

A TELEPHONE INTERVENTION FOR ISCHEMIC STROKE
PATIENTS TO SUPPORT TRANSITIONS OF CARE

by

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As members of the DNP Project Committee, we certify that we have read the DNP project prepared by *Alicia Nicole Jarrell*, titled *A Telephone Intervention for Ischemic Stroke and Transient Ischemic Attack Patients to Support Transitions of Care* and recommend that it be accepted as fulfilling the DNP project requirement for the Degree of Doctor of Nursing Practice.



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Final approval and acceptance of this DNP project is contingent upon the candidate's submission of the final copies of the DNP project to the Graduate College.



I hereby certify that I have read this DNP project prepared under my direction and recommend that it be accepted as fulfilling the DNP project requirement.



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ABSTRACT

Stroke mortality has moved from the second leading cause of death in 2013 to the fifth leading cause of death in 2016 as a result of stroke certified hospitals, standards of care, enhanced tracking and control of risk factors, and improvements in the hospital systems. Stroke patients are most vulnerable during the transition from hospital to home. Leading to an unsuccessful recovery and/or recurrent stroke, with 53% of these being preventable (Renke & Ranji, 2015). Transition of care programs have shown successful results in decreasing 30-day readmissions, higher patient satisfaction, and decreased adverse events (Hirschman, Shaid, McCauley, Pauly, & Naylor, 2015). This project proposal will evaluate the effectiveness of a 30-day post discharge telephone intervention for stroke survivors and/or their caregivers. This will be accomplished by determining stroke knowledge, survivor functional status, and readmission rates. The information gained in this study will provide the site with potential areas to improve patient care and experience and facilitate a future TOC program.

INTRODUCTION TO THE PROBLEM

Background

In the United States about 800,000 people have a stroke every year, of these people 185,000 have a recurrent stroke or transient ischemic attack (TIA) (Benjamin et. al., 2017). Of note is that as a result of implementation of standards of care and stroke certification for hospitals, advances in research science introducing new reperfusion therapies, enhanced tracking and control of risk factors, public education campaigns and improved pre-hospital stroke systems of care, stroke mortality moved from the second leading cause of death in the U.S. in 2013 to the fifth leading cause of death in 2016 (Broderick & Mahshid, 2015; Benjamin et al., 2017). An area of stroke care that remains understudied but has significant potential to reduce morbidity and mortality from stroke is transition of care (TOC).

One of the most vulnerable times in a stroke patient's disease process is the transition from the hospital to home (Rennke & Ranji, 2015). The transition from hospital to home can be overwhelming for patients and can lead to unsuccessful recovery and/or recurrent stroke. Studies have shown that 53% of stroke recurrence were preventable and due to gaps in multiple factors. Rennke and Ranji (2015) posit that recurrent stroke occurs due to deficiencies in knowledge of diagnosis, risk factors and medications, lack of care coordination once home, and long waits in provider follow-up visits. Currently, there is a widespread lack of attention to these deficiencies in the stroke population as they transition out of the acute care setting.

Transitional care can be defined as care provided to patients moving between different settings of health care (Rennke & Ranji, 2015). Naylor introduced the transition of care model (TCM) in 1989. Use of the TCM has been well-studied in other diseases such as heart failure,

chronic obstructive pulmonary disease, and myocardial infarction (Rennke & Ranji, 2015). When implemented, implementation of the TCM results in a significant decrease in 30 day-readmissions, higher patient satisfaction, and decreased adverse events (Hirschman, Shaid, McCauley, Pauly, & Naylor, 2015). Successful TOC programs address most of the ten major elements of Naylor's TCM. Those elements are screening, staffing, maintaining relationships, engaging patients and caregivers, assessing and managing risks and symptoms, educating through promoting self-management, collaboration, continuity, and advancing coordination (Hirschman et al., 2015).

Naylor's transitional care model aligns with the organization's interest related to their stroke program. Education is an important element of Naylor's TCM. Stroke education can be more complex due to the diverse deficits and lifestyle changes over time. Literature suggest that the working memory, also known as short-term memory, holds about seven pieces of information at once. The complexity of the information can inhibit translation by working memory, leading to information that is forgotten (Lewis, 2016). The physical and emotional stress of a hospital stay can prevent most education from being stored in long-term memory. Coupled with cognitive deficits of a stroke, patients may have trouble remembering education taught while in the hospital.

Naylor's TCM emphasizes the engagement of patients and caregivers in the successfulness of the transition from hospital to home. Research is limited on the changing needs of caregivers and patients, providing reason for engaging them in the continuum of care (Czerwonka et al., 2015). The majority of stroke patients return to the community either immediately after hospitalization or after a rehabilitation stay and require the help of a caregiver.

A stroke survivor's quality of life and the burden placed on caregivers is closely related by engaging patients and their caregivers in the telephone intervention, data can be obtained to determine the needs of not only the patient, but the caregiver as well (Jeong, Myong, & Koo, 2015).

Naylor's TCM provides this project with a structure to develop a thorough needs assessment. The needs assessment will align with the concepts important to a successful transitional care program. Stroke survivors and their caregivers will be engaged in conversation over the telephone to determine knowledge obtained from hospital stay and discharge instructions and also lack of knowledge of risk factors, medications and follow-up appointments. Naylor's TCM provides a framework that will guide the assessment and management of these risk factors aligning with the first aim of the project. Within the model, screening is an important component, the screening of functional status in stroke survivors is important to their recovery and aligns with the second aim of the project.

TOC programs vary with respect to the type of intervention offered. Successful TOC telephone interventions have been described for heart failure (Albert et. al., 2015) and diabetes mellitus (Chamany et al., 2015). For stroke, several studies indicate that telephone TOC interventions resulted in improvements in blood pressure and low-density lipoprotein cholesterol (LDL-C) (Irewall, Ogren, Bergstrom, Laurell, Soderstrom, & Mooe, 2015). While limitations of a telephone intervention have been noted, particularly with respect to the lack of a face to face assessment and "personal touch," telephone interventions have also been cited as being more resource efficient, time efficient, and convenient for families and researchers vs. face to face

programs (Corry, Smith, Neenan, & Brabyn, 2017). Levels of care/services offered also vary widely in successful TOC programs.

An important outcome measure of transition of care programs is hospital readmission rate, a measure traditionally used to reflect the efficiency of a healthcare system (U.S. Centers for Medicare, 2016). Transitional care across different diagnoses has been shown to be effective in reducing adverse events and readmissions (Groesbeck, Whiteman, & Stewart, 2015). Readmission rates for congestive heart failure, pneumonia, and acute myocardial infarction are currently scrutinized by the Center for Medicare and Medicaid Services (Rennke & Ranji, 2012). In 2012, the Center for Medicare and Medicaid Services (2016) developed the Hospital Readmission Reduction Program (HRRP) with yearly updates, establishing penalties to acute care hospitals with excessive readmission rates for the above diagnoses (U.S. Center for Medicare, 2016). The advent of this policy (program) has likely influenced the development and implementation of hospital-based TOC programs for these conditions. To date, the HRRP does not include stroke, thus, incentive to include stroke in hospital-based TOC programs is likely absent. However, conversations about including stroke in the HRRP are occurring and penalties for stroke readmissions and the subsequent need for the development of hospital-based TOC stroke programs may be on the horizon (Rennke & Ranji, 2015).

Over the last decade there has been a significant increase in the number of U.S. hospitals achieving Primary Stroke Center certification and to a lesser degree, Comprehensive Stroke Center certification. Some attention has been made by the certifying organizations (e.g., The Joint Commission & HFAP) to stroke follow up care. For example, Primary and Comprehensive Stroke Centers are asked to collect prescribed 30- and 90-day post discharge data on patients that

have received reperfusion therapies (rtPA or mechanical intervention). This data prescribed by certifying organizations includes readmission within 30 days of admission/discharge, death after discharge, and Modified Rankin Scale. The decision for the 30- and 90 day follow up time frame is likely based on several factors. Stroke recurrence is highest in the 30-day period (Broderick & Abir, 2015); the majority of survivors are home by 30 days (typical acute rehab lasts 2-3 weeks) (Belagaje, 2017). Finally, the responsibility of collecting TOC data will most often fall on the hospital stroke coordinator, as is the case at Northwest Medical Center. Nationwide and locally, evidence indicates that the work of a typical stroke coordinator is ever-expanding (Malfitano, Turner, Piper, Burlingame, & D'Angelo, 2013), making the collection of TOC data a serious resource consideration. Screening of high risk patients by advanced practice registered nurses (APRN) helps establish the relationship between the staff, patient and their caregivers. Currently in place at NWMC patients are already engaging in their care and risk factors related to stroke are assessed and managed appropriately. Patients are thoroughly educated until discharge. With the implementation of this proposal high risk patients will be screened post-discharge for any gaps in the transition of care that need to be addressed. The implementation will also allow for future collaboration with community resources and determine barriers in community-based coordination.

Purpose and Specific Aims

This project is an important first step in developing a stroke transition of care program at Northwest Medical Center (NWMC). Toward this goal, the principal investigator (PI) and NWMC stroke team met in July 2017 to develop an overall purpose and specific aims that are meaningful to the stroke program at this time as well as to a future stroke TOC program. The

purpose of the project is to evaluate a 30-day post discharge telephone intervention for stroke survivors and their caregivers after discharge from Northwest Medical Center. The specific aims are:

- Aim 1: Determine stroke knowledge among survivors and/or their caregivers (knowledge of diagnosis, risk factors, medications, follow up appointments)
- Aim 2: Determine stroke survivor functional status (degree of physical disability, quality of life, depression)
- Aim 3: Determine readmission rates

In addition, demographic data included, age, gender, co-morbidities/stroke risk factors, stroke type, day of admission and discharge, and discharge medications. The telephone intervention feasibility data (average time to reach participants, the number of calls ending in data collection, average time to collect data during the call) was obtained.

Innovation and Significance

Even though we know that TOC programs result in better outcomes, TOC programs for stroke are rare. In order to document improved patient outcomes, stroke certification organizations are moving toward requiring hospitals to document post discharge TOC elements. Additionally, as the healthcare industry and policy continue to change, stroke may be another complex disease that the government requires hospitals to monitor after discharge to avoid penalties for readmission. In addition to meeting these potential requirements, the information gained from this study will provide valuable insights regarding NWMC's certified stroke program. Data could be used to design program improvements that improve patient care and patient experience. While not the main goal of this project, data regarding feasibility of a

telephone intervention will be gathered which may be used by the program to inform resources needed for a future TOC program.

Approach

Research Design

This is a prospective descriptive project design that will use a telephone intervention to support stroke survivors and/or their caregivers at 30 days after discharge.

Study Setting

The study will take place at Northwest Medical Center in Tucson, Arizona.

Study Population

The study participants will include patients discharged home with a ICD-10 code of ischemic stroke patients over a three-month period of time. Sixty ischemic stroke patients were discharged from NWMC from Jan-March of 2017, according to NWMC leadership. We anticipate a similar number for the three-month study period from June-September 2018.

Inclusion Criteria

All patients discharged from Northwest Medical Center with diagnosis of ischemic stroke (defined by ICD-10 code), greater than the age of 18, are English speaking will be included. If the stroke survivor is unable to give consent, the caregiver will be asked to participate and answer questions about the stroke survivor.

Exclusion Criteria

Stroke patients less than 18 years old, do not speak English, or are unable to give informed consent will be excluded.

PROJECT METHODS

The PI has obtained permission from NWMC Stroke Program Medical Director, Sarah Sullivan, MD, to conduct this study. As stated earlier, the project PI had a pre-planned meeting with Dr. Sullivan and members of the stroke team Cheryl Nelson, RN Director of Neurology, and Ibon Utsch, RN Stroke Coordinator, in order to establish a collaborative relationship and understand their goals for the project and a future TOC program. This team discussed including the staff nurses in the project in order to help staff understand the importance of follow up and potentially identify a future registered nurse interested in continuing the follow up phone calls. The outcome of this meeting resulted in the development of this projects purpose and aims.

Procedures

After the study received approval, a flyer (Appendix G) describing the project and asking for the nurses' help recruiting stroke survivors or their caregivers was placed on the neuro unit. The stroke coordinator will also send an email on behalf of the PI with the same information to the nursing staff. The PI and stroke coordinator will then meet with the neuro unit nurses (day shift and night shift) to again describe the purpose of the study, review the recruiting process and the participant form and answer any questions they might have. Nurses will ask stroke survivors or their caregiver if they would like to receive a follow up phone call from a research nurse about 30 days after discharge to collect patient data. Participants will be consented by the nurses (Appendix H). If the survivor or caregiver agrees, their name and telephone number will be recorded on the Participant Form (Appendix H). The nurses will put the forms in the Stroke Transition of Care Study notebook which will be kept in a nurse-access only secure location on the nursing unit. Once a week, the stroke coordinator will scan the Participant Forms and email

them to the PI via a secure encrypted email. Phone calls will then be made by the PI within 30 days of discharge. The phone call will go over the telephone survey (Appendix A), determine their current modified Rankin scale (Appendix B), stroke-specific quality of life (Appendix C), determine if the patient has depression (Appendix D & E), and the *Get with the Guidelines* follow-up form (Appendix F). The patient or caregiver will be asked if they still want to participate in the study at the beginning of the phone call and then asked all of questions on the different appendices as stated above. Only three separate attempts of reaching the participant will be made. The phone intervention will take approximately 25 minutes. The PI is an RN and DNP student. No medical advice or suggestions for a change in discharge instructions will be provided other than information normally provided at discharge by a nurse. Community resources for stroke may be provided by the PI if requested by the survivor or caregiver.

Aim 1: Determine Stroke Knowledge Among Survivors and/or Their Caregivers

Measures and Instruments

Outcome measures for Aim 1 include survivor or caregiver knowledge of diagnosis, risk factors, medications, and follow up appointments. Data will be collected using the GWTG Patient follow up Survey (Appendix F) and the Stroke Knowledge Survey (Appendix A).

Aim 2: Determine Stroke Survivor Functional Status (Degree of Physical Disability, Quality of Life, Depression)

Measures and Instruments

Outcome measures for Aim 2 include degree of disability, quality of life and depression. Instruments include the modified Rankin Scale (mRS) (disability and dependence) (part of the GWTG follow up form, Appendix F), SS-QOL in 11 categories with sub-categorical questions

(quality of life) (Appendix C). A depression assessment will be obtain using the patient health questionnaire-2 (PHQ-2) and if found to be positive, a patient health questionnaire-9 (PHQ-9) will be performed to determine severity of depression (Appendix D & E).

Aim 3: Determine Readmission Rates of Stroke Survivors

Measure and Instruments

Readmission rate and readmission diagnosis questions are part of the GWTG follow up survey (Appendix F).

Finally, in addition to the data directly related to the Specific Aims, data concerning practicalities of a telephone stroke TOC intervention will be collected, such as barriers and facilitators of patient recruitment and retention, and the time investment in making the phone calls (Haynes et al., 2015).

Data Analysis

Data will be collected using dichotomous question and Likert scales. Dichotomous questions refer to the use of 'yes' or 'no' answers. The Likert scale will use five-point ordinal scales to rate the degree of agreement or disagreement (Sullivan & Artino, 2013). The results of the Likert scale will be analyzed for themes.

RESULTS

On the first day of recruitment the PI met with the nursing staff during morning huddle before day shift began, at this time the project was explained to the staff and their participation was requested. On subsequent days for the next week the PI meet with staff before shifts began to explain the project. The PI was either on the unit daily or called the charge nurse to determine if there were strokes patients available to enroll. Once patients were identified as potential

candidates for enrollment they were approached by nursing staff to determine interest in the project and then introduced to the PI.

Over a three month and two-week period, 25 patients with stroke meeting the criteria set out by this project were approached. Of those, only 13 of these patients agreed to be called. The majority of the declines came from family members who were concerned about the amount of time and energy it would take for the stroke survivor. In addition, there were two patients with dementia whose family members believed it would be too taxing on them. Only four of these patients were interviewed over the phone. The total number of patients in the sample was significantly lower than projected at the start of the study. This was due to the unexpected lack of stroke patient admissions during the recruitment period, an unexpected lack of consistent help from the nursing staff, and a low call back response rate, 30.7%. A fair amount of time was needed to reach patients who agreed to participate; the PI attempted to call the patients three times and thereafter phone calls were stopped. The survey took approximately 15-20 minutes to complete.

Description of the Sample

Out of the four patients that were reached by phone three of these were male and one was female. The ages ranged from 56-66. Three of the patients were Caucasian and one was Hispanic (Table 1).

TABLE 1. *Demographics.*

	Age (average)	59.8
Race		
Caucasian		75%
Hispanic		25%
Gender		
Male		75%
Female		25%

Description of Aims

The purpose of this project was to evaluate a 30-day post discharge telephone intervention for stroke survivors and their caregivers after discharge from Northwest Medical Center. The specific aims are:

Specific Aim 1

Determine stroke knowledge among survivors and/or their caregivers (knowledge of diagnosis, risk factors, medications, follow up appointments). The data for Aim 1 is presented in Table 2.

TABLE 2. *Aim 1 – Stroke knowledge.*

	Number of people responding “Yes” to question (%)	Examples of responses to questions that were “No”
Knowledge of diagnosis	2/4 (50)	“I remember what side of the brain but not the specific location.”
Risk factors	1/4 (25)	“I do not understand what you mean by risk factors, they might have told me but during that time I was really out of it.”
Understanding of new medications	3/4(75)	“Again, I do not remember much from the time around my stroke, I’m sure my daughter has more information than I do. It was really hard to follow anything they said.”
Follow-up appointments	4/4 (100)	
Barriers after discharge	4/4 (100)	Half of the patients stated that they had difficulty finding a neurologist to see in the Tucson area and the hospital did not refer them to a specific neurologist. One patient stated that once he got home he had balance issues that he did not have in the hospital.

In this small sample, knowledge of stroke risk factors was low with only a quarter of the sample stating they knew their risk factors. In addition, only half of the participants knew the exact type of stroke and location they had. One participant made multiple statements that due to the stroke and time surrounding his stroke, he has a hard time even remembering what the staff explained to him. He stated, “Without my daughter being there I would have not had any knowledge about what happened or what I was supposed to be doing at home.” All of the participants were able to schedule follow-up appointments, however half of the participants also had issues finding a neurologist and were not referred to a neurologist by the hospital.

Specific Aim 2

Determine stroke survivor functional status (degree of physical disability, quality of life, depression). The data for Aim 2 is presented in Table 3.

TABLE 3. *Aim 2 – Quality of life, functional status, depression.*

	Mean score	Range of Scores
Stroke-Specific Quality of Life Scale		
Energy/Mood	4.2	3.3/5
Mobility	4	2.8/4.5
Language	4.8	4/5
Family/Social Roles	3.8	3/5
Functional Status		
Modified Rankin Scale (mRS) (0-5)	2	5/0
Patient Health Questionnaire-2 (yes or no)	¾ (answered yes to two or more questions)	No to all questions- yes to all questions
Patient Health Questionnaire-9 (0-27)	9	8/10

The stroke-specific quality of life scale (SS-QOL) is composed of four different subscales, including energy/mood, mobility, language, and family/social roles. Table 3 displays the participants mean score for each of these subscales with a range of 1-5, with ‘1’ describing more impairment in QOL and ‘5’ describing no impairment in QOL. Of the four participants

surveyed, half of them reported no impairment in their energy/mood. All of the participants reported their mobility to be limited to some degree and only one patient reported his language was affected by the stroke but not significantly affected. All but one participant reported their social/family roles were impaired due to the stroke. It is worth mentioning that one participant had significant impairment in mobility before stroke due to another disease leading to almost constant use of a wheelchair. However, he did state that he was still not back to his baseline on one side of his body. The modified Rankin scale (mRS) was used to determine function status at the time of the telephone call. One participant had severe disability ('5'), however as stated above, this was present before the stroke. One participant described no disability ('0') and two participants described no significant disabilities ('1').

The participants were screened for depression using the patient health questionnaire-2 (PHQ-2) and if depression was identified, surveyed for the extent of depression using the patient health questionnaire-9 (PHQ-9). In this small sample, 75% responded to PHQ-2 with 'yes' on two questions, leading to the use of the PHQ-9 to determine severity of depression. Mild depression was found in two (66.6%) and moderate depression was found in one (33.3%) of the participants.

Specific Aim 3

Determine readmission rates. Readmission rate was determined by asking the participant during the telephone survey whether they had returned to the hospital. No participant had returned to the hospital for any reason. After discharge, 75% of the participants returned home and 25% of the participants went to an inpatient rehabilitation unit.

DISCUSSION

Deficiencies in the stroke population due to lack of care coordination once home, deficits in knowledge of diagnosis, risk factors and medications, and long waits in provider follow-up visits contribute to the gaps in transition of care (TOC) (Renke & Ranji, 2015). Approximately 53% of stroke recurrence is preventable and influenced by these gaps in transition of care (Renke & Ranji, 2015). The Center for Medicare and Medicaid services (2016) created the Hospital Reduction Readmission Program (HRRP) in 2012 to penalize acute care hospitals with excessive admission rates for congestive heart failure, pneumonia, and acute myocardial infarction, which most likely led to the implementation of these hospital-based transitional care programs for these diagnoses. The hospital-based TOC programs for these conditions have been shown to be beneficial and effective in reducing adverse events and readmissions (Renke & Ranji, 2015). If stroke is included in the HRRP in the future, hospital-based TOC stroke programs will need to be developed. This study was designed and implemented with this future possibility in mind. The purpose of this project was to evaluate a 30-day post discharge telephone intervention for stroke survivors and their caregivers after discharge. Perhaps one of the most significant findings from this project is that in order to have a successful program, buy-in from the hospitals' unit staff and leadership is essential and that a stroke TOC program may not be successfully implemented or if implemented, not sustainable unless this buy-in occurs.

Recruitment

Participant recruitment was a significant obstacle for this study. As previously noted, this was likely due to a number of factors. In preparation for this study, the hospital stroke leadership indicated that historically, 2-3 stroke admissions/week occurred. However, during the three-

month recruitment period there was an unexpected lack of stroke patient admissions. Because of this, the recruitment period was extended for an extra month, but this did not result in an increase in participant recruitment. In addition, early in the recruitment period, there was an unexpected lack of consistent help in recruitment from the staff or nursing stroke leadership. As a result, the PI either called the nursing staff or was present on the units every day of the recruitment period in order to answer staff questions and/or remind staff to ask stroke patients if they were willing to participate, but again, these actions had no effect on increasing participant recruitment. Compounding these factors was a low call back response rate (~ 30%) from those who said they were willing to participate. This call back rate was similar to that reported by Haynes et al (2015).

Specific Aim 1

A widespread lack of attention to deficiencies in knowledge of diagnosis, risk factors and medications, lack of care coordination once home, and long waits in provider follow-up visits contributes to stroke reoccurrence (Rennke & Ranji, 2015). The cognitive deficits of a stroke and the physical and emotional stress of hospital stays contribute to knowledge deficits after discharge (Oni, Olagunju, Olisah, Aina, & Ojini, 2018). Northwest Medical Center (NWMC), the hospital of focus in this study, currently does not have a TOC program for stroke patients. As a result, data regarding knowledge of stroke amongst survivors and/or their caregivers after discharge has never been recorded and was the impetus for the primary aim of this project, determining stroke knowledge among survivors and/or their caregivers (knowledge of diagnosis, risk factors, medications, follow up appointments).

Knowledge of Diagnosis

Although all participants in this study had knowledge of having a stroke, only two out of four participants (50%) knew the side of the brain where the stroke was located, only one participant knew the exact location affected by the stroke. Reasons for this may be due to the extent of education received while in the hospital. Northwest Medical Center gives each stroke patient a stroke booklet that provides generalized information, it is unknown if the staff is providing patients with education specific to their stroke. In addition, the amount of educational information retained may be a factor. It is known that the complexity of information contributes to the amount of information forgotten by the working memory (Lewis, 2016). This knowledge has implications for the manner in which stroke education occurs, perhaps implying that multiple educational sessions throughout a patient's hospital stay may benefit retention of information.

Risk Factors

The American Stroke Association created guidelines in order to prevent secondary strokes, as patients with a prior stroke are at increased risk for subsequent cardiovascular incidents (Bretz et al., 2014). In a study of over 200,000 stroke patients it was concluded that 80% of recurrent strokes would have been avoidable if the patient managed their risk factors. Thus, not only is knowledge of risk factors imperative for stroke patients but also the management of risk factors. In this project, only one participant had knowledge of his risk factors and could list them. The other 75% of participants were unsure what risk factors for stroke were and what their specific risk factors included. This finding might suggest that information is not being retained, as discussed above, and/or that patients are not referring to or understanding the information in the stroke booklets provided to them after discharge. Evidence

for this come from a pilot program conducted in multiple hospitals in which 60% of 136 participants received telephone calls and 39% of those benefited from educational packets sent them; the packets contained specific patient information needs such as risk factor management (Bretz et al., 2014). In developing a stroke transitional care program, providing education after discharge through telephone calls and individualized informative packets may be of benefit.

Medications

Medication adherence is important for the prevention of secondary stroke. However, studies have found that 25% of stroke patients discontinued one or more of their secondary prevention medications within three months of discharge without practitioner approval (Bretz et al., 2014). A patient's understanding of the reasons for new medications is imperative to adherence (Bretz et al., 2014). In this project, three out of four patients explained understanding of new medications and the reason for taking them. Only one patient stated that he was unaware of new medications due to difficulty remembering events around his stroke. These results confirm that in this very small sample, education regarding new medications is adequate. Further studies to determine the compliance of taking new medications at 90 days and 180 days after discharge may be of interest to the hospital and of benefit to stroke patients.

Follow-Up Appointments

All of the participants in this project had either already followed up with a neurologist and their primary care physician or had appointments scheduled. However, two out of four participants stated that they had difficulty finding a neurologist and the hospital staff did not refer them to a specific neurologist. Haynes et al. (2015), found similar results regarding issues with follow-up care and lack of recommendations for physicians in the community. Implying

that more attention should be paid to helping patients find physicians to follow-up with so they are not lost in transition.

The goal of Specific Aim 1 was to assess knowledge amongst stroke survivors and/or their caregivers. This aim was established based on the current gaps in TOC for stroke patients and aligns with Naylor's TCM elements of assessment and management of knowledge and risk factors. This project demonstrated knowledge gaps in the TOC for stroke patients and this hospital would benefit from continuing post discharge telephone calls to provide patients with specific educational material and support. Benefits would include gaining more information from patients to provide smoother transitions home and determining what barriers the hospital could resolve before stroke survivors are discharged from the hospital. In addition, patients would receive a more complete discharge and follow-up phone calls to assist with barriers.

Specific Aim 2

Strokes are sudden events that effect both the patient and their families, often resulting in physical and emotional disabilities and the need to restructure life when survivors return home. Adjusting to life after stroke and changes in lifestyle influences stroke survivors greatly (Oni, Olagunju, Olisah, Aina, & Ojini, 2018). Common mental health issues stroke survivors face: anxiety, depression, personality changes, and psychotic disorders. Post-stroke depression affects up to 25.5% of patients and is linked to decreased quality of life and increased mortality (Oni, Olagunju, Olisah, Aina, & Ojini, 2018). Post-stroke depression is under reported and often misdiagnosed due to the cognitive effects of stroke. These post stroke physical and emotional challenges were the impetus for Specific Aim 2 (determining stroke survivor functional status (degree of physical disability, quality of life, depression)).

Degree of Physical Disability

The degree of physical disability in stroke patients vary depending on location of stroke and the amount of brain cells affected by lack of blood flow. In this project, the degree of disability was evaluated using the modified Rankin scale (mRs), with a ranking system of 0-5 with '5' being severe disability. One participant had no disability and one participant had severe disability that was present before his stroke, the other patients had no significant disabilities. The degree of physical disability can influence post-stroke outcomes and ultimately lead to decreased quality of life and depression (Oni, Olagunju, Olisah, Aina, & Ojini, 2018), pointing toward the idea that strategies to identify and prevent depression and decreased quality of life can be an important part of a stroke TOC program.

Quality of Life

Assessing post-stroke quality of life is important in determining how a person's life is impacted. Important aspects of good quality of life include, energy/mood, mobility, language, and family and social roles (Bretz et al., 2014). Results from this project demonstrated that all participants had some degree of decreased mobility and all but one participant found social/family roles were also affected by their stroke. Stroke survivors encounter new challenges due to changes in quality of life. A correlation has been found linking a decreased quality of life to increase risk of depression.

Depression

As noted above, studies consistently demonstrate an association between depression and decreased quality of life in stroke survivors (Oni et al., 2018). Depression in stroke survivors is attributed to interpretation of disabilities, dependency on others, and an uncertain prognosis

regarding recovery in the acute phase (Oni et al., 2018). Long-term factors of depression include working status, insecurities of finances, and permanent dependency on others (Oni et al., 2018). Further, stroke survivors with post-stroke depression is associated with a decreased adherence to treatment, increase mortality, stroke recurrence, and reduced quality of life (Wang et al., 2018). This project revealed that three out of four of the participants had some form of depression. The use of a TOC program to screen stroke survivors for depression and provide management strategies can not only aid in adherence to treatment but may decrease stroke recurrence.

The goal of Specific Aim 2 was to describe the functional status of stroke survivors. The results from the project provided some evidence that all stroke survivors had some form of functional (physical and/or emotional) disability. The additional resources and education future stroke survivors could receive from a transitional care program might be beneficial to their quality of life, degree of disability, and depression.

Specific Aim 3

Readmission rates are highly scrutinized by the Center for Medicare and Medicaid Services, due to the fact that 30-day readmissions are related to unresolved issues at the time of discharge (Lee, Park, Shin, Ju, Choi, & Lee, 2018). The goal of Specific Aim 3 was to determine 30-day readmission rates in stroke survivors. Readmission rates are usually underreported due to patients going to different hospitals and incorrect admission diagnosis (Haynes, Gallek, Sheppard, Drake, & Ritter, 2015). However, a TOC program that involves a telephone intervention, such as this project, can provide accurate readmission rates. In this project, no participant was readmitted to the hospital within 30-days of discharge, although, the sample size

was small. However, with a larger sample size accurate readmission rates would be easy to collect.

Limitations

This study has several limitations with the main limitation being the small sample size, which has been discussed previously. Again, the low number of stroke admissions within the hospital contributed to the small sample size. It is possible that some stroke patients could have been triaged to the comprehensive stroke center or university hospital for possible higher level of intervention. Only 13 out of 25 patients approached consented to the project. Of the patients that did not consent, some family members believed the phone call would be too taxing on the stroke survivor and other patients had dementia and family was not willing to participate. It is unclear if the patients and family members completely understood the purpose and goals of the project. In addition, staff buy in was minimal and the PI did the majority of the recruitment. This could have contributed to the small sample size. Another limitation was reaching patients by phone. Reasons for this were due to wrong telephone numbers or no answer on multiple occasions.

Future Directions

The overall goal of this study was to evaluate a 30-day post discharge telephone intervention for stroke survivors, as an important first step in developing a stroke transition of care program. This project provided insight into the amount of retained education by stroke survivors. Educating patients during hospitalization may not be the optimal time for effective absorption and stroke survivors have reported discontent with the quantity and quality of information received from the hospital. Currently, at Northwest Medical Center a stroke booklet is given to each patient with a confirmed stroke. However, these booklets have generalized

information that does not pertain to every patient. This hospital would benefit from developing a stroke booklet with more specific information for stroke survivors. Future research is needed to determine the best time for education based on individualized patient needs. Stroke education needs can occur for up to two years after the initial stroke (Reeves et al., 2017). The needs are always changing and a future transitional care program must be flexible and adaptable to the individual needs of each patient. For future research on a developing a successful TOC program understanding the specific goals and buy-ins of the organization is crucial. Perhaps meeting with the organization throughout the enrollment process to address barriers will help with staff buy-in and recruitment of patients. Extension of the recruitment time may help achieve a higher sample size, as recruitment was originally scheduled for three months and extended for one more month, this may need to be longer. In addition, it may be helpful for future research to collect the specific location of each patients stroke and see if that correlates with different barriers faced. Based on this project and research, essentials elements for a stroke TOC program include: individualized education based on patient needs, resources for local neurologist, assessment of cognition, functional status, and depression, and community resources. With these elements the hospital may be able to evaluate the results of their program and make adjustments accordingly.

Recommendations to the Organization

In order for a future TOC program to be successful the organization should consider the following areas: follow-up facilitation, including phone calls as part of the program, individualizing education, and determining what their specific goals are for a TOC program. Facilitation of follow-up care for patients may need to be improve and by providing the patient with a list of local neurologist would be helpful or the addition of a neurology clinic to refer

stroke survivors to could expand the stroke program. Including follow-up phone calls as part of the stroke program can capture more patients and prevent patients from declining when there are already multiple things going on while in the hospital. Individualizing stroke survivor education with a revised stroke book and education specific to their stroke location would aid in knowledge of diagnosis. The organization may also benefit from asking the patient specifically “what do you need right now?” and “What do you need to understand your stroke?” These broad questions can give insight into a lot of issues that the patient may be experiencing that the SSQOL scale may not capture.

DNP Essentials

In 2006, the American Association of Colleges of Nursing established “The Essentials of Doctoral Education for Advanced Nursing Practice,” to help guide the Doctorate of Nursing Practice (DNP) education (AACN, 2006). The ‘DNP Essentials’ specify education is differentiated by completing a research project demonstrating the synthesis of doctoral work and knowledge, in addition to integrating research evidence to improve patient outcomes or clinical practice (AACN, 2006).

This project provides the stepping stones to the development of a TOC program using the knowledge gained throughout the doctoral program. The foundation of this project focused on evaluating stroke survivors well-being, optimal function, and how health status is affected by specific interventions, this aligns with ‘Essential I: Scientific Underpinnings for Practice’ (AACN, 2006). In alignment with this ‘DNP Essential,’ the translation of research knowledge gleaned from the DNP program was used to develop a new approach to the development of a TOC program.

‘DNP Essential II: Organizational and Systems Leadership for Quality Improvement and Systems Thinking’ describes the importance of improving patient and healthcare outcomes (AACN, 2006). This ‘DNP Essential’ focuses on target populations and their needs, and establishing delivery models for care that are feasible with the current organization perspectives (AACN, 2006). This study was developed to determine if a TOC program would improve patient and healthcare outcomes, aligning with this ‘DNP Essential.’ Extensive review of the literature provided evidence of a gap in care for stroke survivors, this research was used to guide the projects specific aims.

APPENDIX A:
TELEPHONE SURVEY

Telephone Survey

PI script: PI: Hi Mr./Mrs./Ms. _____, My name is _____ and I am calling to follow-up with you after discharge from NWMC in regards to your stroke. I want to thank you for your time. NWMC and I are partnering on a research study to evaluate whether telephone calls made by me is something you find helpful and may help impact future stroke survivors. You may choose not to participate in the study at any time, for any reason. Do you have any questions so far? If you choose to participate I will ask you several questions in order to understand your perception of your stroke and how you are doing now.

Did you understand education on your stroke during your hospital stay? If no, what don't you understand?

No Yes Explain: [Explanation]

Do you remember the specific type of stroke you had (location in the brain)? If no tell patient location

No Yes Explain: [Explanation]

Do you know what your personal risk factors are? If no tell patient risk factors, if yes have patient list risk factors

No Yes Explain: [Explanation]

Did you understand all of your discharge instructions? If no, what did you not understand?

No Yes Explain: [Explanation]

Did you understand why new medications were added or discontinued and why?

No Yes Explain: [Explanation]

Did you have any issues obtaining your new medications?

No Yes

Is there anything that I could have done ahead of time to have made your day more successful?

No Yes

Have you made any follow-up appointments with your primary care physician and a neurologist? If no, explain why.

No Yes Explain: [Explanation]

Did you have any barriers after discharge?

No Yes Explain: [Explanation]

What is one thing you wish you had when you were discharged?

APPENDIX B:
MODIFIED RANKIN SCALE

Modified rankin scale

Category	Score
No symptoms at all	0
No significant disability despite symptoms	1
Slight disability	2
Moderate disability, but able to walk without assistance	3
Moderate disability, but unable to walk without assistance	4
Severe disability	5

Legend: Modified Rankin Scale measures independence rather than performance of specific tasks. Scale consists of six grades from 0 to 5; 0 denotes no symptoms and 5 indicates severe disability. For clinical purpose, mild disability range is from 0 to 2; moderate disability ranges from 3 to 4 and 5 indicates severe disability.

[Source: Sulter G, Steen C, Keyser JD. Use of the Barthel Index and Modified Rankin Scale in acute stroke trials. *Stroke* 1999;30:1538-41].

APPENDIX C:
STROKE-SPECIFIC QUALITY OF LIFE

Stroke-Specific Quality of Life

	1 = strongly agree	2 = moderately agree	3 = neither agree nor disagree	4 = moderately disagree	5 = strongly disagree
I spent a lot of time in bed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I had to stop and rest during the day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I felt hopeless about my future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I slept more than I would like	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I had little interest in sex	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I was irritable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I was impatient with others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am not the same person I used to be	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I had to cut back on social activities outside my home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My physical condition interfered with my social life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I laughed or cried too easily	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I had trouble remembering things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	1 = strongly agree	2 = moderately agree	3 = neither agree nor disagree	4 = moderately disagree	5 = strongly disagree
Did you have trouble communicating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you have trouble understanding what other people say	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you lose your balance when walking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you feel unsteady when walking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you pull to one side while walking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you need help to get out of the chair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	1 = strongly agree	2 = moderately agree	3 = neither agree nor disagree	4 = moderately disagree	5 = strongly disagree
Did you have trouble swallowing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you have trouble controlling your urine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you have trouble controlling your bowels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you have trouble tying your shoelaces	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you have trouble dialing the telephone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you have trouble putting on socks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	1 = strongly agree	2 = moderately agree	3 = neither agree nor disagree	4 = moderately disagree	5 = strongly disagree
Did you have trouble reading	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you have trouble seeing things off to one side	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you need help to do regular work around the house	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you need help to do the shopping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you need help taking care of personal jobs, for example, paying bills, going to the bank, making appointments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

APPENDIX D:
PATIENT HEALTH QUESTIONNAIRE-2

Patient Health Questionnaire-2

Over the past two weeks have you often been bothered by any of the following	Yes	No
Do you have little interest or pleasure in doing things	<input type="checkbox"/>	<input type="checkbox"/>
Do you feel down depressed or hopeless	<input type="checkbox"/>	<input type="checkbox"/>
Dependability	<input type="checkbox"/>	<input type="checkbox"/>

The patient answered yes to both questions in PHQ– Two. Use PHQ– nine to determine severity of depression

APPENDIX E:
PATIENT HEALTH QUESTIONNAIRE-9

Patient Health Questionnaire-9

Over the past two weeks have you often been bothered by any of the following	Not at all= 0	Several days= 1	More than half the days= 2	Nearly every day= 3
little interest or pleasure in doing things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
feel down depressed or hopeless	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trouble falling or staying asleep, or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feeling tired or having little energy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poor appetite or over eating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feeling bad about yourself or that you are a failure or have let yourself or your family down	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trouble concentrating on things such as reading the newspaper watching television	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Moving or speaking so slow that other people could have noticed. Or the opposite being so fidgety or restless that you've been moving around a lot more than usual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thought that you would be better off dead, or of hurting yourself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Interpretation of total score

Depression severity:

Minimal depression: 1– 4

Mild depression: 5-9

Moderate depression: 10-14

Moderately severe depression: 15-19

Severe depression: 20-27

APPENDIX F:

GET WITH THE GUIDELINES STROKE 30 DAY PATIENT FOLLOW-UP FORM

GET WITH THE GUIDELINES STROKE 30 DAY PATIENT FOLLOW UP FORM

Today's date:	Source of Information:	
FOLLOW UP INFORMATION		
<input type="checkbox"/> Patient <input type="checkbox"/> Caregiver <input type="checkbox"/> Chart review	30-day post discharge date //	Date of hospital discharge //
	Date of hospital admission //	

POST DISCHARGE INFORMATION			
Patient location 30 days post discharge <input type="checkbox"/> home <input type="checkbox"/> hospital or acute care facility <input type="checkbox"/> short term rehab <input type="checkbox"/> chronic health care facility <input type="checkbox"/> unknown	Died within 30 days of discharge <input type="checkbox"/> Yes <input type="checkbox"/> No	Died within 30 days of admission <input type="checkbox"/> Yes <input type="checkbox"/> No	Cause of death <input type="checkbox"/> Cerebrovascular accident <input type="checkbox"/> Cardiovascular <input type="checkbox"/> Non-vascular <input type="checkbox"/> Unknown
Hospitalizations within 30 days of discharge <input type="checkbox"/> Yes <input type="checkbox"/> No	Reason for rehospitalization <input type="checkbox"/> Cerebrovascular <input type="checkbox"/> Cardiovascular <input type="checkbox"/> Unknown <input type="checkbox"/> Non-cardiovascular	Modified Rankin Score post discharge:	Modified Rankin Score at discharge:

APPENDIX G:
FLYER

HAVE YOU OR YOUR LOVED ONE SUFFERED FROM A STROKE?

**Ask your nurse about
the transition of care
study for stroke
patients**

**INCLUDES PATIENTS WITH CURRENT
STROKE WHO ARE 18 YEARS OF AGE AND
ENGLISH SPEAKING**

PATIENTS ENROLLED WILL RECEIVE THE FOLLOWING:

Phone call 30 days after discharge from the principal investigator to discuss knowledge of education, quality of life, and much more.

**PARTICIPATION
WILL HELP
IMPROVE
FUTURE STROKE
PATIENTS CARE
AND
CORRDINATION
AFTER
DISCHARGE**

APPENDIX H:
PARTICIPATION FORM

PARTICIPATION FORM		
PARTICIPANT INFORMATION		
Name:		
Telephone:	Secondary telephone:	Date of admission:
Date of Discharge:		

APPENDIX I:
NEUROLOGY UNIT STAFF EMAIL

Neurology Unit nurses,

The unit will be participating in a study conducted by myself Alicia Jarrell, a University of Arizona Doctorate of Nursing Practice student. This study will entail enrolling stroke patients who are 18 years and older and English speaking. The purpose of the study is to evaluate a 30-day post discharge telephone intervention for stroke survivors and their caregivers. The specific aims are:

Aim 1: Determine stroke knowledge among survivors and/or their caregivers (knowledge of diagnosis, risk factors, medications, follow up appointments)

Aim 2: Determine stroke survivor functional status (degree of physical disability, quality of life, depression)

Aim 3: Determine readmission rates.

This study will provide the Northwest Medical Center's stroke program with valuable insight into their stroke program and the data obtained may be used to improve patient care and experience. Raffle tickets will be given to nurses who enroll patients into the program and at the end a name will be drawn and the winner will receive a special prize (gift card).

If you have any questions regarding the study please feel free to contact Alicia Jarrell at (623)313-7731 Monday-Friday 8-5 or aliciahobert@email.arizona.edu at any time.

Thank you for your time
Alicia Jarrell

APPENDIX J:
SCRIPT FOR NURSES TO CONSENT PATIENT

Our neurology unit has been chosen as the site of a doctorate project for a doctorate of nursing practice (DNP) student at the University of Arizona. The purpose of this program evaluation is gain knowledge from patients on their stroke knowledge, functional status, and readmission rates. Your participation in this program evaluation will provided valuable information to not only improve the stroke program at northwest but also improve your knowledge of your stroke and receive resources for help outside the hospital. By signing the provided disclosure form you will be consenting to receiving a telephone call 30 days after discharge and answering questions about your stroke and quality of life post stroke. At any time you can withdrawal this program evaluation with no negative effects.

APPENDIX K:
DISCLOSURE FORM

A telephone intervention for ischemic stroke and transient ischemic attack patients to support transitions of care

Alicia Jarrell

The purpose of this program evaluation is to determine if a transition of care program can help improve the stroke program at Northwest Medical Center and help stroke survivors like yourself with outside resources and prevention of barriers after discharge.

If you choose to take part in this program evaluation, you will receive a telephone call about 30 days after your discharge from the hospital. During this phone call you will be asked questions about your stroke and your knowledge on your type of stroke, risk factors, medications, follow-up appointments, and potential barriers you may have come across. In addition, questions about quality of life and symptoms of depression will be asked. It will take about 25 minutes to complete all the questions. There are no foreseeable risks associated with participating in this program evaluation and you will receive no immediate benefit from your participation. Survey responses are anonymous.

If you choose to participate in the program evaluation, participation is voluntary, refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may decline participation at any time from the program evaluation. You may also skip any questions that you do not want to answer. By participating, you do not give up any personal legal rights you may have as a participant in this program evaluation.

For questions, concerns, or complaints about the program evaluation, you may contact the PI, Alicia Jarrell, RN, BSN, DNP Student at Aliciahobert@email.arizona.edu

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