed to be the major problem in implementing a clinical pathway for schizophrenia.

The finding that the hospital core values were developed and communicated by the founding director, and that they had affected the behavior of hospital staff and became basic underlying assumptions of the hospital, was similar to the findings of Weiner (1988). Weiner studied how the source of group values relates to how values become basic underlying assumptions. Weiner found that some core organizational values are derived from organizational tradition or charismatic leadership, especially from a particular individual or the founder of the organization. These values tend to be stable and rooted in the organization. Such is the case with the core values of this hospital; they are derived primarily from charismatic leadership and organizational tradition.

_Holding up the Flag_

As changes in organizations are unique due to the differences in the nature of the organization, nature of the unit, work culture and values, and the attitudes and behaviors of people in the organization, it is important for leaders to know how to shape and influence their work environment to make it conducive to creativity and organizational change (Schein, 2004). The former leader of the hospital reacted to the national economic and health care crisis by sending a strong message about values and assumptions of this hospital to the hospital staff. When the hospital staff saw the leader hold up the flag and announce that “we’re going to do the HA together with all resources that we have,” they saw commitment and a personal sacrifice in the throes of crisis. Staff emotions ran high and the leader sent strong messages that the values of conscientiousness, togetherness,
patient-centered care, and teamwork were very important in achieving the hospital’s goals.

These findings demonstrated the characteristics of the director of the hospital, her visionary nature, and her quick response to challenges. She was able to create a new vision and communicate this new vision to the staff, who were convinced to have the same vision and to commit themselves to this new vision. This led to major changes in the basic political and cultural systems of the organization and showed that a creative leader can successfully guide an organization that is limited in resources (Hughes, Ginnett, & Curphy, 2006; Van Wart, 2005). The former director of the hospital also exemplified that she knew her staff and was able to capture their hearts to propel them to the highest levels of effort in the name of achieving the hospital’s goals. This visionary leadership and the conscientious commitment and devotion to the hospital were recognized and shared by staff members across units and at all levels.

These findings are consistent with Goodwin (2000) who studied leadership in the United Kingdom (UK) health service and reported that the required leadership factors to influence public policy were leadership style, vision about the organization, organizational values and culture, appropriate evaluation of the situation by leaders, and a well-developed knowledge about one followers. These findings are also congruent with prior research that indicates that clinical pathways are most successful when there is a strong support from the hospital leadership and a shared commitment among the staff (Roberts et al., 2004; Shortell et al., 1995; Smith & Gow, 1999).

Moreover, research studies on organizational culture and the role of the leader supported the findings of shared values being a driving force. Organizational culture is a
dominant factor affecting organizational members’ attitudes and productivity (Kim et al., 2004; Rachid et al., 2003) and strong organizational culture can also increase employees’ satisfaction, organizational commitment, and performance among members (Berlowitz et al. 2003; Corbett & Rastrick, 1999; Lim, 1995; Saffold, 1988; Silverthorne, 2004; Yin-Cheong, 1989). This highlights the findings of the current study that the more the members identify with shared assumptions and values in an organization, the stronger the behavioral norms and organizational culture, which can predict the organizational effectiveness.

*Singing the March Song Drunk*

The theme of *singing the march song drunk* was the expression from one key informant who was a physician and who wondered about one hospital staff member who sang the hospital march song every time he was drunk. The idea of having an organizational march song that is deeply ingrained in group members illuminated a shared value of commitment and a strong emotional attachment toward the hospital. This theme was an analogy that best described how the multidisciplinary team developed and implemented the clinical pathways into their routine work through commitment, shared values, and rituals. Thus, the success of the development and implementation of clinical pathways at this hospital came from MA-NO-SUM-NUK (conscientiousness) and the shared values that had been embedded in the organization and were subtly transmitted from generation to generation. Accordingly, this neuro-surgery unit successfully implemented a clinical pathway for head injury into the unit through the use of cultural factors and other internal strengths such as routine work.
Researchers have found that hospital cultures are comprised of many subcultures, and these subcultures should be identified to determine the forces that might have effect on the innovation or the quality improvement program (Berlowitz et al., 2003; Coeling & Simms, 1993; Tzeng et al., 2002). However, there has been no clearly defined type of culture that has emerged as most suitable to health care settings and no studies have included an examination of how organizational culture affected the implementation of clinical pathways. None of the research studies from the literature review mentioned the role of shared values, beliefs and underlying assumptions in constructing and maintaining a hospital staff’s patterns of behaviors or norms that influenced clinical pathways implementation.

New findings about cultural shared values and beliefs were uncovered in this study. The findings from the narratives illustrated strong values of conscientious, togetherness, and using routine work to achieve the hospital goals. Other shared values of a sense of family in the multidisciplinary team, seniority, and respect for elders were also recognized in this community. These cultural factors were the foundation for the organizational successes. Therefore, the findings from this study address the gap in the literature by suggesting that clinical pathways can succeed in groups where conscientiousness is a shared value and where teamwork and using routines are highly valued.

Writing the BAI-HOIR/Ways to Make Clinical Pathways Work Better

International research on clinical pathways measured the effectiveness of clinical pathways by using outcomes, length of stay, resource utilization, patient and staff satisfaction, etc. (Chang et al., 2000; Konety et al., 1996; Litwin et al., 1997; Ranjan et
al., 2003; Vitaz et al., 2001; Wazeka et al., 2001). Compliance and variance tracking were also a means to measure and improve the effectiveness of the clinical pathways. However, not all health care organizations developed variance tracking or follow western concepts exactly. Such is the case with this hospital; the PCT team developed and implemented the clinical pathways in a context of Thai culture that did not match exactly the western concepts of how to implement pathways. The Thai people still maintained their strong sense of cultural identity while being successful in implementing clinical pathways.

Compliance to the clinical pathways was one factor that could explain the success of the implementation. However, not all physicians buy in to or use the clinical pathways. As had been reported by Panella et al. (2003) in a study on a clinical pathway for stroke that had been developed by a committed group of people in the organization, only the physicians who developed the pathway used the pathways, while others did not. This non-compliance to the pathways was similar to the findings in the current study. However, the data from the interviews and field notes demonstrated that team members confronted this problem by using the Hospital Occurrence Incident Report (HOIR) as a tool for collecting data about pathway deviations. These HOIRs were given to the PCT team who worked together to find a solution. Thus, non-compliance was solved immediately in Thai ways, which focused on maintaining a harmonious working environment and respectful relationships. Through the use of informal communication based on the shared values of we are the same family, seniority, multidisciplinary teamwork, and patient-centered care for the greatest benefit of the patients, positive change occurred.
Therefore, the data from field notes attested to the fact that the PCT and the team members viewed clinical pathways as a tool to provide quality of care to patients and as a way to implement evidence-based care into clinical practice. Three factors appeared to be significant. First, staff members revealed that compliance to pathways guaranteed the quality of care for patients and provided liability protection for practitioners. Second, clinical pathways were viewed as an efficient means to identify and solve problems in clinical practice by the multidisciplinary team. In the early stages of development and implementation, the pathways were used as one of many steps to meet the requirements from the HA-Thailand. As the team members became more familiar with the use of pathways, the team members became more proficient in deciding on what goals and patient outcomes the team wanted to focus. This led to the revision of the clinical pathway by adding desired patient outcomes and variance tracking. Third, staff members clearly revealed that implementing the clinical pathway development by beginning with procedures-based (SOPs) and moving toward a more outcome-based pathway with a supportive framework of evidence-based knowledge was the key to successful implementation.

The development and implementation of clinical pathways at this hospital is not yet completely accomplished. To a certain extent, their conscientiousness is telling the staff members to continue to evaluate and increase the effectiveness of the pathways or find better solutions for the patients, much as they did by implementing variance tracking to improve the activities-based outcomes. Clinical pathways at this hospital are ongoing processes that require continuous quality assurance to monitor the relevant outcomes both for patients and in resource utilization.
Implications

Findings from this study have several significant implications for Thai health care policy, clinical practice, and nursing leadership. The findings in this study not only focused on describing the shared values and core beliefs, the underlying thoughts that guide staff behavior and norms in the neuro-surgery unit, but also included shared values and beliefs of the entire organization.

Understanding the organizational culture and the shared values that people in a hospital hold would be crucial information to the health service quality development of the nation and the policy makers of the health care system of Thailand. This is particularly true for the individuals of HA-Thailand who plan and develop programs for personnel development and quality improvement and performance of the hospitals in the health care system. Thai healthcare systems can be strengthened by examining the findings that show how shared values can be created and retained in the organization’s members. For example, in this study the shared values of multidisciplinary teamwork and patient-centered care had been planted through the HA preparation. Since the HA-Thailand was affiliated with the Health System Research Institute (HSRI), the information about the health care system from the HA-Thailand would be useful to the HSRI in guiding where the Thai health care system should be headed and thus for formulating health care policy for the Ministry of Public Health.

Based on the findings of this study, model behavior of charismatic leaders and ritual play a major role in the success of the organization. Leaders who acknowledge the significance of culture and maintain an organizational culture are more likely to succeed in using the cultural forces to guide and lead group members to achieve the unit and
organizational goals. This leads to implications for clinical practice and nursing leadership because the attitudes, values, and behaviors of the nursing staff members begin with its leadership. Examples of how the head nurse created the unit shared value of “we are the same family” through the ritual of “WAI”, which increased the sense of belonging and unity to the team members, were illustrated clearly in the narratives of field notes and interviews. Therefore, nursing leaders and practitioners must not forget the importance of consistently expressing values, attitudes, and desired behaviors that are needed to implement necessary change that increase positive patient outcomes.

Limitations

Several methods have been used to support the trustworthiness of the study. Among these were the use of multiple methods in collecting the data, the variety of informants that covered all the professional groups in the hospital, the persistent observation and prolonged engagement of three full months at the setting, member checking from informants to verify the data in the verbatim interviews, and the confirmation of the description in the field notes with an informant or team members at the unit. Furthermore, the researcher kept asking the same questions and receiving consistent answers from both informants and the team members. Peer debriefing with bilingual nursing instructors during the data analysis phases adds to the credibility of the findings. Memoing, reflexive journals, and maintaining an audit trail also ensured the confirmability of the study.

The findings of this study present an ethnographic study of one neuro-surgery unit, which offer insight that focused on the cultural context of that unit. Therefore, the findings cannot be generalized to other units. However, the variety of informants who
engaged in this study, the thick description of field notes, and the verified verbatim transcripts may offer applicability and transferability to another similar unit. Units in which patients have the same disease and the characteristics of team members and setting that are close to a neuro-surgery unit under this study may be able to transfer some of the findings. Hence, the applicability of these findings must be taken with careful consideration and judgment about context of the unit to which a practitioner might want to apply them.

Future Research

Organizational cultures including the shared values and the underlying assumptions that promote the successful implementation of clinical pathways in one hospital have been described. These findings fill a gap in the literature on this topic. However, further research is needed to explore and uncover other cultural values that may have an effect on organizational performance and innovation. Different nursing units and other medical specialties could be explored and compared to determine whether there are subcultures and cultural differences within and between the groups in the same hospital. Moreover, this study might be replicated in hospitals in different countries and different cultures in order to compare the results.

Conclusion

Review of the literature revealed that organizational culture influences organizational change and organizational outcomes and is a key variable in the success or failure of organizational innovations such as reengineering and quality improvement efforts (Corbett & Rastrick, 1999; Deter et al., 2000, Schroeder & Mauriel, 2000; Jaskyte, 2004; Shortell, et al. 1995). Yet, there was a lack in both quantitative and qualitative
research of in-depth investigation of how organizational culture relates to implementation of change in hospital quality improvement innovations such as clinical pathways. Because group cultural factors govern patterns of behavior and norms of people in particular sub-groups, these factors can become significant to understanding successful innovation and organizational effectiveness. Therefore, the findings of this study offer insight into and perspective on the cultural context of a particular unit and its parent organization and its relationship to implementing a significant organizational change. The findings suggest that discovering and defining such contextual factors before the initiation of changes or innovations into an organization could improve organizational outcomes.
REFERENCES


Appendix A

MAP OF THAILAND
Appendix B

DIAGRAM OF A NEURO-SURGERY UNIT
Appendix C

QUESTIONS GUIDE RELATED TO THE TYPES OF OBSERVATIONS

Descriptive observations and grand tour questions:

1. What does the unit for implementation of a clinical pathway for head injury look like?
2. Who are the people on the unit?
3. How is a clinical pathway implemented?

Focused observations and structural questions:

4. What are the processes for implementing a clinical pathway for head injury?
5. What did the multidisciplinary team do in implementing a clinical pathway?
6. What are the reasons for the way the multidisciplinary team members do what they do?

Selected observations and contrast questions:

7. What are the differences between stages in the process in implementing a clinical pathway?
8. What are the reasons for doing it this way?
Appendix D

INTERVIEWS GUIDE

1. How is a clinical pathway for head injury implemented by a multidisciplinary team?

2. What are the patterns of the culture in a neuro-surgery unit and the hospital in both emic and etic perspectives as they relate to the implementation of a clinical pathway for head injury?

3. What are the factors that promote or impede the success of the implementation of a clinical pathway for head injury?

4. What interdisciplinary problems does the multidisciplinary team encounter with the implementation of a clinical pathway for head injury?

5. How does the multidisciplinary team manage the interdisciplinary problems encountered with the implementation of a clinical pathway for head injury?
APPENDIX E

THAI CONSENT FORM

ในวินิจฉัยเพื่อสั่งข่าวว่าในรูปแบบการวิจัย เชิง
“การพัฒนาและควบคุมคุณภาพการดูแลโดยการใช้วิธีการดีไว้ในกระบวนการดูแลผู้ป่วยบาดเจ็บทางศีรษะ
t(Clinical Pathway for Head Injury) ในโรงพยาบาลของจังหวัด”

ล้วน ดีเอ็นเอ บางสาขาวิชาศิลป์ ดีเอ็นเอ คณะนิเทศศาสตร์ มหาวิทยาลัยนอร์ทเทิร์น รัฐ (Kent State University) ประกาศ
ณ วันที่ 30 เมษายน 2554 เพื่อที่จะมีการวิจัยและวินิจฉัยการ
ทำการพัฒนาและควบคุมคุณภาพการดูแลผู้ป่วยบาดเจ็บทางศีรษะ
t(Clinical path way for Head Injury) ในโรงพยาบาลของจังหวัด” โดยใช้
กระบวนการวิจัยเรื่องคุณภาพ โดยมีวิจัยประสงค์เพื่อศึกษาการประเมินเป็นกระบวนการ
ทำงานของสถานศึกษาที่มีข้อจดแจ้งของการพัฒนาและใช้วิธีการดีไว้ในการดูแลผู้ป่วยได้
นับ ผู้มีสิทธิ์ในการรับ ที่มีการวิจัยดังกล่าว วิเคราะห์และวินิจฉัยการทำงานที่มี
ดีไว้ และพิจารณาความสำเร็จหรือความสัมพันธ์ของการใช้วิธีการดีไว้ในการดูแลผู้ป่วยได้รับบาดเจ็บทาง
ศีรษะเพื่อการพัฒนาและควบคุมคุณภาพการวิจัย

ผู้วิจัยขอความร่วมมือจากท่านในการให้ข้อมูลและแสดงความคิดเห็นโดยการให้สัมภาษณ์
วิเคราะห์ และอนุญาตให้ผู้วิจัยได้สัมภาษณ์ได้สัมภาษณ์ปฏิบัติงานของท่านในการใช้วิธีการดีไว้ในการดูแลผู้ป่วย
รักษาการดีไว้ ระหว่างวันที่ 1 กันยายน – 20 ธันวาคม 2554 การคัดเลือกสถานที่ที่มีอาการหน้า
ครั้งที่ความดูแลผู้ป่วยและควบคุมคุณภาพของข้อมูล ระยะเวลารับการคัดเลือกสถานที่ต่อครั้งใช้เวลา
ประมาณ 30-60 นาที ท่านอาจไม่ต้องการที่จะยินยอมให้ข้อมูลเป็นข้อสมัครใจหากไม่ประสงค์จะให้ข้อมูล แต่ถ้าท่านมีความ
ดีใจที่จะให้ข้อมูลและยินยอมให้ข้อมูล และขอให้ข้อมูลที่มีความสำคัญต่อการวิจัย ขออนุญาตได้ขอให้ท่านให้ข้อมูลที่มีความสำคัญ
และต้องการให้ร่วมกันในการวิจัยขณะที่ไม่ถูกบังคับในการรายงานวิจัยหรือเอกสารใดๆ และมีการปฏิบัติงานและการ
อาจารย์ที่ปรึกษาปัญญาพิเศษที่ท่านได้ถูกคัดเลือก เกณฑ์ขั้นตอนจะถูกทำลายทุกขั้นตอนจาก
การเขียนรายงานเกี่ยวกับสุขภาพ ผลการวิจัยจะสรุปออกมาในภาพรวมโดยไม่ผูกติดสามารถบอกได้จาก
การอ่านรายงานการวิจัยว่าท่านได้เข้าร่วมในโครงการวิจัยหรือไม่

หากท่านเข้าร่วมการวิจัยในครั้งนี้ ความรู้และข้อมูลที่ให้จากประสบการณ์ของการท่านจะเป็น
ประโยชน์อย่างยิ่งต่อการพัฒนาและควบคุมคุณภาพบริการของรัฐสัตว์ใน การเข้าร่วมการวิจัยครั้งนี้
เป็นไปโดยความสมัครใจ ท่านสามารถเลือกที่จะเข้าร่วมการวิจัย หรือปฏิเสธที่จะเข้าร่วมการวิจัยได้
ทุกเมื่อ โปรดใช้ใจมิตร ให้ถึงกับการปฏิบัติงานของท่าน

หากท่านมีคัดค้านใดๆ เลือกไม่เข้าร่วมการวิจัย หรือเลือกการข้อมูลเพิ่มเติม ท่านสามารถติดต่อ
ผู้ช่วยได้โดยตรงที่หมายเลข 06-154-6402 หรือ Dr. Donna Martzolf ประกาศณวัชรรัตนวิภาทุก
หมายเลข 001-66-330-672-8822 ในเวลาทำการ

ขอแสดงความนับถือ

(นางสาวสุชาวดิ์ อิ่มเม่)
นักศึกษาปีบริบูรณ์เอก

ค่าเชื้อมาเข้าร่วมการวิจัย

ข้าพเจ้าตั้งใจเข้าร่วมโครงการวิจัยนี้ ข้าพเจ้ารับทราบว่าจะต้องทำอะไรบางอย่างและข้าพเจ้า
สามารถปฏิเสธการเข้าร่วมการวิจัยได้ทุกเมื่อ

__________________________________________ ลายเซ็นผู้เข้าร่วมการวิจัย

วันที่

College of Nursing
P.O. Box 5190 • Kent, Ohio 44242-0001
Administration: 330-672-7930 • Faculty: 330-672-3636 • Fax: 330-672-2433
Email: nursing@kent.edu • http://www.kent.edu/nursing
Appendix F
Demographic Data

<table>
<thead>
<tr>
<th>Date</th>
<th>Informant Number</th>
</tr>
</thead>
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<table>
<thead>
<tr>
<th>Age</th>
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<td></td>
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<table>
<thead>
<tr>
<th>Religion</th>
<th>Hometown</th>
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<table>
<thead>
<tr>
<th>Education</th>
<th>Specialty Area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Duration of time working in the profession. (Explain)

………………………………………………………………………………………………………..
………………………………………………………………………………………………………..
………………………………………………………………………………………………………..
………………………………………………………………………………………………………..

*Duration of time working in the hospital/unit. (Explain)

………………………………………………………………………………………………………..
………………………………………………………………………………………………………..
………………………………………………………………………………………………………..
………………………………………………………………………………………………………..

*Duration of time working with quality projects. (Explain)

………………………………………………………………………………………………………..
………………………………………………………………………………………………………..
………………………………………………………………………………………………………..
………………………………………………………………………………………………………..

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Appendix G

CONSENT FORMS

CONSENT FORM (will be translated into the Thai language)

Implementation of a Clinical Pathway in Thailand: An Ethnographic Study

I want to do research on the implementation of a clinical pathway in Chiangrai hospital in Thailand. I want to do this because I want to find out how a clinical pathway is implemented in a governmental hospital and how the culture of the institution and the unit influences the implementation. I would appreciate it very much if you would be willing to take part in this project. If you decide to do this, you will be asked to participate in an interview with me. The interview will involve answering questions about a clinical pathway, how you use it, what you know, and how you feel toward the implementation of a clinical pathway. This interview will be conducted in a conference room or in a place of your choice, and will last from 15 to 45 minutes. You may be asked to participate in another interview in order to clarify things you said in the first interview or to ask you to give your opinion on topics related to a clinical pathway which you may not have addressed in your first interview. Your interviews will be audiotaped and transcribed. With your permission, I may come to observe how you implement a clinical pathway on a neuro-surgery unit while you are working. Your name will not be associated with the transcriptions. Pseudonyms will be used in the transcriptions and reports so that your identity will remain confidential. There are minimal risks to you for participation in this study. You may feel some concerns about reactions of your peers to your answers. However, all of your interview responses will not be shared with anyone else. I may use some quotes from your interview in written reports to illustrate important findings of the study. However, a pseudonym will be used and any details that might identify you will be changed.

If you take part in this project, your cultural knowledge and experiences will benefit the hospital and others who are interested in the implementation and the use of clinical pathways for quality improvement in patient care and resource utilization. You will receive 1,330-1,400 Baht as compensation for your time at the end of conducting a study. The end of the study will be approximately August 15, 2006. Taking part in this project is
entirely up to you, and no one will hold it against you if you decide not to do it. If you take part, you may stop at any time.

If you want to know more about this research project, please call me at 01-678-1095 or Dr. Donna Martsolf at 0011-66-330-672-8822 at Kent State University in the United States. The project has been approved by Kent State University. If you have questions about Kent State University’s rules for research, please call John L. West, Vice President and Dean, Division of Research and Graduate Studies (Tel. 0011.66.330.672.2704).

You will get a copy of this consent form.

Sincerely,

Suchawadee Yimmee, MSN, RN, PhD (candidate)

I agree to take part in this project. I know what I will have to do and that I can stop at any time.

____________________________________  ______________________________
Signature                                Date

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Appendix H

AUDIOTAPE CONSENT FORM

AUDIO/VIDEOTAPE CONSENT FORM
(will be translated into the Thai language)

I agree to audiotaping at ________________________________
on ________________________________.

_________________________  __________________________
Signature           Date

I have been told that I have the right to hear the audio tapes before they are used. I have decided that I:

______want to hear the tapes    ______do not want to hear the tapes

Sign now below if you do not want to hear the tapes. If you want to hear the tapes, you will be asked to sign after hearing them.

Suchawadee Yimmee approved by Kent State University may / may not use the tapes made of me. The original tapes or copies may be used for:

______this research project    _____presentation at professional meetings

_________________________  __________________________
Signature           Date

Address:

College of Nursing
P.O. Box 5190 • Kent, Ohio  44242-0001
Administration: 330-672-7930 • Faculty: 330-672-3636 • Fax: 330-672-2433
Email: nursing@kent.edu • http://www.kent.edu/nursing
Appendix I

Clinical Pathway for Head Injury Management

Name………………………..Age…………HN………………..AN………….……

Modified Jan. 2006

<table>
<thead>
<tr>
<th>Consult</th>
<th>Admission Date</th>
<th>24-48 hrs.</th>
<th>Day 3</th>
<th>D/C Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>o Social welfare o Insurance eligibility regulations o Other insurance</td>
<td>o Social welfare o Insurance eligibility regulations o Other insurance</td>
<td>o Physiotherapy o Social welfare o Insurance eligibility regulations o Other insurance</td>
<td>o Nearby healthcare settings o Social welfare o Insurance eligibility regulations o Other insurance</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tests</th>
<th>Admission Date</th>
<th>24-48 hrs.</th>
<th>Day 3</th>
<th>D/C Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>o CBC o Blood Alcohol as indicated o Anti-HIV o CXR o Skull film o CT scan as indicated</td>
<td>As indicated o Hematocrit o Blood sugar o Electrolyte o CT scan</td>
<td>o Repeat CT scan o Additional X-ray</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Admission Date</th>
<th>24-48 hrs.</th>
<th>Day 3</th>
<th>D/C Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>o IV Fluid o ET tube/Ventilator as indicated o Foley’s catheter as indicated o Elevated head/back to 15-30° (Exclude if pt. has spine injury.)</td>
<td>o IV Fluid o Hyperventilation o Elevated head/back to 15-30° (Exclude if pt. has spine injury.)</td>
<td>o Off IV Fluid o NG tube feeding o Off Foley’s catheter o On condom o Tracheostomy</td>
<td>o Stitch off o Foley’s catheter o NG tube feeding o On condom o Tracheostomy</td>
<td></td>
</tr>
<tr>
<td>Assessment</td>
<td>o VS, NS q 1-2 hrs. (SOP) o Intake Output o Complication</td>
<td>o VS, NS q 1-2 hrs. (SOP) o Intake Output o Lungs condition o Bleeding o Infection sign……..</td>
<td>o VS, NS q 1-2 hrs. (SOP) o Intake Output o Lungs condition o Bleeding o Infection sign……..</td>
<td>o Re-assessment o VS &amp; NS before D/C o Identify a patient’s family who takes pt. home.</td>
</tr>
<tr>
<td>Medication</td>
<td>o Manital 1 gm. per kg. of body weight as indicated or Flurosemide 0.5 mg/ kg. of BW o Dexanethazone IV as indicated o Dilantin 15 mg/ kg. of BW o Antibiotic IV as indicated o Ranitidine IV as indicated</td>
<td>o Manital 1 gm. per kg. of body weight as indicated or Flurosemide 0.5 mg/ kg. of BW o Dexanethazone IV as indicated o Dilantin 15 mg/ kg. of BW o Antibiotic IV as indicated o Ranitidine IV as indicated</td>
<td>o Dexanethazone IV as indicated o Dilantin 15 mg/ kg. of BW o Antibiotic as indicated o Ranitidine as indicated</td>
<td>o Dilantin oral as indicated o Medication Education by a pharmacist. o Medication Education by a staff nurse at the unit.</td>
</tr>
<tr>
<td>Activity</td>
<td>o Bed rest</td>
<td>o Bed exercise</td>
<td>o Early ambulation</td>
<td>o Ambulation</td>
</tr>
<tr>
<td>Nutrition</td>
<td>o NPO o Diet as tolerated</td>
<td>o NPO o Diet as tolerated</td>
<td>o Blenderized diet o Diet as tolerated</td>
<td>o Blenderized diet o Regular diet</td>
</tr>
<tr>
<td>Teaching</td>
<td>Psychosocial</td>
<td>D/C Planning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
<td>--------------</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| o New pt. orientation  
o Information about medical diagnosis  
o Sign consent form and notify patient rights  
o Information about Rx and nursing care  
o Rest in a peaceful environment.  
o Education about NPO | o Evaluate anxiety  
o Follow up with the family  
o Patient/family support | o Evaluate family status, care giver, and social network |
| o Sign consent form and notify patient rights  
o Information about Rx and nursing care  
o Wound care and physical hygiene  
o D/C plan follows DEMETHOD | o Evaluate anxiety  
o Follow up with the family  
o Patient/family support | o D/C plan follows DEMETHOD |
| o Wound care and physical hygiene  
o D/C plan follows DEMETHOD | o D/C plan follows DEMETHOD | o Review discharge teaching  
o Doctor appointment and follow up. |
<table>
<thead>
<tr>
<th>Expected Outcomes</th>
<th>Name…………………….……HN………………….AN…………….Unit…………</th>
<th>Date of Admission………………………Operation Date……………......Neurological D/C……………….</th>
</tr>
</thead>
<tbody>
<tr>
<td>o No IICP</td>
<td>o Relief</td>
<td>o Refer</td>
</tr>
<tr>
<td>o Patient ID</td>
<td>o Recover</td>
<td></td>
</tr>
<tr>
<td>matched with the</td>
<td>o No active bleeding from wound/no infection</td>
<td></td>
</tr>
<tr>
<td>patient.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>o Good conscious</td>
<td>o Received pain killer medication</td>
<td></td>
</tr>
<tr>
<td>or not getting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>worst.</td>
<td>o Patient and family reduce anxiety.</td>
<td></td>
</tr>
<tr>
<td>o VS and NS</td>
<td>o Lab tests normal range</td>
<td></td>
</tr>
<tr>
<td>stable</td>
<td>o No active bleeding from wound/no infection</td>
<td></td>
</tr>
<tr>
<td>o I/O balance</td>
<td>o Received pain medication</td>
<td></td>
</tr>
<tr>
<td>o Sign consent</td>
<td>o Insured has been checked</td>
<td></td>
</tr>
<tr>
<td>form</td>
<td>o Complications were assessed.</td>
<td></td>
</tr>
<tr>
<td>o NPO</td>
<td>o Patient and family reduce anxiety.</td>
<td></td>
</tr>
<tr>
<td>o Insurance has</td>
<td>o Patient and family can look after them selves.</td>
<td></td>
</tr>
<tr>
<td>been checked.</td>
<td>o Insurance has been checked.</td>
<td></td>
</tr>
<tr>
<td>o Complications</td>
<td>o The patient can tell how to care for himself after discharge.</td>
<td></td>
</tr>
<tr>
<td>were assessed.</td>
<td>o The patient can tell complications that might happen to him/her.</td>
<td></td>
</tr>
<tr>
<td>o No active</td>
<td>o The patient can tell the date of stitches removal.</td>
<td></td>
</tr>
<tr>
<td>bleeding from</td>
<td>o Can eat without vomiting</td>
<td></td>
</tr>
<tr>
<td>wound/no</td>
<td></td>
<td></td>
</tr>
<tr>
<td>infection</td>
<td>o The patient can tell the date of stitches removal.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o The patient can tell how to care for himself after discharge.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o The patient can tell complications that might happen to him/her.</td>
<td></td>
</tr>
</tbody>
</table>

Name…………………….……HN………………….AN…………….Unit…………

Date of Admission………………………Operation Date……………......Neurological D/C……………….

Condition o Relief o Recover o Refer o Dead

Discharge Date…………………….……Hospital costs…………………….……LOS…………. Day