



Nursing care practices to improve acute stroke care

A descriptive literature review

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Abstract

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Title of publication Nursing care practices to improve acute stroke care A descriptive literature review		
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Abstract <p>Acute stroke starts suddenly, but typically worsens rapidly. Therefore, it is considered as a devastating illness requiring emergent attention and care, considering its adverse effects of leading to a high degree of patients' mortality and inadvertently physical incapacity. Therefore, the aim of this thesis is to find out nursing practices required for care of acute stroke, and furthermore, to discover recent researche in tackling the risk factors and the role of nurses in the care of acute stroke patients.</p> <p>Furthermore, this study is carried out by reviewing literature in order to discover nursing practices in the care of patients with acute stroke, and to study how nursing care of acute stroke can be improved by the enhancement on the use of evidence with regards to the prevention of early complications. The prevention of complications within the first 24 - 48hrs decreases stroke-related mortality, therefore, using the electronic database searches of CINAHL, PubMed and SAGE and considering the inclusion and exclusion criteria. Furthermore, codes retrieved were recorded after which themes were being generated. Hence, the major themes formed were: Nurse led ward round, Goal setting and Nursing support which were further divided into subthemes.</p> <p>Finally, It has been discovered that the management and care of stroke involves the carrying out of evidence-based approach which could therefore be implemented by professionals within the healthcare team, in order to emphasize the care in recognising, response, and treatment are delivered in an inclusive approach, and as such, nurse-led ward round has proven to be a powerful tool to empowering nurses to make decisions within their professional capabilities, within which its contribution has had a significant impact on patient care and safety through early detection and prevention of stroke complications, in an acute setting.</p>		
Keywords Nursing care, Acute stroke, Goal setting in nursing practices, Nurse-Led, Ward round, Rehabilitation, Acute setting, Stroke unit, Support.		

Tiivistelmä

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Tiivistelmä <p>Akuutti aivohalvaus alkaa yhtäkkiä, mutta pahenee tyypillisesti nopeasti, jolloin sitä pidetään tuhoisana sairautena, joka vaatii huomiota ja hoitoa, ottaen huomioon sen haitalliset vaikutukset, jotka johtavat potilaiden korkeaan kuolleisuuteen ja vahingossa fyysiseen kyvyttömyyteen. Tämän tutkielman tavoitteena on selvittää akuutin aivohalvauksen potilaiden hoitoon tarvittavia hoitokäytäntöjä ja lisäksi löytää viimeaikaisia tutkimuksia riskitekijöiden ja sairaanhoitajien roolin käsittelemiseksi akuutin aivohalvauksen potilaiden hoidossa.</p> <p>Tämä tutkimus suoritetaan tarkastelemalla kirjallisuuksia löytääkseen hoitokäytäntöjä akuutissa aivohalvauksessa olevien potilaiden hoidossa ja tutkia, kuinka akuutin aivohalvauksen hoitotyötä voidaan parantaa todisteiden käyttöä ennaltaehkäisyssä varhaisista komplikaatioista. Komplikaatioiden ehkäisy ensimmäisen 24 - 48 tunnin sisällä vähentää aivohalvaukseen liittyvää kuolleisuutta, minkä vuoksi käytetään CINAHL: n, PubMedin ja SAGE: n sähköisiä tietokantahakuja ja otetaan huomioon sisällyttämisen - ja poissulkemisperusteet, lisäksi noudetut koodit tallennettiin, minkä jälkeen teemoja kehitettiin. Muodostuneet pääaiheet olivat: sairaanhoitajan johtama seurakuntakierros, tavoitteiden asettaminen ja hoitotuki, jotka jaettiin edelleen alateemoihin.</p> <p>Lopussa on havaittu, että aivohalvauksen hallintaan ja hoitoon sisältyy näyttöön perustuvan lähestymistavan toteuttaminen, jonka hoitoalan ammattilaiset voivat sen vuoksi toteuttaa terveydenhuollon tiimissä. Jolloin hoito voitaisiin korostaa tunnistamisessa, vastaamisessa, hoidossa ja osallistava lähestymistapa kuten sairaanhoitajien johtama seurakuntakierros on osoittautunut tehokkaaksi välineeksi, jolla sairaanhoitajat voivat tehdä päätöksiä ammatillisten kykyjensä puitteissa. Jonka panoksella on ollut merkittävä vaikutus potilaan hoitoon ja turvallisuuteen varhaisen havaitsemisen ja ehkäisyn kautta aivohalvauskomplikaatioita, akuutissa ympäristössä.</p>		
Avainsanat Hoitotyö, akuutti aivohalvaus, tavoitteiden asettaminen hoitokäytännöissä, sairaanhoitaja-johtaja, seurakunnan kierros, kuntoutus, akuutti asetus, aivohalvausyksikkö, tuki.		

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LIST OF ABBREVIATIONS

ABC	A=Airway, B= Breathing and C=Circulation
CNS	Clinical Nurse Specialist
CT	Computed tomography
ECG	Electrocardiogram
FEES	Fiberoptic endoscopic evaluations of swallowing
ICH	Intracerebral haemorrhage. Considered a life threatening stroke, usually caused by bleeding within the brain
PEG	Percutaneous endoscopic gastrostomy tube
SODS	Signs of Depression Scale
TWOC	Trial without catheter
UTI	Urinary tract infections
VFSS/Modified Barium Swallow	Videoflouroscopy swallowing study

1 INTRODUCTION

Acute stroke is a sudden neurological clinical syndrome that poses significant global health concerns (Sacco & Kasner 2013, 44). Stroke occurs due to build-up of blood clot that hinders blood flow in the blood vessel or as a result of rupture of the blood vessel within the brain. Thereby, disrupting the flow of blood within parts of the brain. (Wei, Shu & Farhad 2014, 94.)

Whenever there is an evident sign from either of these signals, which are apparent, brain tissues within the local parts of the brain tend to die. There is a formation of necrosis from which leads to the brain damage. (Bowen 2016, 241.) The dominant cause, being a blockage of blood flow to the brain, caused by a clot of blood (CDC 2015).

Stroke is the third most common cause of death after heart disease and cancer in developed countries (Michael 2012, 138-139). Internationally, stroke has an impact on peoples' lives and therefore, has been gaining the recognition it deserves, both as an acute and chronic disease. Stroke is considered as one of the leading causes of serious long-term disability in the world. (Baheer 2015, 147.) Over 4 million individuals in the world today are living with the effects of stroke. (Stroke Organization 2015.) In accordance with the latest WHO data published in 2017, Stroke leading to deaths in Finland is estimated to be 4,322 or 9.41% of total deaths (WHO 2017).

Classifying the death rate into age groups is 33.83 per 100,000 of Finland's population, thus ranked her 156th in the world (Aivoliitto 2016). Therefore, it becomes imperative to further research on nursing care of acute stroke. Primarily, by identifying the magnitude of the complication of stroke: proper management of stroke risk factors; awareness of stroke warning signs; and appropriate emergency actions. These are critical for preventing stroke incidence, mortality, or morbidity. (Wei et al 2014,100.) Furthermore, It is vital for nursing staffs to be knowledgeable in recognizing stroke symptoms and reacting appropriately in the event of a stroke (Williams 2010, 103-105).

It is also significant for nurses that are providing stroke education to be trained appropriately regarding stroke, its risk factors and pathophysiology. Furthermore,

effects of stroke, available community resources, and emotional needs for patients and families are likewise important. (Joseph et al. 2014, 69.) One of the consequences of stroke is emotional damage, therefore, poses a socio-financial burden on patients and their respective families as well as the overall healthcare sector. (Joseph et al. 2014, 68-70.) It has been stated that stroke care exhausts a high percentage of cumulative universal healthcare expenses, well above 5% of the local healthcare budget in developing countries. (William 2016, 48.) Likewise, the burden of stroke triggers daunting public health apprehensions as a result of the universal populations' increase, specifically amongst elderly people. (Joanne et al. 2016, 8.)

According to WHO (2017), with regards to age group, "the occurrence and rate at which stroke increases, is exponential with age. It reaches its peak in older citizens of above 84 years with 73% of stroke incidence experienced in citizens of over 64 years old. It therefore becomes crucial for nursing care of acute stroke and patient's quality of life to be heightened and improved, in order to acquire a substantial patient's value of life. (WHO 2017.)

As professional health carer, nurses play significant roles in stroke care and management (Williams 2010, 140). As practitioners, caring effortlessly for the well-being of patients, nurses are therefore exclusively required to mitigate the symptoms and pains of stroke (Binning 2014, 55). Therefore, this thesis aims at finding out nursing practices in the care of acute stroke. Research question would be based on: what are the nursing practices in the care of stroke patients? Information retrieved from the literature reviews would be a useful knowledge to developing the professional skills of nurses towards the care of stroke patients.

2 OVERVIEW OF ACUTE STROKE

2.1 Early Identification of Stroke

Stroke is a common and complex neurovascular disease, making it an important public health issue and health-care professional's priority topic (Linda 2009, 139). Considering the complexity of the disease, and the variety of ways in which it can present itself, as well as the differences between the treatments, it is imperative that nurses involved in stroke have a thorough understanding of its underlining anatomy, physiology and disease processes. (Barer 2009, 250.) Professionals working with acute stroke patients are required to be updated regarding the rehabilitation processes, taking into consideration the caring needs of patients throughout the different phases of the process (Joseph et al. 2014, 100). Also, it is important to familiarize with the two major types of stroke, which are; Ischemic stroke and Haemorrhagic stroke (Joseph et al.2014, 100).

Ischemic stroke is considered the most common type of stroke. It occurs as a result of an obstruction in the blood vessels supplying blood to the brain, consequently narrowing the blood vessels that supply blood to the brain. (Cantangui 2014, 64). This is caused by deposition of fatty substances, blood clots or other debris, which build up in the blood stream that eventually gets deposited in the blood vessels leading to the brain. (Saver et al. 2013, 309.) An Ischemic stroke accounts for about 87% of all stroke cases and the most common subtype is the cerebral embolic strokes (Rosalie 2013, 124). Symptoms experienced by sufferers include aphasia, headaches, confusion, imbalance, weakness and numbness in arms, face and legs are experienced by the sufferer (Williams 2010, 145).

Haemorrhagic stroke occurs as a result of rupture or leakage in the blood vessels (Williams 2010, 145). According to Julia, (2012, 185) there are numerous risk factors causing haemorrhagic stroke, which include:

- Failure to control high blood pressure
- Too much treatment with the use of blood thinners or anticoagulants
- Aneurysms, which is the swelling at the weak spots of blood vessel walls
- Experiencing traumatic incident
- Ischemic stroke that leads to haemorrhage

2.2 Symptoms and risk factors of Stroke

According to Catangui, Elmer, Javier, Slark & Julia (2012), the Barthel index and modified Rankin scaling are measures to evaluate patients' stroke outcome. The maximal score of 20 indicates that the patient is fully independent and the lowest score of 0 indicates a totally dependent or bedridden state (Catangui et al. 2012, 804).

Furthermore, the Face-Arm-Speech-Time (FAST), indicative of an effective assessment to determine stroke signs. Once these following signs are noticed, immediate response by the emergency is therefore needed. (Loo, Hofgart & Csiba 2012, 442.) Face-drooping, assessed by monitoring the individual's face while smiling. If the face droops, it becomes impossible for the person to smile. (David et al. 2011, 14.) Arm weakness or numbness assessed by raising both arms. (Catangui et al. 2012 804.) Speech difficulty assessed by observing slurring, if the patient repeats certain words correctly. (Nunes 2017, 415.) With the observation and assessment of individual possessing the above mentioned symptoms, it becomes imperative to seek emergent help. It should be taken into account, the first time the symptoms have been noticed. (Nunes 2017, 425.)

Other signs indicative of stroke are sudden and severe headache experienced with vomiting, unconsciousness and even dizziness. Sudden blurred vision in one or both eyes, imbalance in walking and loss of co-ordination. (American stroke association, 2016.)

Life-style are among the many risk factors that increase the possibility of having stroke, which includes obesity, sedentary life style, binge drinking, heavy use of illegal drugs like methamphetamine or cocaine and smoking. (Finn et al. 2010, 308.) These factors are often controllable by individuals who are being affected by this life style (Finn et al. 2010, 308).

Furthermore, medical risk factors include continuous uncontrolled high blood pressure, high level of cholesterol, family hereditary or history of stroke, heart attack, and abnormal heart rhythm. These factors contribute to the risk of an individual developing a stroke. Other factors could be age, race, family history, background, hormones and race. (Joseph et al. 2014, 70.)

2.3 Prevention of stroke

According to Finn, Inger & Dorte (2010), adopting a healthy life-style such as healthy diet, regular exercise, adopting a stress free life, regular visit to the hospitals for check-up reduces the risk of stroke. Furthermore, high blood pressure should be controlled in order to prevent or reduce the risk of developing stroke. Most often, medications are required to maintain blood pressure. (Micheal 2015, 90.)

The quantity of saturated fat and cholesterol consumptions should be lowered, since it reduces the fatty deposition or build-up in the arteries. There is the possibility of getting prescription of cholesterol-lowering medication. (Considine 2010, 94.) Consumption of alcohol may increase the risk of high blood pressure, therefore leading to ischemic and haemorrhagic stroke. Alcohol also has the ability of interacting with drugs; therefore the avoidance of alcohol intake is a good way to preventing stroke. (Griffiths 2000, 5.) Apnea, which is a sleeping disorder, could result in shortness or seizure of breath for some short period of time during sleep. However, this could be addressed by using a device to deliver airway pressure by wearing a mask that keeps the airway opened while asleep. (Bowen 2016, 240.) Preventive medications such as anti-platelets drugs are sometimes prescribed, which helps blood cells less sticky and less likely to clot and anti-coagulants (Hill 2009, 130).

2.4 Complications of stroke

The effects of stroke cannot be over emphasized; the effects can be suffered physically, emotionally and socially by patients and their relatives. This causes a major trauma in the case of the affected person. (Finn, Inger & Dorte 2010, 307.) The consequences could either be temporary and resolvable in future, depending on the extent of brain damage as a result of lack of blood flow and the part of the brain which is affected (Finn et al. 2010, 311).

Complications of stroke could result in physical deficits; hemiplegia is a primary physical deficit (Binning et al. 2014, 283). Hemiplegia is the paralysis on one side of the body, due to damage to the opposite part of the brain. (Diana 2014, 781.) In essence, a left hemiplegia indicates there's a damage in the right part of the brain thus, causing an adverse effect on the left part of the body. (Andrea, Maria & Diane

2017, 6.) Dysphagia is a condition in which patients develop trouble with swallowing, following a stroke (Andrea et al. 2017, 20). Usually, patients have trouble with swallowing after being affected with stroke, resulting in slurred speech from weakening of muscles used during speech. (Binning & Rubin 2014, 282.)

Complication of stroke in patients includes balance and co-ordination. Stroke patients find it impossible or difficult in performing simple daily activities, walking, running or dressing. These problems emerge due to difficulties with balance and coordination. (Joanne & Sarah 2016, 7.) Other complication includes cognitive deficiency affecting consciousness, attention, thoughtfulness and decision making (Marwa et al. 2019, 12.) Aphasia is a language complication suffered by stroke having difficulty in forming and/or understanding speeches. Aphasia could further lead to situations or problems in writing and reading. (Demaerschalk et al. 2009, 55.)

Psychological complications in stroke patients are emotional problems such as depression and anxiety resulting in displaying inappropriate emotions in certain situations. (Christopher 2009, 46.) It should be noted that stroke patients experience pain in parts of the body affected by the by stroke, and often associated with numbness and other unusual sensation. Thereby resulting in an unusual tingling feeling in the part affected. (Finn et al. 2010, 307.)

3. NURSING PERSPECTIVES IN ACUTE STROKE CARE

3.1 Nursing care in stroke patients

Nursing care refer to series of interventions delivered by nurses in order to rectify and reverse patients' health status. Thus, enabling patients to be able to take control of their current status of health in order to deter any further or future complications which could arise as a result of stroke. (Julie 2010, 77-78.) Therefore, nurses adhere to all nursing process that involves care plan and achieving goals for patients' recovery process (Marwa et al. 2019, 10). According to Michael (2015, 98), it is recommended that nurses need to pay more focus during the acute stages. This prevents even more damage to the brain, thereby reducing the possibility of further brain injuries. In order to achieve this, there is focus on regulating the vital signs, stabilizing fluid and electrolyte balance, and preventing the possibility of further complications. (Griffiths 2000, 4.)

Therefore, it becomes pertinent for the following outcomes to be measured; before and after guideline implementation: the triage category. Taking into consideration the waiting time, also the emergency department within the duration of stay, the time for various assessments and interventions. (Considine 2010, 95.) Table 2, below shows some of the roles nurses are involved during stroke care.

Table 2 Role of Nursing team in a stroke acute setting (Javier & Julia 2012, 802)

	DESIGNATION
1	Consults through recorded medical and nursing notes to identify patients' current situations or issues that had happened over the weekend.
2	Evaluate changes in patients' physiological parameters, such as; (manual pulse rate, blood pressure, temperature, respiratory rate, electrocardiogram (ECG) if appropriate.
3	Checking and assessing early signs of decubitus ulcer (pressure sore)
4	Checking out and evaluating patient's mouth status (dry, moist, presence of oral candidiasis)
5	Have to Check and assess any bowel movement. Should in case patient has not had any bowel movement in the past 2 days, the stroke clinical nurse specialist (CNS) prescribes laxatives unless contraindicated
6	A stroke CNS as an independent nurse prescriber, identifies any visible medication errors, rewrites drug charts, and prescribes medications if patient is not on treatment
7	To assess the need for bladder training if patient is incontinent but not on catheter. If patient is catheterised, evaluate the need to have a 'trial without catheter (TWOC)'
8	To evaluate changes in patient's weight, body mass index, fluid and nutritional intake
9	Assessing of patient's mood using the appropriate depression scale (Signs of Depression Scale) (SODS)
10	Assessing and evaluating patients' functional outcome using stroke tools (Barthel index and Modified Rankin scale)
11	Ensures that nursing documentation is detailed and updated. Check patient's peripheral line and assess for any signs of infection. Evaluate the need to change it if necessary

3.2 Nursing care in Rehabilitation

Rehabilitation nurses are required to care for stroke patients who have suffered disabilities (Bowen 2016, 241). Rehabilitation practices involve practices of the occupational and physical therapy as advancement occurs. Rehabilitation has become more important, considering that a slight improvement in the patient care could require the patient returning home or staying back at the rehabilitation centre. (Hill 2009, 136.) Rehabilitation processes are more beneficial to patient who have suffered less injury (Joseph et al. 2014, 68). It often involves the occupational, speech and language and physical therapy, and its success is relative to so many factors, like, how fast the process begins, the patients' attitude to the whole process and of course the extent of brain damage. Professional skills and support from family and care givers also play a huge role in its success. (Nordin, Aziz & Noor 2012, 603.) According to Diana et al (2014), stroke rehabilitation team include, physical therapist, whose responsibility is to restore the physical functioning by evaluating and treating problems related with movement, balance and co-ordination (Nordin et al. 2012, 602). Occupational therapist they simply provide exercises and practices to enhance patients' performance in daily activities (Binning et al. 2014, 74). Speech therapist speech therapist provides therapy which helps to improving speech and language skills in patients who need it (Diana 2014, 780). Social workers assist with problems related to financial decisions and make a plan on patients' returning home or a new living place (Joseph 2014, 66).

According to Nordin et al. (2012, 605) the need for stroke rehabilitation begins immediately after the diagnosis of stroke in acute hospitalization. In acute care, nurses together with occupational therapist evaluate the cognitive functioning, motor skills and daily living activities.

The nursing care during the acute care phase focuses on the prevention of secondary stroke complications, monitoring of possible seizure and the proper management of general health conditions. (Saver et al. 2013, 309.) Encouragement of self-care activities and the provision of emotional supports to both patients and family. Nursing care of stroke has developed rapidly over time, with the invention of technological advancement and increase in medicinal knowledge and various therapies. (Binning et al.2014, 74.)

3.3 Psychological Assessment

Anxiety, Impairments and post stroke depression in cognitive functioning are commonly observed in patients after spending a long time in hospital. Therefore, an occupational therapist, proffers a solution for patients to get over the effects of possible ICU psychosis experienced due to stress, apnea, and sensory disorder. (Williams 2010, 130.) Nurses also engage patients in familiar task, to reduce stress.. Light massage and music therapy are also a good way to help minimize anxiety, fear and of course depression. Conversations are also therapeutic in elevating the patients' feeling and an avenue to share his/her problems. (Diana 2014, 784.)

3.4 Nursing Discharge

Teams within the multidisciplinary unit work towards discharge plans. Patient's discharge plan is carried out by the nurse, who figures out patient's continuity plan. (Griffiths 2000, 2.) Therefore, patients who do not require further rehabilitation services could be discharge home upon recovery. However, patients with disabilities are further transferred to nursing homes, while those need a long term care are transferred to long-term disabled settings. (Griffiths 2000, 3.) Nurses would assess patients for clinical observations till patients are discharged. The discharge plan then focuses that patients are protected and can function independently both at home and within the community (Cantagui 2012, 804.)

According to Finn, et al. (2010), heart diseases, blood pressure, high cholesterol, diabetes mellitus, smoking and high alcohol consumptions are high risk factors of developing a stroke. Outlined risk factors however, can be altered by lifestyle changes, furthermore, if blood pressure is constantly 140/90 or even higher, there poses a risk of stroke. Individual blood pressure is considered normal at a measure of 120/80. Patient who have suffered stroke, are monitored and followed with his/her blood pressure to be within its normal levels and also follow up prescribed medicines. (Linda 2009, 57.)

Stroke can also be a result of smoking, smoking damages the blood vessels resulting in the blockage of blood vessels, leading to a stroke. Nurses hold counsel sessions, discussing about how to stop smoking and prevention from developing further stroke. (Joseph 2014, 70.) As a result of the high cholesterol in the blood, there is increase in the risk of blocked arteries which could result in a stroke. A lack of

physical exercise could lead to increase in the risk of heart diseases and stroke. (Baher 2009, 71.) Guidance could also be given about general healthy eating habits especially with regards to reducing in-take of saturated fat and sugar, drinking lots of water, the consumption of variety of fruits and vegetables and the reduction of alcohol consumption, below the recommended levels and referral to local care groups, if the need arises. However, the individual patients play a large role to achieving these set goals. Therefore, patients participate in nursing care by involving themselves in their recovery process and focusing on self-managements. (Diana 2014, 784).

4. PURPOSE, AIM AND THESIS QUESTION

The aim of the theses is to find out nursing practices required for care of stroke patients, to carry out a qualitative, descriptive literature review and study how nursing care of acute stroke can be improved. (Williams et al. 2010, 140.)

The purpose of this thesis is to develop the professional skills of nurses towards the care of stroke patients.

The research question for this thesis would be based on:

What are the nursing practices in the care of stroke patients?

5. METHODOLOGY

5.1 Method and Databases

Descriptive literature review has been chosen as the method to be applied in this thesis. This method has been chosen to enhance and provide a comprehensive detail in order to understand recent knowledge and research regarding the topic. Nursing research aims at investigation which further reinforces nursing practices, education in the pursuit of enhancing the nursing profession to improving the health and quality of patients' life (Mistovich 2014, 70).

Literature review is a thoroughly organized investigation, which further proceeds into concise methods to finding out answers to questions. A research is aimed at providing an encompassing and comprehensive knowledge about the topic or within the sphere of research topics that are being conducted. (Julie 2010, 97.)

A literature review is therefore regarded as a reliable and comprehensive way to gather or collect relevant data. It helps to establish surveyed scholarly articles and book discovery. And on this occasion, has been used as to emphasize nursing practices and profession with the prospect at improving the quality of health life of patients. The systematic findings of previous scholarly work that appear in nursing practices. (Raheleh 2014, 243.)

Furthermore, literature review could be regarded as a meticulous way of summarizing, an objective and thorough analysis of an important research on a given topic (Joseph 2014, 69). It is an inexpensive and simple approach to gathering useful data. Previous materials were used for this thesis to identify specific topics that were being studied. Reviews therefore, provide with a synthesis of published literature about the topic. Descriptive literature reviews are therefore useful in representing a broad perspective on a topic (Joanne 2016, 7). A descriptive literature review has therefore been chosen as a method for this thesis, considering that it systematically examines previously written scholarly works on nursing care of acute stroke. It therefore, demonstrates a critical analysis of most recent information regarding a topic. (Libguide 2019).

Literature search was derived electronically using the database available through the Masto-Finna Library system. The data-bases Pub-Med, CINAHL and SAGE related to nursing fields which have been selected for this study.

5.2 Inclusion and Exclusion Criteria

In the thesis, Inclusion criteria are the boundaries set within an article, it helps to make decisions as to what kind of information is needed during the literature search, to guide to which studies are to be included in the results. While exclusion criteria would be those characteristics that disqualify prospective subjects from being included in the results. (VCU Libraries, 2019.)

In order for these criteria to be established, table 3 below summarizes the extracts of findings based on latest information on the topic. In addition, the search results were selected from the year 2009 to 2019. The language of materials available was selected from English Language publication which was to ensure precise understanding and reflection of the content. Consideration was given to articles with full text available, in order to derive complete information. Peer-reviewed articles were considered, while literature reviews were excluded from the selection.

Table 3: Inclusion and exclusion criteria

Inclusion Criteria	Exclusion Criteria
10 years publications, (2009-2019)	Publications over 10 years
Nursing related fields in peer-reviewed journal	Non-peer Reviewed
Full text available publications	Only abstract available publications
Related articles in acute stroke, Nursing care of acute stroke, Nursing Role in acute Stroke, Rehabilitation	Non-related articles in acute stroke, Nursing care of acute stroke, Nursing Role in acute Stroke, Rehabilitation
Relevant to the study	Non-relevant to study
related to nursing field	Non-Nursing field
Published mainly in English language and from original studies	Published in other Languages, other than English words and not from original studies

5.3 Literature Search

A literature review research is achievable provided there are reliable data to be accessed and evaluate for the research purpose. During the process of literature search, the first stage was to conduct selected databases. Thereafter, in the quest of finding more information, alternative keywords have been inputted with addition to main keywords. The results were further filtered with consideration of the inclusion

and exclusion criteria. Researches on nursing care can be achieved when data considered are relevant in evaluating the research. Initial reading from the abstract gave an insight and understanding of the articles, thereafter, selections of the articles were based on whether the articles were relevant to answering the research question of the thesis, and duplicates were also removed to eventually get the useful articles needed for the analysis. Articles have been collected from various journals from the clinical nursing journals, and Journals of acute care. Eventually, the search was conducted and these articles, inclusion and exclusion criteria have been used to eliminate articles that were not relevant and excluded studies that were not relevant to this study and not regarded as being scientific.

The search from electronic database were conducted in February-November 2019 using the already selected data-bases. At the initial stage, searches with the following phrases were used:

- Acute stroke
- Nursing support
- Nursing care
- Rehabilitation
- Nursing management
- Stroke care
- Nurse-led

Literature search was further gathered electronically using the database available through the Masto-Finna Library system, these electronic database searching method delivers a wide variety of information needed, which are retrieved reliably and easier as opposed to searching manually. Therefore, data-bases related to nursing fields which have been selected for this study includes: Pub-Med, CINAHL and SAGE.

PubMed, which is a search engine consist primarily of a set of citations from MEDLINE databases on life science and biomedical articles (Joseph et al. 2014, 36). CINAHL comprises majorly English language selected articles and journals relevant to nursing, healthcare and biomedicine, which is often regarded as a reliable search engine for health professionals and students. (Libguide 2019.) SAGE provides with

a wide variety of research journals and articles relevant to healthscience, which provide with latest information. As compared to books when citing as sources, therefore, the journal retrieved were genuine information for the write up of this thesis. (Raheleh 2013, 250.)

During the databases search, contents like “Stroke care”, “Nursing care for acute stroke”, and “Nursing support for acute stroke patients” have been utilized. After the search for articles, a total number of 982 articles were found, but ten articles are included in this study.

Table 4: Filtered Articles process

CINAHL	SAGE	PUB-MED
Articles identified in database CINAHL Search term 'Acute stroke care' = 737	Articles identified in database SAGE Search term 'Nursing support for acute stroke' = 532	Articles identified in database PUB-MED Search term 'Goal setting in acute stroke care' = 1124
Articles (2009-2019) After initial search=90	Articles (2009-2019) After initial search = 79	Articles (2009-2019) After initial search= 124
Abstract Screened, relevant articles in English Language = 19	Abstract Screened, relevant articles in English Language = 62	Abstract Screened, relevant articles in English Language = 34
Full text availability = 17	Full text availability = 20	Full text availability = 14
Articles meeting requirements for study purpose, Screened for eligibility = 6	Articles meeting requirements for study purpose, Screened for eligibility = 2	Articles meeting requirements for study purpose, Screened for eligibility = 2

5.4 Thematic Analysis

Thematic analysis is a reliable method used in the analysis of a qualitative data. It is usually applied to a set of texts, such as interview transcripts. The researcher usually examines the data to identify common themes – topics, ideas and patterns of meaning that come up repeatedly. (Jack 2019, 56.)

Thematic analysis is a very convenient option available for analysing and interpreting data in a qualitative research (Jack 2019, 60). The approach chosen to conduct the analysis is thematic analysis. Theming is regarded as combining codes from several transcripts into themes that presents in coherent and comprehensive findings from a qualitative research. Furthermore, it is a tool for detecting, analysing and presenting themes of data. (David et al. 2011, 180.)

The Inductive thematic analysis, has been utilized has it best suits this thesis. This type of analysis involves assemble of themes that form a strong connection to the data. (Cameron 2013, 50.) This has been considered as a flexible and reliable method in research methodology.

After the literature search was conducted, the selected articles have been critically and systematically reviewed. Data have also been deduced by reading enough, several times and initial codes of the findings about nursing care of acute stroke have been recorded. Thereafter, elements in the data that have been considered useful or represented a meaning that is relevant to the study have been selected into codes. Thereafter, the data were further collated into phrases related to 'Nursing care of stroke', acute stroke, support for stroke'.

Thereafter, after the codes have been combined and fused to generate three main themes. (As shown in Appendix 2). These are nursing-led ward rounds, goal setting and nursing support emerged which were further divided into subthemes.

The finale articles were analysed with thematic analysis and results have been described with three main themes, as shown in table 5 below: The nurse-led ward rounds, goal setting and nursing support.

During the stage of thematic analysis, codes that had no relevance to the study were discarded, while codes that were relevant from the qualitative data such as seen (in appendix 2) were combined together. For instance, in order to generate the theme for the nurse-led ward rounds, it was discovered from the patterns that nursing practices for stroke care involves close communication with patients, direct bed sides assessments, nursing parade within the patients' ward and nurses' clinical assessments. Thereafter, subthemes were also generated to establish the main themes' focus.

Table 5: Themes and Sub-themes

Main Theme	SUB-THEMES
Nursing-led ward rounds	<ul style="list-style-type: none"> • Monitoring of patient's vital Signs • Oral Hygiene • Commitment
Goal Setting	<ul style="list-style-type: none"> • Self-Management skills • Independency • High-quality care
Nursing support	<ul style="list-style-type: none"> • Continuity of care after discharge • Counselling • Stroke support groups

6. RESULTS

6.1 Nurse-Led ward rounds

The theme nurse-led ward rounds has been further categorised within the three stated sub-themes, which are: monitoring of patients' vital signs, oral hygiene and commitment, these factors explain nurses' work in the acute care. Ward rounds explain a very vital and essential task in which doctors get involved in hospital settings. It also requires structured communication skills, clinical care proficiency, patient management skills and a whole lot of teamwork. (Nikendei et al, 2009.)

In principle, ward rounds are functionally a convoy of health professionals parading within the wards as a result; most patients' care plan is generated. This kind of procedure presents the ground for the multidisciplinary team to listen from every patient directly and further make a joint decision regarding patients' care. (Cantangui 2012, 71.) This further unfolds the diagnosis, management plans, prognosis formation and the opportunity to explore social, psychological, rehabilitation and other vital issues concerning each patient. (David et al. 2011, 184.) A direct and physical examination of the patients just their bedsides will always remain an important aspect of patient care. Therefore, in this case, nurses who are presented as a round leader have an obligation to involve nursing staffs, considering the nurses' input in the care of stroke patients. These ensure continuity of care and the need for the joint round as the focus of clinical decision making. (O'Hare, 2010, 256.)

Monitoring of patients' vital signs

The results of the findings emphasize the importance of nurses to measure the patient's vital signs as a routine check-up, such as the body temperature, blood pressure, respiration and heart rate. Physiological changes can be observed through monitoring patients' vital signs, these further hinder a negative outcome of acute stroke. (Cantangui 2000, 194.) Furthermore, blood glucose level, body temperature and oxygen saturation level should be monitored. A drastic change in the blood pressure of patients could worsen the effect of acute stroke by pressure or discomfort in the blood vessels and heart. Vital signs have to be monitored and controlled

upon the patients' arrival for the care, which in turn prefers to being a secondary prevention. (Julia 2012, 801.)

A pulse oximeter is very reliable instrument in the monitoring of oxygen saturation, should the patient suffer from hypoxemia, oxygen therapy would be administered to the patient. Recommendations are that, should the oxygen level drop below 95%, oxygen is administered between 2-4liters per minute. (David et al. 2014, 53.)

Oral hygiene

The findings states that acute stroke patient are faced with the difficulty of maintaining a good oral health as a resulting from deficiency in cognitive development, physical weakness and co-ordination. Nursing care in oral hygiene effects on the patients' health and reduces the occurrence of infection. (Joanne et al. 2016, 6.) Nurse's role in the maintenance of healthy oral hygiene, prevents complication of diseases such as, gingivitis, halitosis and dental caries. This could inevitably give rise to pneumonia and chest infections of regular assistance of the patient. (Julia 2012, 805.)

Patients suffering from acute stroke require a close and regular assessment of oral hygiene, especially those with difficulty in swallowing, with installed feeding tubes. Oral cleaning agents such as, chlorhexidine gluconate are highly recommended to prevent dental cares and tartars. (Kelly et.al. 2010, 38.) A healthy mouth requires nurses routine monitoring and care, which inevitably would be free from chronic mouth pain, oral sore and throat cancer that can potentially cause more health damage in acute stroke patients. (Joanne 2016, 10.)

Commitment

According to findings, nursing care of stroke patient require commitment. Patients become their priority, and nursing care towards their care is propelled with the desire to stay loyal and keeping patients' situation confidential. Commitment to patients' care ensures nurses plan effectively and stay in their profession in order to provide

optimal care plan for stroke patients. In order to achieve the goal, nurses are aimed in enquiring knowledge about the patient's life in depth, because it is essential to know the patient's life before the onset of stroke. (Hill et al, 2009, 57.) This might pose a bit difficulty at the beginning, because the patient's life history wasn't known before the stroke, therefore it would be essential to ask from the family members who the patient was before the onset of the illness. (Baher 2014, 38.)

Nurses' commitment to the patient care also enhances nurses to discover cognitive, physical and emotional needs of the patients. This further makes nurses' job little easier in providing sound informative, motivational and holistic care plan (Demaerschalk 2009, 60.) In the advent of being committed to stroke patient care, there are situations where by, nurses have to make decisions to either implement patient care, for instance in assisting patients with fluid intake or whether to document what has been implemented in a cases where there has been shortage or lack of time. Commitment becomes a prioritized sector of nursing care of stroke patients that promises to provide a high quality care with excellent standards. (Bree 2010, 81.)

6.2 Goal-setting

The findings emphasize the importance of nurses to set goal in collaboration to enhance patients' care. These goals are to be reviewed at intervals, updated and adhered to, in order to achieve stroke patients' recovery. (Baher 2016, 323.)

The idea of goal setting is to focus on setting key and realistic goals in the care of acute stroke patients. The main theme goal setting is described within the sub themes; self-management skills, independency and high quality care. The sub-theme highlights patients with disabilities to cope independently without having a caregiver nearby. Physical practice focuses on improving the movement of paralysed parts. Goal setting is patient-centred and further increases stroke patients' ability to adhere to therapy. (Finn et al. 2010, 307.)

Self-management

The adherence of stroke patients to therapy and rehabilitation is wrapped up in nursing care for stroke patients' in which patients are allowed to take charge of their activities, whereby nursing promote self-management and this is to enhance the confidence of stroke patients. Thereby, promoting self-confidence, balance and enhancing self-esteem. (Freburger 2012, 182.). Self-management offers a pathway for stroke patients to promoting their recovery, it involves nursing care whereby, there is focus on encouraging patient to engage actively in their recovery process. (Joice 2012, 56.)

Promote Independency

Promoting of independent living for patients who have suffered from acute stroke is very vital in the recovery of stroke patient and a part of stroke care (Loo et al. 2012, 68). It is therefore important that nurses encourage patients to do some of their activities by themselves, even while still receiving care in the hospital. Independency requires a whole lot of motivation and self-determination , but this is however achievable by the help and supervision of nurses.(Joice 2014, 44.)

Support on high quality care

The provision of high quality care to patients is nursing priority. The most required characteristics of nurses are to be patient and attentive. Theses enables patient receive good quality care. (Struwe, Baernholdt, et al., 2013.) Nurses are required to deliver a high quality care, clinical support, which requires a high level of competency, after which nursing care is regarded as being successful (Loo et al. 2012, 82).

6.3 Nursing Support

Various clinical studies have shown a relatively direct proportional relationship between time to access care and brain injury and disability; whereby, delay in care will result in an increase in brain cell death leading to significant physical and/or cognitive impairment (Mozaffarian et al., 2015). An additional factor that remains a consistent nationwide obstacle is availability of expert neurology services (Cronin, 2013; Demaerschalk et al., 2009; Parra et al., 2012).

Continuity of care after discharge

There are varieties of care planning approaches upon patients' discharge. The pathway of stroke care after discharge is usually planned in the hospital. (Struwe, Baernholdt, et al., 2013, 147.) Therefore, continuity of care after is further carried out by home care nurses or rehabilitation nurses, depending on the patient's need and care plan. Rehabilitation therefore, becomes the best therapy which would be needed to continue to attain post-stroke abilities. (Parra et al. 2012, 74.)

Counselling

Counselling services are required to be made available for stroke patients and families in the form of an active and vibrant educational counselling approach. It is also regarded as a problem-solving counselling approach, information dispatched to families approach. (Catangul & Roberts, 2014, 145-147.) However, nurses are required to intervene in matters concerning counselling to patients and family (Struwe, Baernholdt, et al., 2013, 140.)

Stroke support groups

The findings state the importance of patients' receiving adequate information and support specifically during all the stages of recovery process. In the course of providing quality care for stroke patients, nurses provide care with the management of

stroke patient's health problems that are commonly faced with such as high blood pressure, and diabetes, to prevent further stroke complications. (Shulkin et al. 2102, 108.) Therefore, assistance is required to manage stroke survivors within the local stroke support group or other beneficial peer support well enough, before leaving the hospital and also when returned back into the community. (Wei et al.2014, 154.)

7 DISCUSSION

7.1 Findings

Findings from the literature search suggest various nursing practices needed in the care of stroke patients and identify how nurses could improve the care of acute stroke patient as mentioned in the results. The research question of the study is: What are the nursing practices needed to improve the care of stroke patients?

In a channel to finding the answer to the question, data needs to be collected. The data was collected through the online masto-finna portal. Databases such as: CINAHL, and PubMed were used. The search words used were “nursing acute stroke care”, “stroke care”, and “support for stroke patient”. Ten articles have been selected, despite the numerous numbers of articles searched in order to discover the answer being sought. The articles have been searched within the year 2009-2019, published in English language, full-text availability and publication relevant to the study.

The result of this thesis reveals the approach of nursing care through the nurse-led ward concept. According to Cantagui, 2012, 805, nurse-led ward round is a very strong nursing approach that can be used in the care of stroke patients. As mentioned in the results, it enhances direct physical contacts with all patients and enhances nursing assessment which improves the care plan, and goal for each patient.

Goal setting is also considered as a strong tool for nursing care of acute stroke patient. Apparently, without setting goals for each patients care, achievements of patients' care are almost impossible. (Kroeders et al.2013, 151.) Therefore, nurses need to have self-management skills which are usually provided as a special training within the work place, and most often needed for a smooth channel of patient record, care plan and eventually patients' discharge.(Cameron 2013, 44.)

Nursing support is highly needed, especially during patients' discharge process. Patients are encouraged to be independent and have a high sense of performing their daily activities, which in turn speeds up their recovery process. (Kroeders et al.2013, 150.) Furthermore, a follow-up of patients' enrolment within a support group to meet

with stroke survivors. These approach triggers a sense of belonging and accommodation, which in turn enhances patients' mental state. Nursing care is enhanced when applied through a holistic approach, which is also patient-centred enabling patients to participate in their recovery. (Finn et al. 2010, 36.)

Furthermore, the findings outlined risk factors associated with the prevalence of stroke as unhealthy diet, diabetes, lack of exercise, lack of exercise, hypertension, obesity and smoking. As a result, nurses would be expected to spread the awareness of risk factors and preventive measures. (Jytte 2013, 148.)

7.2 Ethics

According to Polit and Beck (2012, 727), ethics is defined as a system of moral values consistent with the procedures of research processes and to what extent the legal, professional and social obligations have been adhered to. Ethics refers hereto the process through which examining resources further enhances the knowledge of human moral values and behaviour.

Precisely, it enlightens the principles of human beliefs, expresses expected standards of moral behaviour and describes the formal code of professional ethics. Therefore, the examiner is obligated to safeguard the privacy of research participants, which includes respecting individuals' identity and families. (Polit & Beck, 2012, 720)

Furthermore, research integrity is used in emphasizing the honesty and integrity in the way research is being adopted. Research is considered ethically acceptable, if it has been conducted accordingly. (Finnish advisory board on research integrity 2017.) Therefore, this study is being conducted based on record accuracy, result evaluation and presentation. In order to avoid plagiarism, correct techniques of referencing others idea has been followed.

7.3 Trustworthiness

Trustworthiness of a qualitative research is based on four criteria: Credibility, Transferability, Dependability and Confirmability. Trustworthiness is regarded as an essential element of a research process. (Linda 2016, 3)

For this study, articles have been analysed and retrieved from professionally reliable databases. Publications within a range of ten years have been selected as being qualified for the research process. For the literature search, nursing databases have been sourced. A narrative literature is regarded as being biased without the consideration of inclusion and exclusion criteria (Polit & Beck 2012, 727). Therefore, non-relevant data have been excluded from the study by considering inclusion and exclusion criteria, in the quest of finding reliable, accurate and reliable information. However, there has been insufficient time during the study process and literature search that affect the amount of articles discovered.

Furthermore, selected articles have been peer reviewed from reliable sources, and analysed to find themes and sub-themes through codes derived from the articles. However, some researchers are of the opinion that the themes derived from articles may lack consistencies and coherence. (Polit & Beck 2012, 727.) To be able to understand procedures on how to increase nursing input in the care of acute stroke and improve quality of care. And also to evaluate the hospital's development methods in the development of my skills and career field.

7.4 Conclusion

The objective of this study is to develop the professional skills of nurses towards the care of stroke patients.

Reliable stroke care is achieved with the clinical skills and approach of nursing personnel. The findings of this study have elucidated the practices of nurses towards the care of acute stroke. Knowledge about nursing care for acute stroke is as important when considering the effects and consequence of the disease. Therefore,

the findings shows that patients require close monitoring and assessment throughout the process of their care, they require direct communication as shown in the results found from nurse-led ward rounds. Nurse led ward rounds in acute stroke care is regarded as a powerful procedure to identify and prevent upcoming patient's issues that may arise to complications.

Furthermore, they require support and follow up of their health status during the recovery process. It is reliable as a patient care review, a problem and results-oriented nursing initiative, a way to improve documentation, and an opportunity to improve teamwork, patient care and the patient experience.

Stroke complications are common. These can be prevented, managed and treated. Monitoring, checking and evaluating patient care is one way to identify whether the patient is improving or deteriorating. A concept similar to the doctors' ward round is used to identify early signs of stroke complications from a nursing perspective. A nurse-led ward round is an example of an innovation to improve patient care in one acute setting. The nursing team, including the input of a stroke CNS, have contributed in early detection, prevention and treatment of stroke complications. The recommendations are that there should be special education or training in courses, which would enable nurses capable of analysing and predicting the capacity of patients.

The recommendations are that there could be specific nursing training and education in empowering nurses to analyse and assess stroke patients' capacity. Also, nurses could be empowered to create a patient specific care plan that involves clinical, physical and psychological tools.

Furthermore, future research could include special tools for nurses' assessment and diagnostic analysis in the treatment of stroke patients.

7.5 Limitations

Finally, the findings of this study should be seen and considered to have some limitations. Firstly, considering that the process of literature search has been done through just three databases which could limit the total articles that have been

selected. Secondly, the keywords that have been used in the search of articles may not have been the best search words to source for articles from nursing care of acute stroke.

The third limitation was the fact that the selected articles were only in English language, which otherwise, could have provided with more related articles to give a broader and wider information to the study.

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APPENDICES

APPENDIX 1 Conduction of Study

Title	Authors & Year	Aim of study	Methodology used in the research	Outcomes
Nurses in led ward rounds, a significant contribution to acute stroke care.	Catangui, Elmer Javier & Slark, Julia. 2012	To improve the way nurses manage stroke patients in an acute setting, nurses, in led ward round concept was originally taken up uncover essential nursing care, and to confirm from patients about their experiences over the period of their stay in the hospital and regarding the treatment received from multidisciplinary team.	Qualitative Method, population study in the hospital setting	This has been proven to be successful in improving clinical communication between nurses and patient involvement in their care planning, also empowering nurses to take the mantle of decision making within their professional arena, which has contributed and made impact on the patient care and safety through early detection and the prevention of stroke complications.

<p>Patients rehabilitation after stroke incidence in a tertiary hospital, is it early and intensive enough?</p>	<p>Loo KW, Gan SH, Hofgart G and Csiba L 2012</p>	<p>To find out the significant burden placed on hospital out-patient rehabilitation services, stroke survivors' families and society at large when stroke survivors are discharged home before they have achieved functional recovery, particularly with regards to mobility.</p>	<p>Analyses of medical records of stroke patients who were admitted to a main teaching hospital</p>	<p>Goal-setting for the rehabilitation of stroke patient was not patient centred as evidence based by: Irrationality between the patient and professionals in setting, communicating and prioritizing of goals.</p>
<p>The delivery of Physical Therapy in an acute Care Setting.</p>	<p>Freburger, Janet K; Shank, Kendra Heatwole; Knauer, Stefanie R and Montmeny, Richard M. 2012</p>		<p>A Population-Based Study</p>	<p>It shows that the quality of care is more efficient when organization of care is focused on continuity of care.</p>

<p>The Impact of Systems of Care and Blood Pressure Management on Stroke Outcomes.</p>	<p>Shulkin, David J.; Jewell, Kay E.; Alexandrov and A.W.; Bernard 2011</p>	<p>To highlight a high profile pathway to create stroke care systems and dissemination of treatment guidelines</p>	<p>A qualitative descriptive study</p>	<p>It is important that nursing pathways for stroke care is address with regards to BP management from a systems perspective and that a system-wide approach to BP management is developed</p>
<p>Lived experiences of nurses in an hyper acute stroke unit.</p>	<p>Catangui, Elmer Javier; Roberts, Clifford John 2014</p>		<p>Qualitative research</p>	<p>The study identified five major themes: learning and support opportunities, readiness for the roles, role perceptions, role definitions, and barriers and frustrations, which have been developed through the extraction of significant statements highlighted through repeated review of the transcripts.</p>

<p>The Stroke patients' delay of emergency treatment.</p>	<p>Hjelmlink F; Holmström I; Kjeldmand D 2010</p>	<p>To describe staff nurses and charge nurses perceptions of how to organize stroke care</p>	<p>qualitative casestudy based on interviews with open-ended questions.</p>	<p>The most important finding of the study was that in stroke patients who delayed emergency treatment for 24 hours experienced that the stroke threatened control of bodily functions, autonomy and integrity.</p>
<p>The Implementation of clinical guidelines for acute stroke management: do nurses have a lead role?</p>	<p>Hill K; Middleton S; O'Brien E; Lalor E 2009</p>	<p>To outline guidelines towards a timely, efficient and coordinated care from ambulance services, emergency services, and stroke services to maximise the potential of acute therapies and prevent costly complications and subsequent strokes.</p>	<p>A literature search</p>	<p>The study points out the essence of neuroscience nurses having an essential role in the multidisciplinary stroke team, therefore, would make a valid contribution to implementing a number of the evidence based guideline recommendations for acute stroke.</p>

Physical inactivity, anxiety and depression in acute stroke.	Kroeders, Rosalie; Bernhardt, Julie and Cumming, Toby 2013		Literature search	The understanding of the relationship between physical activity and mood after stroke is important and also possible for stroke patients with anxiety symptoms to engage in out-of-bed activities in the acute stage
An Evidence-based approach to the improving of nursing care of acute stroke	Considine, Julie and McGillivray, Bree 2010	Improving the emergency nursing care of acute stroke by enhancing the use of evidence regarding prevention of early complications.	Qualitative method	Highlights significant improvement in risk management, increase in triage, and increased frequency of repeated

				assessment of vital signs.
An evidence-Based Measures in the Prevention of aspiration Pneumonia in Patients with Dysphagia	Wei Yi Tay, Lian Leng Low, Shu Yun Tan and Farhad Fakhrudin Vasanwala, 2014	Pointing out nursing care for acute stroke by providing evidence based recommendation for the clinical practice process of care and models of care from arrival at the	Literature review	Highlights significant improvement in risk management, increase in triage, and increased frequency of repeated assessment of vital signs.

APPENDIX 2 Codes combined into themes

Codes

Theme

<ul style="list-style-type: none"> • Direct Communication • Nurses Parade • Bed sides • Direct assessments 	Nurse-Led ward rounds
<ul style="list-style-type: none"> • Collaboration • Enhancement • Adherence to time 	Goal-setting
<ul style="list-style-type: none"> • Recovery • Support • Stress 	Nursing Support