NURSE-DRIVEN SPIRITUAL CARE REFERRALS FOR POSTSTROKE DEPRESSION

Polly Kanoy

A dissertation submitted to the faculty at the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Doctor of Nursing Practice in the School of Nursing.

Chapel Hill
2021

Approved by:

Leslie Sharpe

Susan E. Wilson

Lixin Song

ABSTRACT

Polly Kanoy: Nurse-Driven Spiritual Care Referrals for Poststroke Depression
(Under the direction of Dr. Leslie Sharpe)

Poststroke depression (PSD) is a common complication after a stroke that frequently goes undertreated, leading to poor health outcomes. These patients often face a sudden change in self-identity, finding discrepancies between their pre-/post-stroke self, which significantly correlates with depressive symptoms and spiritual distress.

The aim of this quality improvement (QI) project was to create a sustainable process for improving access to spiritual care as a holistic component of PSD treatment by (1) identifying stroke patients with an elevated Patient Health Questionnaire-9 (PHQ-9) depression screening score, (2) initiating a referral to a chaplain for those with a PHQ-9 score of ≥5, and (3) evaluating staff nurse satisfaction with the protocol.

This project uses a pre-/post-test quasi-experimental design. The staff nurses of a 32-bed stroke unit in an academic medical center placed spiritual care referrals for all adult patients with a stroke diagnosis and a PHQ-9 score of ≥5 during admission. Outcomes were measured using the number of completed PHQ-9 screenings, PHQ-9 scores, the number of spiritual care referrals made, and evaluation of nurse satisfaction with the referral protocol. Goals included an improvement in the PHQ-9 screening rate from 62.4% to ≥80%, a referral rate of ≥80%, and that the nurses would find the protocol easy to implement and meaningful for patients.

Over the 13-week implementation period, 108 of 121 eligible patients had completed PHQ-9 screenings for a rate of 89.3%, a statistically significant improvement (p<0.0001). 87%

of patients with a PHQ-9 score of ≥5 had a spiritual care referral placed. Of the 15 nurses who responded to the post-implementation survey, 100% agreed that the protocol was easy to implement and that chaplain visits were meaningful experiences for patients.

This project demonstrated how an inpatient neuroscience unit could successfully implement a referral protocol for spiritual care in response to PHQ-9 screenings of adult stroke patients. Elements of success included a standardized screening and referral protocol, an electronic medical record that supported the screening tool, and the simplicity of placing referrals without a provider co-sign. In addition, nurses were supportive, and their engagement informed changes that led to recommendations for long-term sustainability.

“I don’t feel very much like Pooh today,” said Pooh.
“There, there,” said Piglet. “I’ll bring you tea and honey until you do.”
- *A. A. Milne*

ACKNOWLEDGEMENTS

I have received a tremendous amount of support throughout the planning and implementation of this DNP project. I would like to express my deep gratitude to my committee members. I would like to acknowledge and thank Dr. Leslie Sharpe for her gentle encouragement and steady optimism, Dr. Susan Wilson for her guidance and dedication, and Dr. Lixin Song for her insightful and meticulous feedback along the way. You all pushed me to think deeply and critically, which transported my work to a higher level. It was a tumultuous year, and I could not have done this without you.

I would like to acknowledge the incredible staff and leadership of 6NSH at UNC Medical center and the UNC Stroke Program, including Nicole Burnett, Crystal Norton, Joyce Kern, and David Baker. I would like to thank you all for the opportunity to implement this project and your unwavering support. I appreciate your enthusiasm and belief in this project as a meaningful means of supporting stroke survivors with depression. I am also grateful to the Pastoral Care Department of UNC Medical Center. Specifically, I would like to thank Rabbi Brian Nelson for his insight into what it means to be a chaplain in health care. I would also like to thank chaplains Michelle Hayes and Andrew Kang for their support and for taking the time to meet with me and the staff nurses of 6NSH as a means of intentional relationship building in preparation for rolling out this spiritual care referral protocol.

In addition, I would like to thank my parents, Kent Kanoy and Chris Kanoy, for their unconditional love and for always supporting and encouraging me through every endeavor.

Without you, none of this would have been possible. I would like to thank my sister, Stephanie Trueblood, and my soul sister, Tiffani Mascarella, for providing time and space when I needed an empathetic ear. I would not have made it through this program without the love and support of my friends, especially my morning crew, who provided lighthearted conversations, happy distractions, big lifts, and lots of laughter during a uniquely challenging year. Lastly, I would like to express my sincere gratitude to my friend, David Belknap, for keeping me accountable, encouraging me to make quantifiable goals, and showing support when I needed it most. Let's go.

TABLE OF CONTENTS

LIST OF FIGURES xi

LIST OF TABLES xii

LIST OF ABBREVIATIONS xiii

CHAPTER 1: INTRODUCTION 1

Background and Significance 2

Purpose of Project 3

CHAPTER 2: REVIEW OF LITERATURE 5

Literature Search Strategy 5

Inclusions/Exclusion Criteria 5

Results 5

Scope of the Problem and Current Practice of Pastoral Care 6

Critical Appraisal of the Published Studies 13

Conclusion 16

CHAPTER 3: THEORETICAL FRAMEWORK 18

Theory: Problem and Planned Intervention 18

The ADKAR Model for Change Management 19

Application of ADKAR Change Management Model to the DNP Project 20

CHAPTER 4: METHODOLOGY 22

Design 22

Ethical Considerations 22
Setting and Population 23
PSD Screening Tool 23
Project Implementation 24
Outcome Measures 30
Data Collection 30
Communicating Results 31
Anticipated Facilitators for Project Implementation 32
Anticipated Barriers for Project Implementation 32
CHAPTER 5: RESULTS 36
Sample Characteristics 36
PHQ-9 Baseline Data 39
Post-Implementation PHQ-9 Screening Rate 39
Rates of Staff Nurses' Documentation of PHQ-9 Depressions Screening 40
Pastoral Care Referral Rates and Chaplain Visits 43
Staff Nurse Satisfaction and Attitudes Regarding PSD Protocol 45
Chaplains' Experiences with PSD Protocol 47
CHAPTER 6: DISCUSSION 49
PHQ-9 Screening Rate 49
Pastoral Care Referral in Setting of PSD 50
Staff Nurses' and Chaplains' Feedback Regarding PSD QI Project 50
Recommendations for Future Practice 53
Limitations 54

Goals of Dissemination 57

Conclusion 58

APPENDIX A: SITE LETTERS OF SUPPORT 59

APPENDIX B: IRB LETTER OF EXEMPTION 62

APPENDIX C: PHQ-9 SCREENING TOOL 64

APPENDIX D: SAMPLE SCRIPT 66

APPENDIX E: NURSING SATISFACTION QUESTIONNAIRE 67

APPENDIX F: CHAPLAIN EXPERIENCE QUESTIONNAIRE 68

REFERENCES 69

LIST OF FIGURES

Figure 3.1 – ADKAR Model of Change Management 19

Figure 5.1 – PDSA Run Chart of PHQ-9 Depression Screening Rates 42

Figure 5.2 – PHQ-9 Screening Rate Comparison by Month and Year 42

Figure 5.3 – PDSA Run Chart of Pastoral Care Referral Rates 44

Figure 5.4 – Pastoral Care Referral Rate by Month 45

Figure 5.5 – Nurse Responses Concerning Attitudes and Satisfaction with Pastoral Care Consult Protocol (n = 15) 46

Figure C.1 – PHQ-9 Screening Tool 64

Figure C.2 – PHQ-9 Depression Screening in Hospital EMR 65

LIST OF TABLES

Table 5.1 – Individual Characteristics of Patients Eligible for PHQ-9 Depression Screening..... 38

Table 5.2 – Baseline PHQ-9 Screening Completion Rates..... 39

Table 5.3 – PHQ-9 Screening Rate and Pastoral Care Referral Rate Results with Recommended Revisions to Project by PDSA Cycle..... 41

Table 5.4 – PHQ-9 Depression Screening Comparison with Fisher's Exact Test (One-Tailed)..... 43

Table 5.5 – Visits with Chaplain per Patient with Pastoral Care Referral Placed..... 45

LIST OF ABBREVIATIONS

AHA	American Heart Association
AIS	Acute Ischemic Stroke
ASA	American Stroke Association
COVID-19	SARS-CoV-2
DNP	Doctor of Nursing Practice
EMR	Electronic Medical Record
FACIT-Sp	Functional Assessment of Chronic Illness Therapies-Spiritual
GDS	Geriatric Depression Scale
ICH	Intracerebral Hemorrhage
ICU	Intensive Care Unit
ISCU	Intermediate Surgical Care Unit
IHI	Institute for Healthcare Improvement
IRB	Institutional Review Board
NIHSS	National Institute of Health Stroke Scale
NRC	Nursing Research Council
NSICU	Neuroscience Intensive Care Unit
PANAS	Positive and Negative Affect Schedule
PCC	Primary Care Chaplaincy
PDSA	Plan-Do-Study-Act
PHQ-9	Patient Health Questionnaire-9
PSD	Poststroke Depression
QI	Quality Improvement

RN	Registered Nurse
SAH	Subarachnoid Hemorrhage
TIA	Transient Ischemic Attack
UNC	University of North Carolina
WEMWBS	Warwick-Edinburgh Mental Well-being Scale

CHAPTER 1: INTRODUCTION

A stroke occurs roughly every 40 seconds in the United States, leading to approximately 600,000 new stroke cases each year (Dar et al., 2017). Depression is the most frequent manifestation of mental illness seen in stroke survivors (Dar et al., 2017). Nearly one-third of stroke survivors are affected by poststroke depression (PSD) compared to 5-15% of the adult population without stroke (Towfighi, 2017). PSD frequently goes unrecognized and has significant adverse impacts on functional recovery, cognition, rehabilitation, and quality of life (Dar et al., 2017; Hackett & Pickles, 2014; Towfighi et al., 2017). Those with PSD are at an elevated risk of recurrent vascular events and mortality, including suicide. (Dar et al., 2017; Hackett & Pickles, 2014; Towfighi et al., 2017). PSD is associated with higher healthcare use rates, including a more extended hospital stay and increased consumption of inpatient and outpatient services within the first year of the acute stroke event (Towfighi et al., 2017).

PSD reduces the motivation to receive treatment and participate in physical therapy, limiting a person's ability to recover (Dar et al., 2017; Towfighi, 2017). Therefore, it is essential to identify PSD early in the trajectory and initiate appropriate interventions to reduce the morbidity and disability associated with it (Dar et al., 2017; de Man-van Ginkel et al., 2010).

Past psychiatric history, family history of depressive disorders, and social isolation increase the risk of depression following stroke (Dar et al., 2017; Towfighi et al., 2017). However, poststroke depression is likely multifactorial, and evidence suggests an association between the psychological distress of new disability, poststroke stress factors, and depression (Dar et al., 2017; Towfighi et al., 2017). Patients with PSD also face a sudden change in self-

identity, finding discrepancies between their pre-stroke and post-stroke self, which significantly correlates with depression and spiritual distress (Lapadatu & Morris, 2019; Pai et al., 2019).

Although there is little research, existing evidence shows that spirituality plays an important role in positive physical and mental health outcomes (Wilson et al., 2017). After suffering a life-threatening event like a stroke, people tend to have a greater awareness of how fragile life can be and how quickly their ability to function independently is compromised. With this physical loss, there is a need to seek wholeness independent of their physical condition. They may benefit from a greater spiritual resilience to cope with the distress that comes with this sudden shift from a normal life (Macdonald, 2017). Chaplains often draw on narrative models of compassionate communication, which evidence shows to be effective in re-establishing identity and meaning, which can lead to improved emotional responses and reduce depressive symptoms in adults experiencing PSD (C. Ellis-Hill, Payne, & Ward, 2008; C. S. Ellis-Hill & Horn, 2000; Emery, 2013; Kirkevold, Bronken, Martinsen, & Kvigne, 2012; Risk, 2013). Supplementing holistic stroke care by focusing on poststroke spiritual well-being to alleviate the psychological distress of PSD could serve as a beneficial support mechanism in the care of these patients (Wilson et al., 2017).

Background and Significance

In 2017, an observational study at an academic medical center in the Southeastern United States found between 33-55% of admitted stroke patients had a positive Patient Health Questionnaire-9 (PHQ-9) depression screening (Wilson, 2017). The research study included transient ischemic attack (TIA), ischemic stroke, hemorrhagic stroke, and subarachnoid hemorrhage (SAH). The current standard of practice at this facility requires nurses to administer a PHQ-9 screening for all patients diagnosed with stroke within 24 hours of admission. If

appropriate, a provider from the neurology team will then prescribe antidepressant medication. There is no standard procedure for nursing to initiate spiritual care services for these patients as a component of PSD treatment.

Nurses highly value chaplains and tend to view them as integral members of the health care team (Bone et al., 2017; Purvis, 2019). However, there is a lack of understanding surrounding the unique skillset of the chaplain and how they can apply these skills with patients outside of the quintessential roles involving prayer, ritual, grief, loss, and death (Galek et al., 2007; Kim et al., 2017). Kim et al. (2017) suggest that intentional relationship building between nurses and chaplains may enhance understanding of the chaplain role, improving pastoral care service utilization through referral for issues not traditionally considered within the chaplain's scope. Therefore, directly involving the chaplain in a more meaningful and consistent manner can be an efficient strategy for providing excellent whole-person care to address the emotional and spiritual concerns of patients with PSD.

Purpose of Project

The Doctor of Nursing Practice (DNP) student identified gaps in nurses' clinical practice connecting patients experiencing PSD with spiritual resources, which may be related to a gap in knowledge surrounding the chaplain's many roles in the hospital. Therefore, an important aspect of this project was to provide teaching to the staff that enhances understanding of a chaplain's skills that can be applied to this population.

The purpose of this project was to improve access to spiritual care in the acute setting as a holistic component of PSD treatment by implementing a nurse-driven protocol to prompt a referral to pastoral care. The nurse will place an order for referral for any adult stroke patient who screens positive for depressive symptoms, using a PHQ-9 score of 5 or greater. The desired

outcomes of this quality improvement (QI) project included an improvement in the PHQ-9 screening rate from 62.4% in March-May 2020 (UNC Health, 2020) to ≥80%, and the rate of pastoral care referrals placed for qualifying patients would be ≥80%.

CHAPTER 2: REVIEW OF LITERATURE

Literature Search Strategy

An electronic search of studies was conducted using the following databases: PubMed, CINAHL, PsycINFO, and Google Scholar. A scoping review was performed by searching for keywords in multiple combinations and variations. These keywords included stroke, depression, depressive, poststroke depression, PHQ-9, pastoral, chaplain, chaplaincy, pastoral, spirituality, well-being, counseling, nurse, nursing, perception, efficacy, outcome, identity, narrative, intervention, change, framework, model, theory, theories, and theoretical. Reference lists of all articles were reviewed for pertinent references otherwise missed through electronic search.

Inclusion/Exclusion Criteria

Only articles available in English were included in the database search; no other limitations were set. Inclusion criteria included: adults (age ≥18), diagnosis of stroke or other permanent neurological deficits, and intervention included pastoral care services. Exclusion criteria included: pediatric (age <18), acute illness, and transient disability. A total of 40 articles were reviewed, of which 22 were excluded.

Results

Eighteen articles met the inclusion criteria and thus were included in this review. These articles include: (1) one systematic review of quantitative studies (Pai et al., 2019), (2) one meta-analysis (Hackett & Pickles, 2014), (3) one non-randomized control trial (Baker, 2000), (4) one systematic review of qualitative studies (Lamb et al., 2008), (5) ten cross-sectional, observational studies (Cunningham et al., 2017; Flannelly et al., 2003; Galek et al., 2007; Koenig et al., 1991;

Lapadatu & Morris, 2019; Macdonald, 2017; Purvis et al., 2019; Weinberger-Litman et al., 2010; Wilson et al., 2017; Wilson, 2017), and (6) two phenomenological qualitative studies (Bone et al., 2018; Kim et al., 2017). Two scientific statements published by the American Heart Association (AHA) and the American Stroke Association (ASA) were also included (Holloway et al., 2014; Towfighi et al., 2017). Amid the literature, the following themes emerged: (1) prevalence and incidence of PSD, (2) screening and treatment for PSD, (3) stroke, identity, and psychological distress, (4) the relationship between stroke, depression, and spirituality, (5) inpatient perceptions of pastoral care services, (6) nursing perceptions of pastoral care services, and (7) efficacy of pastoral care intervention in depression.

Scope of the Problem and Current Practice of Pastoral Care

Prevalence and Incidence of PSD

Poststroke depression is common. Pooled data show that 31% of stroke survivors experience depression at any point in time up to five years after the stroke event (Hackett & Pickles, 2014). Yet many of these studies only enrolled ischemic stroke subjects and did not include all stroke types thus presuming a higher percent of PSD in the stroke population as a whole. Depression affects 5% of stroke survivors at two to five days poststroke and 84% at three months poststroke (Hackett & Pickles, 2014). Thirteen percent of those who experienced a stroke meet the Diagnostic and Statistical Manual of Mental Disorders criteria for major depression within six weeks of the event (Hackett & Pickles, 2014).

Screening and Treatment for PSD

The pathophysiology of PSD is not well understood but is likely multifactorial with biological and psychosocial components. The AHA and ASA recommend routine screening of all stroke patients to detect PSD as long as there are processes for accurate diagnosis, prompt

treatment, and follow-up availability (Towfighi et al., 2017). The PHQ-9 depression screening has a sensitivity of 0.86 (5% CI, 0.55-0.92) and specificity of 0.79 (95% CI, 0.62-0.92) in the stroke population (Towfighi et al., 2017). A meta-analysis by Hackett et al. (2008) reviewed 12 clinical trials (n=1121) that suggest antidepressants are an effective pharmacological treatment for PSD (as cited in Towfighi, 2017). Seven studies (n=775) show that brief psychosocial interventions, such as counseling and behavioral therapy, are beneficial and effective (Towfighi, 2017). Patients tended to benefit from repeated exposure to the psychosocial intervention over time, ranging from four weeks to six months (Towfighi et al., 2017). Effect on poststroke depressive symptoms was measured two months to twelve months post-intervention across all studies (Towfighi et al., 2017).

Stroke, Identity, and Psychological Distress

Two studies showed evidence that after a stroke, adults face a sudden change in self-identity that correlates with decreased mood and increased psychological distress (Lapadatu & Morris, 2019; Pai et al., 2019). Lapadatu & Morris (2019) found that the discrepancy between pre-stroke self and post-stroke self (p<0.00) and the discrepancy between post-stroke self and ought self (how the person feels they should be; p<0.05) were significantly correlated with depression. Pai et al. (2019) asserted that post-stroke change in identity has a significant positive correlation with depression (pooled z-value=0.442, 95% CI=0.349).

Relationship Between Stroke, Depression, and Spirituality

A systematic review of qualitative literature and an observational cohort study explored the relationship between stroke, depression, and spirituality (Lamb et al., 2008; Wilson et al., 2017). Results were measured using validated screening tools and scales to measure depressive symptoms, spiritual well-being, and mood. Wilson et al. (2017) sought to describe the

relationship between spiritual well-being and depression after spinal cord injury with permanent neurological deficit. Data were obtained via in-person or phone interview by a trained evaluator who used the PHQ-9 to measure likely depression, the Functional Assessment of Chronic Illness Therapies-Spiritual (FACIT-Sp) to measure spiritual well-being, and the 10-item mood scale Positive and Negative Affect Schedule (PANAS) to measure positive and negative affect (Wilson et al., 2017). Lamb et al. (2008) explored 27 qualitative studies evaluating the psychosocial and spiritual experiences of elderly persons (mean age 65) who have experienced a stroke. Data were extracted using the Qualitative Assessment and Review Instrument. Researchers aggregated 165 study findings into 20 categories, grouped under four synthesis topics: connectedness, reconstructing life, life-altering event, and sudden unexpected event (Lamb et al., 2008).

Depression, as determined by PHQ-9, positively correlated with the PANAS ($p < 0.0005$) and negatively correlated with the FACIT-Sp ($p = 0.01$) (Wilson et al., 2017). Lamb et al. (2008) identified psychosocial themes including spiritual connection and connectedness to others, which play a positive role in poststroke recovery. Both studies demonstrated an inverse association between spiritual well-being and psychological distress. The AHA and ASA assert that it is reasonable to provide referrals to chaplains in the care of stroke patients as a spiritual or existential crisis is common poststroke (Holloway et al., 2014). Chaplains have the training necessary to explore meaning, deal with suffering, and help the patient elicit their inner strength (Holloway et al., 2014).

Inpatient Patient Perceptions of Pastoral Care Services

A mixed-methods cross-sectional study examined the value patients place in chaplains who have been integrated into hospital medical teams (Cunningham et al., 2017). They found

that admitted hospital patients view chaplain visits as very positive (mean for all items on 12-item Likert scale = >4.14) regardless of spiritual or religious beliefs. 79.4% of participants would have liked to have regular visits from the chaplain. The only significant difference found was between those who wanted regular visits (n=151) and those who did not want regular visits (n=38) with respect to whether or not the chaplain met spiritual needs, met emotional needs, contributed to healing during their stay, or improved quality of medical care received (Cunningham et al., 2017).

Health Care Professionals' Perceptions of Pastoral Care Services

There appears to be an inadequate understanding of the chaplain's role by health care professionals (Galek et al., 2007; Kim et al., 2017). In a cross-sectional study, Galek et al. (2007) surveyed medical directors (n=278), nursing directors (n=230), social workers (n=229), and pastoral care directors (n=470) across many acute inpatient facilities to analyze referral patterns to chaplain services. Investigators distributed questionnaires asking participants to rate the importance of referring to pastoral care for specific issues. Pastoral care directors gave importance ratings that were significantly higher than those offered by directors of medicine, nursing, and social services regarding treatment issues (p<0.001), pain and depression (p<0.001), anxiety and anger (p<0.001), and loss, death, and meaning (p<0.001). These findings illustrate a lack of understanding on the part of health care professionals concerning the capacity chaplains possess to skillfully intervene and substantially help patients with various psychological and spiritual problems other than loss, grief, and poor prognosis.

Literature supports the notion that nurses value chaplains highly and believe that they play an essential role on the health care team (Bone et al., 2018; Purvis et al., 2019). Ninety-one percent of the surveyed staff of a neuroscience intensive care unit (NSICU) regarded chaplains as

integral members of the health care team and believed that pastoral care improves the patient's quality of care (Purvis et al., 2019). Kim et al. (2017) conducted individual interviews and focus groups of intensive care unit (ICU) nurses (n=31) exploring their experience with spiritual care for the critically ill. One underlying theme they uncovered is that nurses view the chaplain's role as a spiritual advisor who listens to, counsels, provides physical touch, and prays with patients and their families in times of distress and illness (Kim et al., 2017). Purvis et al. (2019) found that nurses are more likely than other disciplines to believe that chaplains enhance the quality of patient care (p=0.032). Bone et al. (2018) conducted semi-structured interviews of ICU nurses (n=25) at an acute care facility seeking to understand their experiences in making referrals for spiritual care. Nurses tended to view chaplains as playing a key role on the health care team by providing an individualized, skillful approach for supporting patients regardless of the patient's faith or belief system (Bone et al., 2018). There was also a sense of relief for nurses knowing that the chaplain was present and available to help them support and comfort their patients emotionally and spiritually (Bone et al., 2018).

Pastoral Care Referral Patterns of Health Care Professionals

Three cross-sectional studies determined that nurses referred to pastoral care services far more often than any other discipline in the acute care setting (Flannelly et al., 2003; Koenig et al., 1991; Purvis et al., 2019). Professional chaplains collected data via chart review using a standardized checklist (n=3570) showing 82.3% of all staff referrals to pastoral care in the first year of study and 82.6% of all staff referrals to pastoral care in the third year of study were placed by nurses (Flannelly et al., 2003). This demonstrated a significant increase in referrals ordered by nursing (p<0.01) across the three-year study period (Flannelly et al., 2003). Purvis et al. (2019) surveyed the staff (n=65) of an NSICU where it was determined that 84% of those

who had made referrals to pastoral care services were nurses rather than healthcare professionals from other disciplines (physicians or social workers).

Nurses are most likely to make referrals to pastoral care in situations long deemed to be traditional for the chaplain's role: poor prognosis, imminent death, and for those with strong religious beliefs (Kim et al., 2017; Weinberger-Litman et al., 2010). A cross-sectional study surveying nursing staff found that nurses (n=133) were most likely to make referrals for family issues such as goals of care discussions, grief, and death (Cronbach-a=0.59) (Weinberger-Litman et al., 2010). Still, others refer when a patient needs comfort from someone who can listen to them uninterrupted for an extended period, a role unique to the chaplain in an acute care setting (Bone et al., 2018).

Efficacy of Pastoral Care Intervention in Depression

One prospective non-randomized control trial (Baker, 2000) and one retrospective observational study (Macdonald, 2017) reported that pastoral care interventions effectively treat depression in adults of the general population. Both studies showed pastoral care intervention to improve depressive symptoms with no significant difference from antidepressant treatment (Baker, 2000; Macdonald, 2017).

In a prospective non-randomized control trial, Baker (2000) implemented a weekly chaplain visit lasting 30-60 minutes for six months in three subgroups: depression group (n=40), risk for depression group (n=40), and healthy group (n=40). All subjects in the depression subgroup were taking either an anti-anxiety or antidepressant medication (Baker, 2000). Participants were matched relative to age, gender, and level of care within each subgroup, then designated to either the treatment group or the control group (Baker, 2000). Depressive symptoms were measured using the Geriatric Depression Scale (GDS) pre-intervention, post-

intervention, and at a three-month follow-up (Baker, 2000). Baker (2000) found that the difference in pre-intervention and post-intervention GDS scores for those in the treatment group with clinical depression (GDS >10) showed greater improvement (a reduction in score) than those in the control group with clinical depression, though not statistically significant. Still, the difference in pre-intervention and post-intervention GDS scores for all subgroups who received chaplain visits (mean=–1.06) was significantly greater (p=0.049) than all subgroups assigned to the control group (mean=0.65). In addition, researchers noted that the treatment group subjects on medication did not appear to respond differently to the pastoral care intervention than the treatment group subjects who were at risk for depression and not taking medication (Baker, 2000).

In a retrospective study, the effectiveness of a primary care chaplaincy (PCC) intervention was evaluated as a treatment for depression compared to those treated with antidepressant medications only. Those referred to PCC were seen within a week for up to one hour and the number of appointments varied (Macdonald, 2017). Mental well-being was measured using the Warwick-Edinburgh Mental Well-being Scale (WEMWBS). Although has not been validated in diagnosing depression, the WEMWBS demonstrated a strong inverse correlation with the Center for Epidemiologic Depression Scale – a gold standard tool for depression screening (Donatella, 2012; Macdonald, 2017). Macdonald (2017) found that both the PCC group (p<0.0001) and the control group treated with antidepressants (p<0.0001) showed significant improvement in WEMWBS scores.

Critical Appraisal of the Published Studies

Strengths

One scientific statement (Towfighi et al., 2017), one systematic review (Hackett & Pickles, 2014), and three of these studies (Baker, 2000; Holloway et al., 2014; Pai et al., 2019) are considered to be high-quality evidence, ranging from level I to III, using a modified rating system for the hierarchy of evidence (Guyatt & Rennie, 2002, as cited in Melnyk & Fineout-Overholt, 2011). Thirteen of the studies are of moderate-quality evidence ranging from level IV to VI using a modified rating system for the hierarchy of evidence (Guyatt & Rennie, 2002, as cited in Melnyk & Fineout-Overholt, 2011), but have demonstrated rigor in methodology, which lends them strength (Bone et al., 2018; Cunningham et al., 2017; Flannelly et al., 2003; Galek et al., 2007; Kim et al., 2017; Koenig et al., 1991; Lamb et al., 2008; Lapadatu & Morris, 2019; Macdonald, 2017; Purvis et al., 2019; Weinberger-Litman et al., 2010; Wilson et al., 2017; Wilson, 2017). However, none of the studies included in the literature review can establish causation.

The majority of the studies were well-powered, exceeding sample size requirements calculated to complete meaningful research (Baker, 2000; Cunning et al., 2017; Flannelly et al., 2003; Galek et al., 2007; Macdonald, 2017; Wilson et al., 2017). The two qualitative studies collected data until theme saturation was reached (Bone et al., 2018; Kim et al., 2017).

Lamb et al. (2008) and Hackett & Pickles (2014) reviewed 27 and 61 studies, respectively, demonstrating extensive review. The AHA/ASA appointed experts from multiple disciplines to perform a scoping review of the literature, including clinical studies, clinical practice guidelines, authoritative statements, and expert opinions, to create a scientific statement outlining recommendations for the assessment, treatment, and prevention of PSD (Towfighi et

al., 2017). Two phenomenological qualitative studies expressed a detailed understanding of the nurse's experience with chaplains and the referral process for pastoral care (Bone et al., 2018; Kim et al., 2017). No harm was inflicted across all studies.

Limitations of the Literature

Setting. Purvis et al. (2019) surveyed the staff of a neuroscience ICU. Four studies were implemented on an outpatient basis rather than inpatient (Baker, 2000; Lapadatu & Morris, 2019; Macdonald, 2017; Wilson et al., 2017). In addition, the systematic review conducted by Pai et al. (2019) only included studies from an outpatient or community setting. The studies in this review did not investigate whether a moderating variable may exist between illness representation and psychological distress (Pai et al., 2019). In another systematic review, Hackett & Pickles (2014) included studies in both inpatient and outpatient settings.

Nine studies are limited in generalizability as studies took place in a single institutional setting (Bone et al., 2018; Cunningham et al., 2017; Flannelly et al., 2003, Kim et al., 2017; Koenig et al., 2019; Macdonald, 2017; Purvis et al., 2019; Weinberger-Litman et al., 2010, Wilson, 2017).

Sample. Hemorrhagic stroke, SAH, and TIA populations were underrepresented in the literature. Of the 61 studies reviewed by Hackett & Pickles (2014), 12 studies excluded SAH, nine studies included only ischemic stroke diagnoses, and 26 studies only included individuals with first-ever stroke. Although Wilson (2017) did not exclude a diagnosis of SAH or TIA, there was a minimal number represented in the sample. Patients with a diagnosis of TIA often complete medical evaluation in the emergency department and are not typically admitted for inpatient care.

Lapadatu & Morris (2019) excluded stroke patients with severe aphasia. Two studies excluded participants based on cognitive impairment, such as a diagnosis of dementia (Lapadatu & Morris, 2019) or a Mini-Mental State Exam score of less than 20 (Baker, 2000). Hackett & Pickles (2014) excluded studies with mixed populations (e.g., stroke and head injury) that did not separate data by diagnosis.

Ten of the studies did not specifically target stroke patients nor health professionals who specialize in stroke care (Baker, 2000; Bone et al., 2018; Cunningham et al., 2017; Flannelly et al., 2003; Galek et al., 2007; Kim et al., 2017; Koenig et al., 1991; Macdonald, 2017; Weinberger-Litman et al., 2010; Wilson et al., 2017). However, one of the studies focused on patients with permanent neurological disabilities (Wilson et al., 2017). Baker (2000) excluded individuals less than 65 years old and anyone with a history of depression. Lamb et al. (2008) excluded any study with a mean age less than 65 years old.

Timing of Outcome Measures. Two systematic reviews included poststroke depression prevalence studies that varied widely in the timing of evaluation for depressive symptoms (Hackett & Pickles, 2014; Pai et al., 2019). Hackett & Pickles (2014) included 12 outpatient studies measuring depressive symptoms up to five years poststroke, 19 studies completed in a rehabilitation center after discharge from the hospital, and 30 studies were hospital-based. Pai et al. (2019) included two outpatient studies measuring depressive symptoms at least one year after the stroke event and five studies in the subacute to early chronic phases of stroke.

Systematic Bias Risk. Selection bias may be present as it relates to convenience sampling used in all experimental and non-experimental studies, which were also non-randomized (Bone et al., 2018; Cunningham et al., 2017; Flannelly et al., 2003; Galek et al., 2007; Kim et al., 2017; Koenig et al., 1991; Lamb et al., 2008; Lapadatu & Morris, 2019;

Macdonald, 2017; Purvis et al., 2019; Weinberger-Litman et al., 2010; Wilson et al., 2017; Wilson, 2017) (Greenhalgh, 2014). Performance bias was introduced in Macdonald's (2017) research as participants could choose PCC or antidepressant medication intervention for themselves (Greenhalgh, 2014). Lapadatu & Morris (2019) introduced recall bias in their retrospective appraisal of the pre-stroke self (Althubaiti, 2016). Weinberger-Litman et al. (2010) denote that their study setting is known to have a predominantly religious population, which presents a risk of confirmation bias surveying nurses' beliefs regarding chaplains at that facility (Althubaiti, 2016).

Conclusion

Depression is a common sequela of stroke. It is necessary to provide adult stroke patients with pharmacological and nonpharmacological intervention for those with a positive depression screening. The evidence shows a correlational relationship between spiritual well-being and depression in stroke survivors or those who suffer another sudden, permanent neurological disability (Lamb et al., 2019; Wilson et al., 2017). This includes the psychological work stroke survivors have identified as needed after experiencing an abrupt change in life circumstances (Lamb et al., 2019). The AHA and ASA recommend referral to chaplains when caring for stroke patients in such situations (Holloway et al., 2014). Pastoral care interventions effectively alleviate depressive symptoms in non-stroke populations. There is no significant difference in the effectiveness of pastoral care when compared to those treated with antidepressant medications alone (Baker, 2000; Macdonald, 2017). There is evidence demonstrating that nursing staff highly value pastoral care services, consider chaplains an essential element of the healthcare team (Bone et al., 2018; Purvis et al., 2019), and traditionally place more referrals for chaplains than any other discipline (Flannelly et al., 2003; Koenig et al., 1991; Purvis et al., 2019).

Wilson (2017) demonstrated that many stroke patients struggle with depressive symptoms during their admission to this facility. Before this project, there was no standard process for addressing the spiritual needs of this population. Although the evidence may not be substantial, it is reasonable to implement a nurse-driven protocol to place spiritual care referrals for patients with PSD to address this gap in holistic practice. In turn, it will add to the existing body of literature.

CHAPTER 3: THEORETICAL FRAMEWORK

This DNP project was guided by a theoretical framework that integrates the theory of the problem and the theory of the planned intervention. The DNP student conducted an electronic search for theory related to PSD, spiritual distress, and change in behavior using the databases mentioned previously and the following keywords in various combinations: theory, theories, theoretical, framework, model, stroke, depression, poststroke depression, well-being, spirituality, pastoral, chaplain, chaplaincy, narrative, identity, and change.

Theory: Problem and Planned Intervention

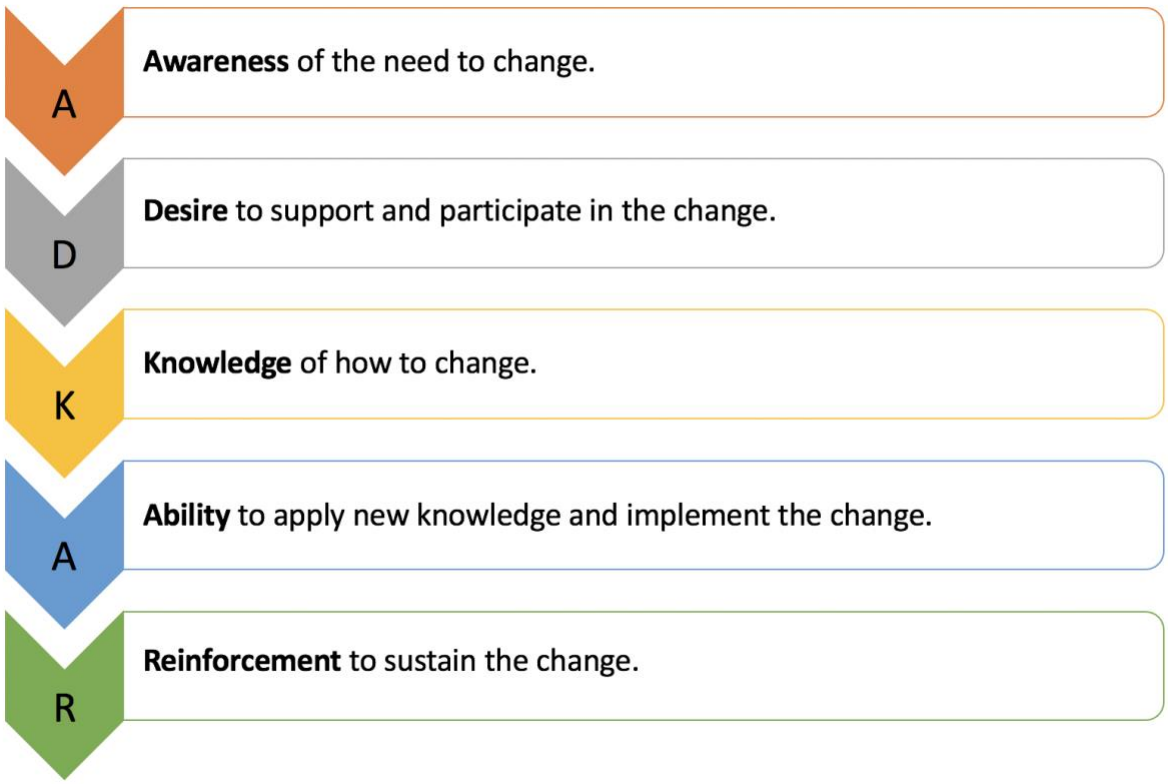
One factor that contributes to PSD is the acute change in identity related to sudden illness or disability (Ellis-Hill, Payne, & Ward, 2008; Ellis-Hill & Horn, 2000; Emery, 2013; Kirkevold, Bronken, Martinsen, & Kvigne, 2012; Pai, Li, Tsai, & Pai, 2019; Risk, 2013). Narrative theory lays the groundwork for developing new perspectives in self-identity and recreating a sense of coherence within the larger framework of identity theory (Ellis-Hill, Payne, & Ward, 2008; Ellis-Hill & Horn, 2000; Emery, 2013; Kirkevold, Bronken, Martinsen, & Kvigne, 2012; Risk, 2013). Chaplains often draw on narrative models of compassionate communication (Emery, 2013; Risk, 2013). Evidence indicates that applying a narrative model may effectively re-establish identity and meaning, leading to improved emotional responses and reducing depressive symptoms in adults experiencing PSD. Implementing a nursing protocol to increase access to spiritual care as a component of PSD treatment involves a change in the nurse's behavior and workflow. The ADKAR Model for Change Management provides a model for change at the individual level.

The ADKAR Model for Change Management

The ADKAR Model for Change Management is a five-step model that guides change at the individual level (Hiatt, 2006). This model outlines the five steps, thought of as building blocks, that an individual or group must meet for change to be realized: (1) Awareness, (2) Desire, (3) Knowledge, (4) Ability, and (5) Reinforcement (Prosci, n.d.; Wong, Lacombe, Keller, Joyce, & O'Malley, 2019). The ADKAR model provides a specific method to determine what is needed for individuals to change by representing the five interrelated concepts as milestones that must be met in a stepwise fashion (Esposito, n.d.). See Figure 3.1.

Figure 3.1

ADKAR Model for Change Management



Note. Five steps of ADKAR Model for Change Management. Adapted from *ADKAR: A model for change in business, government and our community*, by J. Hiatt, 2006.

The application of the ADKAR Change Management Model takes a structured approach in examining how things are currently done, how things should be done in the future, and how to transition from the current state to the future state (Boca, 2013; Shepherd, Harris, Chung, & Himes, 2014). The first steps involve analyzing the current state: the Awareness of the necessity for change, the Desire to support and participate in the change, and the Knowledge of how to make the change. In the transition phase, the individual must have the Ability to apply the new Knowledge and implement the change. Finally, Reinforcement represents the future state and is crucial for successfully maintaining the change (Boca, 2013; Hiatt, 2006; Paun, 2014; Prosci, n.d.; Shepherd et al., 2014).

The individuals who are expected to make this change in behavior must be involved at every step. For successful Awareness, these individuals should be invited to share their unique perspectives. Their concerns should be addressed to eliminate barriers and foster optimism to increase their Desire to participate in the change. Formal training, education, coaching, and access to information are needed to disseminate the Knowledge of how to make the planned change. Reinforcement may include personal recognition of the individuals or group, celebrations, or compensation (Shepherd et al., 2014).

Application of ADKAR Change Management Model to the DNP Project

The ADKAR Change Management Model is an action-oriented and outcomes-focused tool for planning change and identifying gaps and barriers. Guided by the ADKAR Model, the planned intervention focuses on changing the individual nurse's behavior and involves the nurse's actions: screen for PSD and make the referral to pastoral care when appropriate. The ADKAR Model will also guide project implementation. The stages of intervention are detailed below.

In the Awareness stage, stakeholders were engaged to seek their input and establish lines of communication. Their concerns and suggestions were considered when formulating strategies to mitigate or remove any perceived barriers to support a Desire to change. Stakeholders were encouraged to stay involved throughout the planning stages. The Knowledge the nurse needs for understanding why this change in workflow is meaningful was presented at an online staff meeting. The DNP student e-mailed an electronic copy of the PowerPoint slides and a link to a recorded version of the presentation to all staff members. This presentation included a brief review of the literature and information instructing the nurses on how and when they were expected to initiate a pastoral care consult. The DNP student audited charts and provided regular feedback to ensure that staff nurses had the Ability to implement the intervention appropriately throughout the initiative. The final stage of the ADKAR Change Management Model is Reinforcement. Monthly e-mails were sent with data reinforcing study progress and change success. The DNP student organized a brunch as a token of gratitude and to recognize the hard work of everyone involved. Final outcomes were shared with the unit and all were invited to the DNP student's final defense.

CHAPTER 4: METHODOLOGY

Design

This DNP project was a nurse-driven quality improvement initiative using a pre-post quasi-experimental design with a convenience sample. The staff nurse was expected to implement a new protocol to place an order for a pastoral care consult in response to a positive PHQ-9 depression screening (a score of ≥5) for admitted stroke patients age 18 or older.

The Plan-Do-Study-Act (PDSA) model for continuous quality improvement was used alongside the ADKAR Model for Change Management for setting project aims (Plan) and execution of the protocol (Do). Identification of unexpected barriers and data evaluation (Study) help guide needed refinements to apply to the next study cycle (Act) (Institute for Healthcare Improvement [IHI], 2020). The planning, implementation, and evaluation were structured around seven PDSA cycles, each lasting approximately two weeks. Planning took place before the first PDSA cycle rolled out. Staff nurses implemented the referral protocol (Do) continuously throughout the project timeline. However, the DNP student evaluated data and unexpected barriers (Study) on the last day of each two-week cycle. Necessary adjustments (Act) were made and applied to the next cycle. This project took place over thirteen weeks.

Ethical Considerations

The DNP student received an exemption from the University of North Carolina (UNC) at Chapel Hill's Institutional Review Board (IRB). This project was considered a QI project and deemed non-human subjects research. See Appendix B for letter of exemption.

Approval to conduct this project was obtained from this medical center's Nursing

Research Council (NRC). Letters of support for this project were provided to the NRC from the nurse manager of the acute floor unit, the nurse manager of the comprehensive stroke program, and the director of the pastoral care department (Appendix A).

Setting and Population

This project took place on a neuroscience unit of a large academic medical in the Southeastern United States. It is an acute care floor with 32 beds and is staffed by 44 registered nurses (RN). Staff nurses were asked to place consults to pastoral care services for all adult patients with a stroke diagnosis and a PHQ-9 depression screening score of ≥5. Stroke diagnoses included TIA, acute ischemic stroke (AIS), intracerebral hemorrhage (ICH), and SAH. Nurse participation was voluntary.

PSD Screening Tool

The PHQ-9 is a short self-report instrument measuring the nine diagnostic criteria for major depressive disorder described in the *Diagnostic and Statistical Manual of Mental Disorders, 4th edition* (Kroenke et al., 2001). The screening employs a 4-point Likert scale asking the subject how often they have been bothered by the following nine symptoms over the past two weeks (not at all, several days, more than half the days, nearly every day): anhedonia, depressed mood, sleep disturbances, loss of energy, changes in appetite, feelings of worthlessness, difficulty concentrating, psychomotor retardation or restlessness, and suicidal thoughts or desire to self-harm (Kroenke et al., 2001). As discussed in the literature review, the PHQ-9 has good internal reliability, sensitivity, and specificity in the stroke population (Towfighi et al., 2017).

The PHQ-9 screening is expected to be completed by a staff nurse for all patients admitted with a stroke diagnosis per hospital policy. The screening is embedded in this facility's

electronic medical record (EMR) under the stroke screening tab with automatic scoring, making it relatively quick and easy to administer. The PHQ-9 scores are reviewed by the treating medical team and are automatically entered into the discharge summary for continuity of care. The score generates immediately, and the nurse can swiftly enter an order for a referral for pastoral care if ≥5. It is important to note that the nurse follows hospital policy if the patient indicates they have had recent suicidal thoughts or a desire to self-harm. This is further discussed below. Please see Appendix C for an example of the complete PHQ-9 screening tool and how it appears to nurse staff in the hospital EMR.

Project Implementation

Stakeholder Engagement

Following the approval from the NRC and IRB exemption, the DNP student created an interdisciplinary team. This team included key stakeholders: a stroke nurse practitioner, the neuroscience unit nurse manager, nurse clinical leads from the unit, the stroke program manager, and a hospital chaplain. Early engagement of those with a perceived positive influence on the unit should help to drive change and maintain momentum (Lamming et al., 2019). The clinical leads were recruited as enthusiastic agents of change to serve as role models and show their support for this QI project to further encourage buy-in from their colleagues. The interdisciplinary project team met approximately one month before the project's roll-out to discuss any real or perceived barriers in moving forward with the planned initiative. There were no issues noted at that time.

This neuroscience unit is covered by one or two resident chaplains rotating throughout the year. Staff nurses may not be familiar with the chaplains covering the floor. Two events, one day shift and one night shift, were planned to allow staff nurses an opportunity to meet these

chaplains to establish trust and rapport. The DNP student and chaplains reserved a quiet room where the staff could feel relaxed and open to learning more about what pastoral services offer patients experiencing PSD. Considering the SARS-CoV-2 (COVID-19) pandemic, the DNP student served tea to the staff in to-go cups and individually wrapped cookies to enjoy later, in their breakroom or at home, so that masks and protective eyewear could remain on at all times.

The DNP student made site visits every two weeks, day shift and night shift, throughout project implementation. The student would round the unit seeking feedback from staff and leave a card with baked goods to express appreciation, gratitude, and encourage continued engagement with the project.

Education

Staff education was provided to help nurses understand pastoral care is in the patient and staff's best interest and how it would contribute to high-quality care for poststroke depression. This education aligns with the Institute for Healthcare Improvement's (2019b) recommendation for providing education that highlights the intervention's value by presenting high-quality evidence grounded in sound research. The DNP student presented at the two online staff meetings approximately one month before the project roll-out. This presentation included an introduction to the problem, the project's purpose and goals, a review of the literature supporting this protocol, and why addressing poststroke depression is essential. The DNP student communicated the expectations of the staff nurse role during implementation, including when to place the pastoral care referral. The presentation included a refresher on finding the PHQ-9 screening tool and how to place an order for a referral to pastoral care in the EMR. The DNP student instructed nurses to alert the primary medical team and consider assessing suicide risk per hospital policy if the patient indicated thoughts of self-harm or suicide during the screening.

There are instances where the neurological deficits suffered from stroke make it difficult, if not impossible, to conduct an appropriate screening. In these cases, the nurses were instructed to use a caregiver as a proxy or document the patient as "unable to assess" under the PHQ-9 screening in the EMR.

The DNP student developed a sample script (Appendix D), with input from the hospital chaplain, for the staff nurses to use when placing consults to pastoral care. Rather than asking the patient whether they would like to see a chaplain, it was crucial to reframe the chaplain as an essential member of the stroke care team. The patient could expect a visit from a chaplain to provide a nonjudgmental presence and compassionate support during their hospital stay. Using the sample script was not required but offered as an example and was included in the staff educational presentation. Staff nurses were instructed not to place referrals for patients who refused a chaplain visit and document the refusal with the PHQ-9 screening documentation or in a nursing note for that shift.

A total of 33 RNs were in attendance of the live presentation at the online staff meetings. A link to a narrated version of the presentation along with an electronic copy of the PowerPoint presentation was e-mailed to all staff to reach those who were not in attendance. Two nurses newly hired after the live presentation were provided this same e-mail shortly after their start dates. The e-mail included a link to a short survey asking anyone who did not attend the staff meeting to indicate their position on the unit and whether they reviewed the educational materials provided. The survey confirming a receipt of education for pastoral care consults in poststroke depression had zero responses.

Process

The staff nurse screened admitted stroke patients for depression throughout the implementation phase using the PHQ-9 in the EMR upon admission or transfer onto the unit. If the patient scored a ≥5, the nurse immediately placed an order for a consult to pastoral care. These orders for pastoral care do not require a co-sign by the advanced care provider. The staff included that the referral had been placed in response to a positive PHQ-9 depression screening in the order comments. The nurse then used the script or their own words to alert the patient to expect a visit from a chaplain as a part of the holistic stroke care they receive at this medical center.

Charge nurses were asked to remind staff nurses to complete PHQ-9 screenings and place referrals at safety huddles each shift. These reminders started one week before roll-out and throughout project implementation. The DNP student created visual memes to serve as funny and memorable reminders to staff. These memes were placed on the computer monitors at each nurse workstation (a total of 15). Evidence shows that humor and sharing a laugh increase employee engagement and encourage teamwork (Hughes, 2019). The DNP student created a visual management board in the staff bathroom that included the evidence supporting the intervention, what was expected of the nurses, steps for finding the PHQ-9 screening, how to place the order for a pastoral care consult, and a copy of the scripted language. The DNP student also used the board to communicate current PHQ-9 screening rates and pastoral care referral rates for each PDSA cycle and the PHQ-9 screening rate from the previous year (March-May 2020) for comparison. This provided real-time feedback to encourage a continued change in practice.

Checklists can be effective tools for boosting compliance with best practices (Siegel, Figueroa, & Stockwell, 2018). Each day, Monday through Friday, the charge nurse or clinical

lead receive a stroke list for auditing stroke documentation to monitor whether the unit fulfills quality measure requirements expected of a comprehensive stroke center. This checklist includes the PHQ-9 depression screening. If the screening has not been documented, the charge nurse or clinical lead should remind staff nurses to conduct the screening and refer to pastoral care if appropriate, or document as unable to assess if the patient has neurological deficits interfering with cognition or communication.

PDSA Cycles

The DNP student structured this project around seven PDSA cycles, each with two weeks of implementation. The final cycle was one week in length. Data analysis, evaluation, and stakeholder communication occurred on the first day of the subsequent PDSA cycle. The DNP student audited charts daily throughout each study period to collect and analyze data, then shared results with staff nurses in real-time at the end of each cycle. Each e-mail update included a link to a continuously open, anonymous survey that staff nurses could use to communicate feedback, suggestions, or concerns directly to the DNP student. This survey received no responses from staff. The goal was to see a steady improvement in PHQ-9 screening rates and rates of pastoral care referral for patients with a score ≥5 with each cycle. Boosting the number of completed depression screenings was critical for identifying a greater number of stroke patients who may have depression to be further managed by the medical team and offered holistic support from a hospital chaplain.

Data collection and analysis determined the biggest challenges in screening patients for depression: those transferred from other units and those unable to be assessed at admission, but neurological status improved with time. While auditing, the DNP student noted whether patients were admitted directly from the emergency department or transferred from another unit. Nurses

struggled with remembering to check whether a PHQ-9 depression screening was completed before transferring onto the unit. The DNP student also recorded the neurological status of patients who had no documented PHQ-9 screening or had been reported as unable to assess. Often, these patients that could not be evaluated early in their hospital course were not screened as their neurological status improved.

After the first PDSA cycle evaluation, the DNP student attempted to remind the assigned care nurses for patients without documented screenings during the planned site visits. It quickly became evident that this was ineffective. The DNP student only visited once every two weeks, and the care nurse was not necessarily available to speak at those times. The DNP student had planned to send update e-mails with just the resulting rates at the end of each cycle but instead added specifically targeted reminders based on where nurses seemed to struggle the most in the process as well. During the third PDSA cycle, the DNP student wrote personal e-mail reminders to the assigned care nurse for patients without a completed PHQ-9 screening documented. These e-mails requested the nurse either screen the patient, document as unable to assess based on neurological status, or delegate the task to the oncoming nurse. Requests to re-evaluate for screening were also e-mailed directly to assigned care nurses of patients who were documented as unable to assess but appeared to improve neurologically. No changes were made in subsequent PDSA cycles.

Outcome Measures

The DNP student measured completed PHQ-9 depression screenings, PHQ-9 scores, the number of pastoral care referrals, and the number of chaplain visits at patient discharge and for stroke patients still admitted at the end of the data collection period. The primary outcomes measured included the PHQ-9 depression screening rate, the rate of pastoral care referrals made

for a stroke patient with a PHQ-9 score of ≥5, and nurse satisfaction and attitudes related to the new consult protocol. Secondary outcomes included the number of chaplain visits, successful and attempted, along with evaluating the chaplains' experiences responding to consults. In addition, nurse and chaplain evaluation took place post-implementation.

The primary goals of this QI project included improvement in PHQ-9 screening rates from 62.4% to ≥80%, the rate of pastoral care referrals for patients with a PHQ-9 score of ≥5 would be ≥80%, and that the nurses would find the protocol easy to implement and meaningful for patients with PSD.

Data Collection

Data were collected from the EMR by the DNP student through daily chart auditing and directly recorded into an Excel spreadsheet. Patient medical records accessed only included adult patients admitted to the facility with a stroke diagnosis and admitted to the acute neuroscience floor. A daily stroke list with patient medical record numbers was e-mailed securely to the DNP student on business days by the comprehensive stroke program staff. Data collected included patient demographics (age, sex, race) and clinical factors (stroke diagnosis, National Institute of Health Stroke Scale (NIHSS) at admission, PHQ-9 score, and previous psychiatric history). Protocol fidelity factors were also recorded (number/percentage of patients screened with PHQ-9, PHQ-9 scores, number/percentage of referrals placed to pastoral care for scores ≥5). The number of chaplain visits made, both completed and attempted, were also collected and recorded.

Data Management and Security

Medical record numbers were coded to ensure patient privacy was maintained. The identified master keycode document was kept separate from coded data on the University-secure (ONYEN password-protected) OneDrive through Office 365@UNC, of which only the DNP

student had access. De-identified, coded data was stored on the University-secure Microsoft Teams cloud drive (ONYEN password-protected) and was only accessible to the research team.

Data Analysis and Evaluation

Data was collected and analyzed daily (Monday through Friday) throughout the project implementation period. Pre-initiative and post-initiative PHQ-9 screening rates were analyzed for statistical significance using a one-tailed Fisher's exact test ($p<0.05$). Descriptive statistics were used to analyze post-initiative rates of pastoral care referrals for PHQ-9 scores of ≥5, the number of completed and attempted chaplain visits, and patient data variables. Nurse satisfaction and attitudes were measured using a DNP student-developed survey that employed a four-point Likert scale along with open-ended questions (Appendix E). An open-ended survey was used to evaluate chaplain experiences with responding to consults (Appendix F). Descriptive statistics were used to analyze and present the results of these surveys.

Communicating Results

The DNP student e-mailed a summary of the findings to all unit staff and stakeholders at the end of each PDSA cycle. These briefs included the PHQ-9 screening rate, the rate of pastoral care referrals made (score ≥5), and the number of chaplain visits, attempted and completed, for patients discharged over the past two weeks. The student investigator also shared the most recent stroke patient census (e.g., PHQ-9 screening status or need for appropriate documentation if unable to assess) and targeted reminders (e.g., checking for completed screenings in stroke patients transferred from other units). A total summary of the findings was disseminated at the end of each month of implementation as well. The DNP student also made site visits to update the visual management board at the end of each PDSA cycle. These updates included the most recent PHQ-9 screening rate and pastoral care referral rates. The DNP student posted the PHQ-9

screening rate from the same month of the previous year for comparison and to encourage participation.

Anticipated Facilitators for Project Implementation

This project expands upon a standard of stroke care at this facility: staff nurses screen all patients with a stroke diagnosis for depression using the PHQ-9. Documentation is simple because the PHQ-9 is embedded in the EMR under the stroke screening tab with automatic scoring upon completion. This facility allows for nursing to place orders for pastoral care without a provider co-sign, allowing chaplains to visit the patient as soon as they are available. Furthermore, there was strong support for this project from stroke center leadership, nurse management, and RN clinical leads who served as cheerleaders, with an ability to influence and motivate their colleagues to participate. This project would not require any additional resources or costs outside of regular daily operations for the unit and department of pastoral services.

Anticipated Barriers for Project Implementation

Failure to acquire full buy-in from the staff was a potential barrier to successful change in practice and workflow. Attaining buy-in from the staff nurses was crucial for the effective implementation and sustainability of this protocol. One staff nurse had difficulty separating their own belief system from this patient-centered intervention. They e-mailed the DNP student expressing concern for mixing religion with mental health care, worry that patients may feel uncomfortable, and seeking clarity on the role that the chaplain was expected to play. The DNP student responded by e-mail reinforcing that this project aims to improve depression screening rates to allow an opportunity to offer another holistic component in PSD treatment, along with pharmacologic intervention if deemed appropriate. The DNP student also reminded this staff member that the literature suggests some stroke patients feel a crisis in spirit, that spirituality is

deeply personal, and that the patient can refuse the spiritual care consult at any time. The e-mail included an offer to put the nurse in touch with either of the participating chaplains to discuss how they approach visits under these circumstances.

This academic medical center encourages continuous quality improvement. That said, an accumulation of new initiatives, policies, and procedures could have been perceived as "just one more thing" the staff nurses must do and could be overwhelming, especially as the staff were dealing with COVID-19 changes. This sense of feeling overwhelmed is a common barrier to change (IHI, 2019a). Strategies to address this barrier are included in the methods section and were applied during the Awareness and Desire stages of the ADKAR Model for Change Management.

Ensuring the PHQ-9 depression screening was completed by the staff promptly was another potential barrier to implementing this project. When the screening protocol was first initiated, it was determined that a hard stop could not be created in the EMR to enforce documentation. The health informatics department could not generate a hard stop specifically for the stroke population. It would have affected the ability to document for all patients across the hospital system. Targeting this barrier was essential as rapid screening would allow enough time for the chaplain to visit the patient at least once before discharge. Data were collected daily to see if depression screenings were occurring as they should, which aided in establishing patterns helpful in pinpointing additional solutions. Strategies to address this barrier are included in the methods section and applied in the ADKAR stages of Knowledge and Ability.

In March of 2020, the severity and magnitude of the COVID-19 pandemic became clear. Hospital policies changed drastically and rapidly, almost daily. This substantially impacted the DNP student's ability to plan the project, causing a delay for several months.

The COVID-19 pandemic had the potential to introduce many challenges. There was an inherent uncertainty of how the virus would affect hospital policy at any given time. Surges in COVID-19 could have elicited a reinstitution of visitor restrictions. Early in implementing this initiative, patients were only allowed two visitors for the entirety of their hospital stay, and only one person could be with the patient at a time. By the end of implementation, as restrictions were lifted, patients could have two visitors during the day and only one visitor overnight. This may have affected the staff nurses' ability to screen patients with communication difficulties, as caretakers sometimes help answer the PHQ-9 questions.

Early in the pandemic, ancillary staff were restricted from in-person patient interactions to conserve personal protective equipment. These restrictions are no longer in place, but spikes in SARS-CoV-2 could potentially affect this in the future. Most hospital units now have tablets that patients may use to communicate through a video chat with loved ones. If chaplains were prohibited from entering patient rooms at any point during the implementation phase of this project, the staff nurse would have been asked by the chaplain to set up the tablet for a virtual visit. This could have affected participation as it places a more considerable strain on the nurse.

Although masks and protective eyewear are required at this facility, taking social distancing measures is still very important to reduce the transmission of COVID-19. Meetings that were traditionally onsite and in-person transitioned to a virtual format. This may have affected buy-in, as building relationships in person tend to be more meaningful. To negate the drawbacks of online meetings, the student made site visits (day shift and night shift) at the end of each PDSA cycle throughout the study period as long as hospital policy allowed.

Implementing this new protocol amid the COVID-19 pandemic required significant flexibility of the DNP student. The student had to be prepared to make modifications quickly and

unexpectedly. The implications of COVID-19 were evaluated with each PDSA cycle and adjustments were made as needed.

CHAPTER 5: RESULTS

The purpose of this project was to create a simple, sustainable process for nurses of the acute neuroscience floor to introduce spiritual care as a holistic component of supporting patients grappling with poststroke depression. Rates were measured by the frequency and percentage of PHQ-9 screening completion and pastoral care referrals made for stroke patients with a score of ≥5 to determine screening rates.

Sample Characteristics

Throughout the 13-week implementation period, 132 patients were admitted to the acute neuroscience floor with a stroke diagnosis that met the criteria for screening. Of these encounters, 11 patients were documented under the PHQ-9 screening as unable to assess throughout admission, which the student verified during chart audits, relating to neurological deficits that interfere with cognition or communication lasting for the duration of their hospital admission. These patients were excluded from screening rate measurements. There were 121 unique patients eligible for depression screening.

The sample of eligible patients (Table 5.1) included 121 patients with a mean age of 67.44 years (*SD* 16.01) with an age range from 26 to 99 years old, of whom 58.7% (*n*=71) were female. The group's identified ethnicity was primarily white (62%, *n*=75) and black (30.6%, *n*=37), with low representation of Hispanic groups (4.9%, *n*=6). Three patients (2.5%) did not disclose their ethnicity. In addition, approximately one in five patients had a previous history of depression (18.2%, *n*=22), while 16.5% had a documented history of another psychiatric diagnosis (*n*=20). Patient clinical variables include type of stroke and initial NIHSS score upon

admission to the hospital. The documented diagnoses included AIS (72.7%, *n*=88), ICH (19.8%, *n*=19.8), SAH (6.6%, *n*=8), and TIA (0.9%, *n*=1). Initial NIHSS scores ranged from 0 to 33 with a mean of 6.51 (*SD* 6.98). One patient (0.9%) did not have a documented NIHSS score.

Eleven patients were unable to be assessed and therefore deemed ineligible for the project. The initial NIHSS scores ranged from 4 to 28, with a mean of 18.1 (*SD* 8.44). One patient (9.1%) had no documented NIHSS score. Nursing staff documented that all eleven patients had neurological deficits at admission to the acute neuroscience unit and at the time of discharge or transfer from the unit, which prohibited PHQ-9 screening throughout.

Table 5.1

Individual Characteristics of Patients Eligible for PHQ-9 Depression Screening

Characteristic	*n* (percentage)		Mean (*SD*)
Age in years			67.44 (16.01)
Sex			
Male	50	(41.3)	
Female	71	(58.7)	
Age group (years)			
18-29	2	(1.7)	
30-44	9	(7.5)	
45-59	26	(21.3)	
60-74	39	(32.2)	
75-89	36	(29.8)	
90+	9	(7.5)	
Ethnicity			
White	75	(62.0)	
Black	37	(30.6)	
Hispanic	6	(4.9)	
Not disclosed	3	(2.5)	
Stroke diagnosis			
AIS	88	(72.7)	
ICH	24	(19.8)	
SAH	8	(6.6)	
TIA	1	(0.9)	
NIHSS score			6.51 (6.98)
0-4 (minor stroke)	63	(52.0)	
5-15 (moderate stroke)	47	(38.8)	
16-42 (severe stroke)	10	(8.3)	
Not scored[a]	1	(0.9)	
History of depression			
Yes	22	(18.2)	
No	99	(81.8)	
History of other psychiatric diagnosis			
Yes	20	(16.5)	
No	101	(83.5)	

[a] Not included in calculation of mean and standard deviation.

admission to the unit. These deficits included disorientation (*n*=5), expressive aphasia (*n*=6), global aphasia (*n*=1), somnolence (*n*=1), lethargy (*n*=1), poor attention (*n*=1), and/or unable to follow commands (*n*=6).

PHQ-9 Baseline Data

Baseline PHQ-9 screening data were obtained from the hospital's comprehensive stroke program manager. The DNP student retrospectively audited charts for PHQ-9 screening completion for March, April, and May of 2020 for all patients admitted to the acute neuroscience floor during that period. During these three months, 117 patients diagnosed with stroke were admitted to the acute neuroscience floor. Of these 117 patient encounters, 63 had a documented PHQ-9 screening, 38 had no documented PHQ-9 screening, and 16 were reported as unable to be assessed throughout admission, which the student verified during chart audits. The DNP student used these datasets to calculate PHQ-9 screening rates for each month (Table 5.2). The DNP student also calculated the PHQ-9 screening rate for the entire three-month period. Those determined to be unable to assess were not included in screening rate calculations. Before implementing the new pastoral care consult protocol, there was no process for making referrals for spiritual care in the setting of poststroke depression.

Table 5.2

Baseline PHQ-9 Screening Completion Rates

	PHQ-9 Completed	PHQ-9 Not Completed	Unable to Assess[a]	PHQ-9 Screening Rate
March 2020	21	11	4	65.6%
April 2020	20	9	7	69.0%
May 2020	22	18	5	55.0%
March-May 2020	63	38	16	62.4%

[a]Excluded from screening rates.

Post-Implementation PHQ-9 Screening Rate

The DNP student measured rate by measuring the frequency and percentage at which nurses documented PHQ-9 depression screen in stroke patients, per unit policy, to determine the

screening rate. The PHQ-9 screening goal was ≥80%. Data collection occurred from March 1, 2021, through May 31, 2021. Screening percentages for each PDSA cycle were 73.9%, 80%, 90.9%, 90%, 100%, 96%, and 100%, respectively.

Rates of Staff Nurses' Documentation of PHQ-9 Depression Screening

A retrospective chart review of all stroke patients admitted to the acute neuroscience unit examined rates of PHQ-9 documentation by nursing from March through May 2021. The DNP student calculated PHQ-9 screening rates with each PDSA cycle, monthly, and for the entire 13-week implementation period. See Table 5.3 and Figure 5.1 a summarizing the findings from each PDSA cycle.

The PHQ-9 screening rates for March, April, and May of 2021 were 78.1%, 92.1%, and 96.7%, respectively. These rates were compared to the screening rates from March (65.6%), April (68.9%), and May (55%) of 2020 (Figure 5.2). Over the 13-week implementation period, a total of 108 of 121 eligible patients were screened for depression for a rate of 89.3% as compared to the PHQ-9 screening rate of 62.4% from March to May of 2020.

Table 5.3

PHQ-9 Screening Rate and Pastoral Care Referral Rate Results with Recommended Revisions to Project by PDSA Cycle

PDSA Cycle	Dates	% Patients Screened with PHQ-9	% Patients with PHQ-9 Score ≥5		% Patients with Pastoral Care Referral (PHQ-9 Score ≥5)	Recommended Revisions to Project Implementation
1	3/1-3/14	73.9%	29.4%	(*n* = 5)	100%	• Implemented pastoral care consult protocol. • Reminders to complete screenings and pastoral care consult for score ≥5 at shift huddle.
2	3/15-3/28	80%	41.6%	(*n* = 5)	80%	• Notified individual care RN at site visits for patients with missing PHQ09 screenings. • Continued reminders to complete PHQ-9 screenings and pastoral care consult for score ≥5 at shift huddle. • E-mailed results of PDSA cycle and targeted reminders to staff
3	3/29-4/11	90.9%	18.1%	(*n* = 2)	100%	• E-mailed individual care RN assigned to patients with missing PHQ-9 screening with daily chart audit.
4	4/12-4/25	90%	11.1%	(*n* = 2)	50%	• Continued to e-mail individual care RN assigned to patients with missing PHQ-9 screening with daily chart audit. • Included reminders for patient's whose neurological status appeared to be improving as far as documented assessment.
5	4/26-5/9	100%	37.5%	(*n* = 6)	83.3%	• No changes made.
6	5/10-5/23	96%	4.2%	(*n* = 1)	100%	• No changes made.
7	5/24-5/31	100%	18.2%	(*n* = 2)	100%	• No changes made.

Figure 5.1

PDSA Run Chart of PHQ-9 Depression Screening Rates

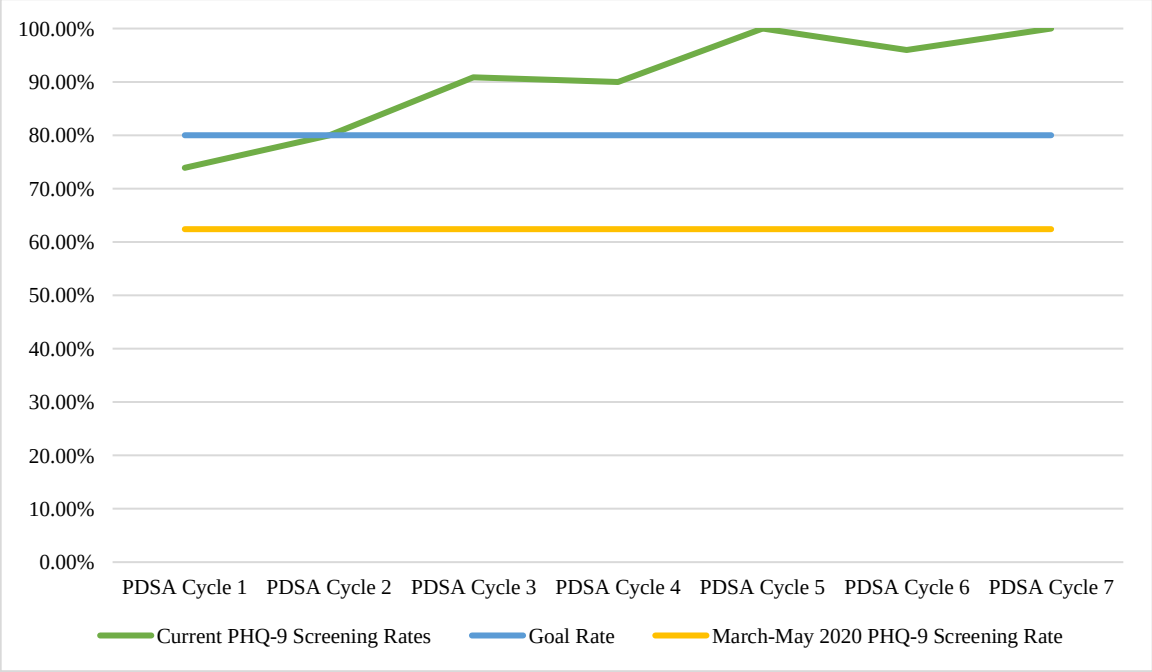
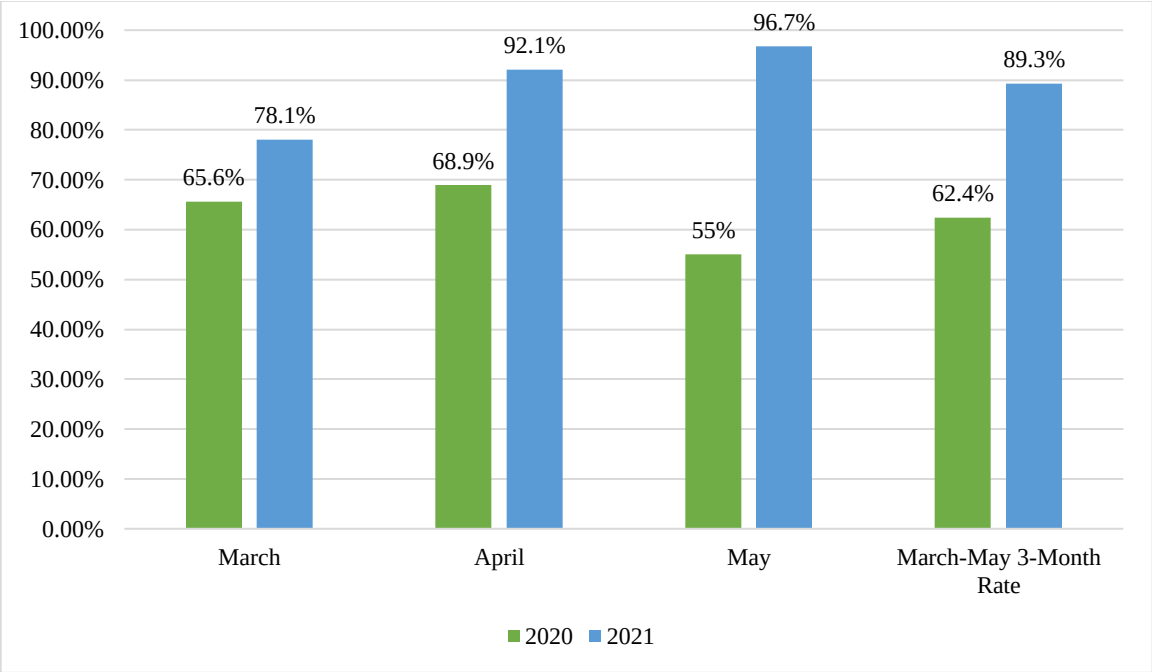


Figure 5.2

PHQ-9 Screening Rate Comparison by Month and Year



There are statistically significant increases in the screening rates from April 2020 to April 2021 (p=0.0167) and from May 2020 to May 2021 (p<0.0001). The PHQ-9 screening rates between March 2020 and March 2021 (p=0.1796) were not significantly different. However, the overall PHQ-9 depression screening rates between March-May 2020 and March-May 2021 were statistically significantly different (p<0.0001). See Table 5.4.

Table 5.4

PHQ-9 Depression Screening Comparison with Fisher's Exact Test (One-Tailed)

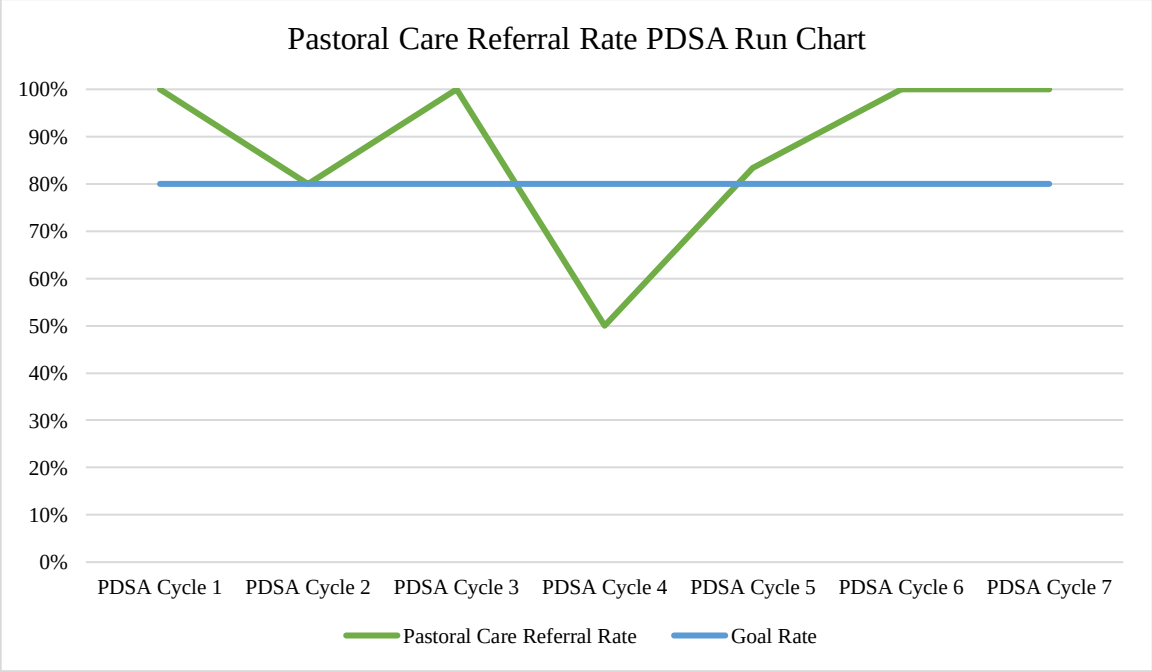
	Screened	Not Screened	Total	*p*
March				
2020	21	11	32	
2021	32	9	41	
Fisher's exact test				0.1796
April				
2020	20	9	29	
2021	35	3	38	
Fisher's exact test				0.0167
May				
2020	22	18	40	
2021	41	1	42	
Fisher's exact test				<0.0001
March-May (3-Month)				
2020	63	38	101	
2021	108	13	121	
Fisher's exact test				<0.0001

Pastoral Care Referral Rates and Chaplain Visits

A retrospective chart review of all stroke patients with a documented PHQ-9 score of ≥5 examined the rates of pastoral care consult orders placed by the acute neuroscience unit staff nurses. The DNP student calculated referral rates with each PDSA cycle, monthly, and the entire 13-week implementation period. See Figure 5.3 and Table 5.3 for a summary of the findings of each PDSA cycle.

Figure 5.3

PDSA Run Chart of Pastoral Care Referral Rates



The pastoral care referral rates for March, April, and May of 2021 were 90%, 88.9%, and 75%, respectively. Over the 13-week implementation period, a total of 23 patients had a PHQ-9 depression screening of ≥5. Twenty of these patients had an order for pastoral care placed in the EMR for a rate of 87% from March through May. See Figure 5.4. Of these 20 patients, 17 had at least one completed chaplain visit. Chaplains had attempted to visit two of the three patients without completing the consult. One patient was screened for depression and referred to pastoral care on the day of their discharge. Therefore, this patient had no attempted visit nor a completed visit. See Table 5.5.

Figure 5.4

Pastoral Care Referral Rate by Month

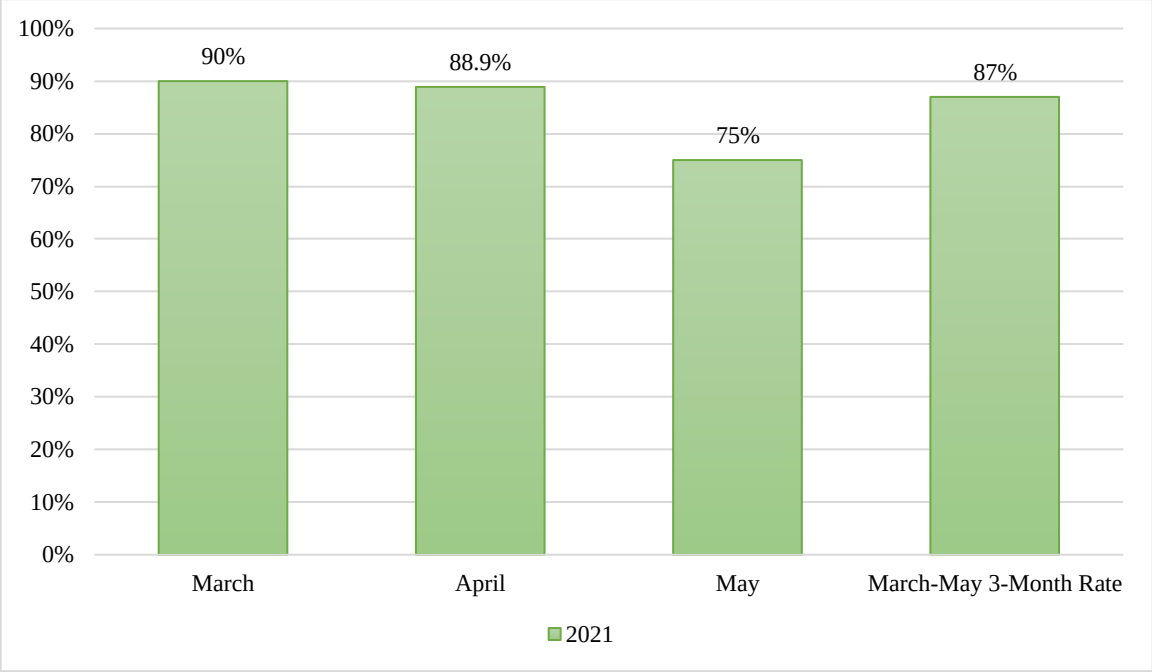


Table 5.5

Visits with Chaplain per Patient with Pastoral Care Referral Placed

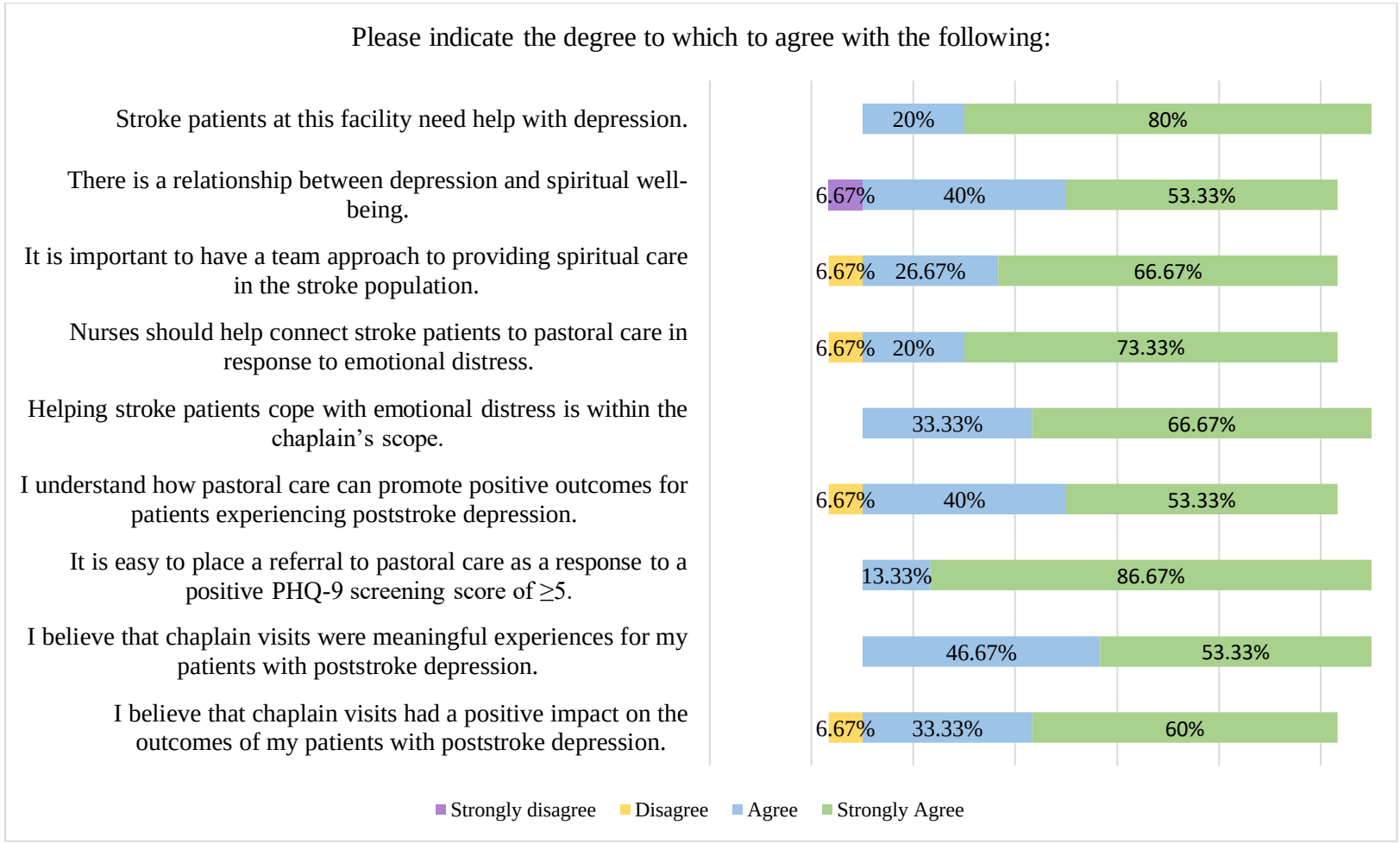
Completed Visits	Patients with Pastoral Care Referral Placed (*n*=20)
0	3
1	13
2	3
3	1

Staff Nurse Satisfaction and Attitudes Regarding PSD Protocol

Nursing staff received a twelve-question survey evaluating their satisfaction with the pastoral care consult protocol (*n*=44). Fifteen nurses responded to the questionnaire with a total response rate of 34.1%. Refer to Figure 5.5 for a summary of the findings of this questionnaire.

Figure 5.5

Nurse Responses Concerning Attitudes and Satisfaction with Pastoral Care Consult Protocol (n=15)



The final three questions of the nurse satisfaction survey were open-ended. The first open-ended question asked, "What went well with the implementation of this pastoral care consult?" Themes included (1) easy to do, (2) routine of the unit, (3) direct, clear guidelines, (4) sharing of results with staff was motivating, (5) memes were funny and helpful reminders, and (6) increase in opportunities to address spiritual well-being and needs of patients with stroke. The second open-ended question asked, "What barriers did you face in the implementation of this pastoral care consult protocol?" The majority of responses indicated that they faced no barriers. Other themes included (1) patient deficits such as cognitive impairments or aphasia, (2) difficulty remembering to place the consult, (3) screenings not done upon admission to the hospital, (4) short hospital stays, and (5) some patients did not seem open to see the chaplain. The third open-ended question allowed for free comments, to which no one responded.

Chaplains' Experiences with PSD Protocol

Chaplains found to have responded to consults placed for PHQ-9 screenings received a six-question survey evaluating their experiences with the pastoral care consult protocol (n=9). Two chaplains responded to the questionnaire with a total response rate of 22.2%.

Among the six open-ended questions, the first question asked, "For the past three months, nurses on the acute neuroscience floor were asked to place referrals to spiritual care for patients with a stroke diagnosis who screened positive for depression. What went well when responding to these referrals?" Themes included (1) good communication between nurse and chaplain about the condition of the patient. The second question asked, "What obstacles or barriers did you experience responding to these referrals?" Themes included (1) lack of information about depressive symptoms. The third question asked, "What changes would you recommend making this process more effective or efficient?" Themes included (1) educating chaplains on the

meaning of PHQ-9 scores, (2) provide context about depressive symptoms, and (3) flag patients in EMR for immediate identification to be seen more urgently. The fourth question asked, “Do you think referrals for spiritual care were beneficial for stroke patients with depression?” One chaplain expressed they felt patients benefited, whereas the other thought there was potential, but in their experience, the patients did not report much about their depression. The fifth question asked, “Do you think the patients found these referrals for spiritual care in the setting of poststroke depression beneficial?” Themes included (1) supportive presence and listening alleviated tensions, (2) patients expressed it was helpful to talk through what they were holding onto inside, and (3) patients may not have understood the connection between depression and spiritual care. The final question asked, “What lingering challenges do you see for chaplains to sustain a nurse-driven spiritual care consult protocol in response to positive depression screenings?” Themes included (1) educating the chaplains on the meaning of PHQ-9 depression screenings and scores, (2) more context and communication about the needs of the patient, and (3) more information for chaplains about this project before implementation.

CHAPTER 6: DISCUSSION

This project examined the implementation of a potentially sustainable process for introducing spiritual care as a form of nonmedical support for the stroke population struggling with depressive symptoms. The post-implementation PHQ-9 screening and pastoral care referral rates were 89.3% and 87%, respectively, successfully meeting the metric goals set. In addition, the survey of nursing staff on this unit indicates that the process was easy to implement and seemed meaningful for patients.

The results of this project support that there is a high prevalence of reported depressive symptoms during hospital admission at this facility (Wilson, 2017), with 21.3% of those screened reporting depressive symptoms (score ≥5). Approximately 30% of this group (n=7) had a history of depression compared to 12.9% (n=11) of patients without a positive depression screening. Previous pooled data show that 31% of stroke survivors experience depression up to five years poststroke (Hackett & Pickles, 2014). In addition, depression symptoms affect approximately 5% of patients with a stroke diagnosis two to five days after the stroke event (Hackett & Pickles, 2014).

PHQ-9 Screening Rate

This quality improvement project significantly improved the PHQ-9 screening rate from 62.4% for March through May 2020 to 89.3% for March through May 2021, exceeding the goal rate of at least 80%. The PHQ-9 depression screening rates calculated for March, April, and May of 2021 were 78.1%, 92.1%, and 96.7%, respectively. This steady increase in screening rates each month can be attributed to the revisions made as the project moved through each PDSA

cycle. During PDSA Cycle 3, this improvement was most notable once the student began to share information from chart audits to coach individual nurses regarding missing PHQ-9 screenings as a component of the Knowledge and Reinforcement stages of ADKAR. Often screenings were missed when patients transferred in from another unit. Frequent reminders were needed to check for completed PHQ-9 depression screenings in these instances.

Pastoral Care Referral in Setting of PSD

This project established an overall pastoral care referral rate of 87% in the setting of positive PHQ-9 depression screenings (≥5) in adults with a stroke diagnosis from March through May of 2021, far exceeding the goal rate of at least 80%. There was no process for making referrals for spiritual care in the setting of poststroke depression before implementing this project. We observed variations in the pastoral care referral rates for March, April, and May of 2021 (90%, 88.9%, and 75%, respectively) with each month showing a decline in the number of patients with positive depression screenings. The seemingly seasonal variation in mood may explain the decrease in the number of patients exhibiting depressive symptoms (Øverland et al., 2019). With such a small sample of patients with PHQ-9 score of ≥5 in May, even one missing referral had a massive impact on the pastoral care referral rate.

Staff Nurses' and Chaplains' Feedback Regarding PSD QI Project

Attitudes and Satisfaction with Protocol

Staff nurses showed overwhelming support for and satisfaction with the pastoral care consult protocol. One hundred percent of respondents believed that stroke patients at this facility needed help with depression and 93.33% understood there to be a relationship between depression and spiritual well-being. In addition, the majority of staff nurses felt a team approach for providing spiritual care in this context was important (93.33%), that helping stroke patients

cope with emotional distress is within the chaplain's scope (100%), and that nurses should connect patients with a chaplain in response to this distress (93.33%). All respondents felt that the chaplain visits were meaningful experiences for their patients with PSD, and 93.33% believed the visits positively impacted patient outcomes. This feedback reaffirmed key findings from the literature regarding nurse perceptions of chaplains as integral members of the health care team who improve the quality of patient care (Purvis et al., 2019).

Two of the nine chaplains who responded to the survey evaluating their experiences with the pastoral care consult protocol believed patients benefited from their visits, but that the patients did not necessarily seem to understand the connection between spiritual care and depression or discussed their depressive symptoms with the chaplain. These chaplains indicated that their supportive presence appeared to alleviate tensions that the patient may have been experiencing. It seemed helpful for patients to talk through the feelings they were holding onto. These views are consistent with the literature which asserts that admitted hospital patients often view chaplain visits as very positive (Cunningham et al., 2017).

Barriers and Facilitators for Continued Implementation and Sustainability

Two major themes identified as barriers to implementation and sustainability of this protocol were when screenings were completed upon admission to the hospital and difficulty remembering to place the spiritual care consult. Chart audits and survey indicated that nursing staff struggled most with remembering to check for completed PHQ-9 depression screenings in the EMR when stroke patients were transferred in from other units such as the ICU. This can partly be attributed to the facility's policy that stroke patients be screened for depression within 24 hours of admission. However, unit routine does require that the receiving nurse check that required stroke measures are completed on arrival. The inability to create an EMR hard stop for

PHQ-9 depression screenings specific to patients with a stroke diagnosis hinders the sustainability of this protocol. Other barriers included short hospital stays, difficulty screening patients with neurological deficits, and believing some patients did not seem open to see the chaplain. Yet, 20 of 23 patients (87%) with a PHQ-9 score of ≥5 had referrals to the chaplain throughout the implementation period which is quite significant. The survey revealed several facilitators for the success of this project. One hundred percent of respondents indicated the process of referring to pastoral care for PHQ-9 scores of ≥5 was easy to do. Other facilitators included PHQ-9 screenings were already a routine expectation of unit staff and that staff education on the protocol provided clear, direct guidelines. Others indicated that the memes placed around the unit were helpful reminders and that communicating the results of each PDSA cycle was motivating. These responses reinforce the notion that regular feedback supports a staff nurse's Ability to implement change under the ADKAR Change Management Model.

Barriers identified by the chaplains included a lack of information and context regarding depressive symptoms the patient may be exhibiting and the meaning of PHQ-9 scores. In hindsight, more information and education about poststroke depression, PHQ-9 depression screening and scores, and how spiritual care may be helpful for these patients should have been shared with the entire pastoral care department before implementation. It was not anticipated how often on-call chaplains would answer these pastoral care referrals when the two chaplains assigned to the neurosciences were off duty. Respondents felt that the lack of context and education concerning PHQ-9 depression screenings and scores was a challenge when approaching these visits. Good communication between the nurse and the chaplain was identified as a facilitating factor when responding to referrals.

Recommendations for Future Practice

The DNP student has proposed the following strategies to promote spiritual care services for patients with PSD based on the QI project implementation process, PDSA analysis, and feedback from the nurses and chaplains. These strategies include optimizing EMR software and creating the role of a PSD champion.

EMR Development

Nurse respondent feedback stressed that two significant barriers for implementation included remembering to check for completed depression screenings upon transfer of stroke patients and remembering to order pastoral care referrals when the PHQ-9 score was at least a five. EMR development could play a critical role in alleviating these issues. For example, the informatics team may have the capacity to incorporate PHQ-9 depression screenings into the required admission documentation for patients with a current stroke diagnosis. This change would flag incomplete screenings under the required documentation tab available to the nurse. In addition, exploring the possibility of generating automatic pop-up reminders within the EMR infrastructure to prompt nursing staff to offer and order pastoral care consults to stroke patients with PHQ-9 screening scores of ≥5 may be beneficial. However, it is likely this would affect patient documentation across the health care system. Further investigation is warranted to determine proposed benefit.

PSD Champion

Auditing and providing feedback have been identified as immensely helpful in improving and maintaining high PHQ-9 depression screening rates and pastoral care referral rates, as evidenced by data analysis with each PDSA cycle. There is an expectation at this facility that the nurse manager or charge nurse use the daily stroke checklist to assist with documentation of

stroke measures. These measures include PHQ-9 depression screening. However, recent staffing shortages have led to patient assignments for charge nurses, which may have taken precedence over administrative duties. Therefore, unit leadership should identify PSD unit champions. Unit champions are nurses who take a special interest in and demonstrate enhanced knowledge regarding specific clinical topics and serve as a resource to their colleagues (Creehan, 2015). The Stroke Center should add the PSD unit champions to their daily stroke checklist listserv. The champions would perform regular chart audits with this list to determine whether the PHQ-9 screening is complete or the patient has been documented as unable to assess, and if a spiritual care referral has been placed for a score of ≥5. The champion can then send targeted e-mail reminders to the assigned care nurse or speak with them in person if they are auditing charts onsite.

Future Institutional Efforts

The success of this project indicates that the next steps should include an extension of this protocol to the NSICU and intermediate surgical care unit (ISCU). These sister units are responsible for stroke patients at higher levels of care, and the nursing staff is expected to screen for depression with the PHQ-9 at admission or check for completion at transfer. Chart audits show that many patients transferred onto the acute floor without a completed screening, indicating that staff of the NSICU and ISCU may benefit from refresher training. Repeating the steps of the project for each unit could be a very successful quality improvement project for a new graduate nurse, PSD champion, or future DNP student.

Limitations

This quality improvement project was a single-center study with a small sample size of admitted adult stroke patients (n=121) and nursing staff (n=44) on one acute care unit. In

addition, the initiative was one-arm with historical comparison. However, this project adds to the published evidence specifically exploring the effect of pastoral care services on inpatient stroke patients exhibiting depressive symptoms. There was no preexistent process for introducing spiritual care in this population, and the student measured referral rate over a short duration of 13 weeks. This protocol relies on voluntary staff participation and is therefore subject to human error. Inherent to the design of this study, there is no account for confounding variables co-occurring throughout the implementation timeline. It is unknown whether the success of this project is transferable to other patient populations or hospital settings. The long-term sustainability of continuing this project is uncertain, especially as it relates to staff turnover. This project relied heavily on staff education, frequent communication, and visual reminders. Identifying PSD unit champions to continue the education of new staff and provide targeted feedback could counteract this. This project was not designed to determine the effect of spiritual care in this patient population with long-term follow-up assessment.

Another limitation is that the PHQ-9 is a retrospective evaluation of depressive symptoms over the past two weeks. A stroke can be life-changing, and it may be challenging to think about one's state of mind over the past two weeks rather than this time of immediate crisis. This could inflate rates of depressive symptoms with further exacerbation from feelings of isolation, anxiety, or other distress stemming from the COVID-19 pandemic. However, the literature asserts that the PHQ-9 screening tool is sensitive (0.86) and specific (0.79) when used to evaluate the stroke population (Towfighi et al., 2017). Regardless, patients may have benefited from spiritual care whether the distress was related to the stroke event or not. The DNP student developed the nurse and chaplain satisfaction questionnaires; therefore, no validity or reliability

data exists. A minimal number of responses (n = 2) from the chaplains to the satisfaction survey is also a limitation.

Strengths

Despite the limitations noted above, this project was succesfully implemented amidst a global pandemic, exceeding project goals, and holistically addressing the needs of stroke patients endorsing symptoms of depression. Staff were overhwelmingly supportive of this change in practice and offers a readily available resource, pastoral care services, in a novel way with no added cost for the facility. This study adds to the body of literature regarding the importance of depression screening in the adult stroke population and how to successfully implement a protocol that links these patients with spiritual care services in an inpatient setting.

COVID-19 Pandemic

It is unknown to what extent the COVID-19 pandemic impacted this project. However, its effect on the project was likely multifaceted. The global pandemic has had a significant psychological and social impact. Economic disruption, social isolation, prolonged stress exposure, feelings of helplessness, or fear of contracting the virus may have exacerbated depressive symptoms in patients. These stressors were likely to have affected nursing staff as well, potentially influencing staff engagement. Some nurses may have been dealing with feelings of apathy regarding quality improvement in the wake of staff shortages related to the COVID-19 pandemic. Others may have had a heightened awareness of the importance of mental health, which could have positively influenced their engagement with the project.

Project implementation was delayed by approximately six months as a direct consequence of the COVID-19 pandemic. In that timeframe, the student lost two key stakeholders involved in the planning stages: the nurse manager and the chaplain overseeing the

acute neuroscience unit. The original nurse manager was critical in garnering support for this project as she sincerely believed that stroke patients could benefit from chaplains dedicated to serving the neuroscience population. Fortunately, a clinical lead who was a part of the original team maintained the support of this project when she took over the nurse manager position. Moreover, the original chaplain who was familiar with depression and PHQ-9 screening moved on, and the DNP student had to onboard new chaplains who were not as familiar with the assessment tool.

Communication between the DNP student and the staff transitioned largely to a virtual forum, limiting in-person interactions with the staff. In addition, live staff education moved to an online format, and a recorded presentation was uploaded to YouTube. This lack of face-to-face interaction may have influenced rapport and engagement. However, electronic communication did allow an opportunity for increased accessibility to the DNP student leader.

Goals of Dissemination

The primary goal of disseminating the project results is to publish a manuscript in a well-respected, peer-reviewed journal targeting stroke health care professionals. The dissemination plan includes sharing this quality improvement project with other stroke centers and national organizations to improve the mental health of stroke survivors by taking a holistic approach to inpatient care. Sharing this information on a grand scale through national conferences hosted by organizations such as the AHA, ASA, or the American Association of Neuroscience Nurses will aid in reaching a larger audience.

An overview of this project with final results was provided on June 23rd, 2021, as a part of the facility's Joint Commission Comprehensive Stroke Certification survey. Stroke health care providers from this facility, including physicians, nurse practitioners, nurse managers, registered

nurses, and stroke program employees, along with members of the Joint Commission were in attendance. Staff from the stroke program, neuroscience nurses, and the pastoral care department were invited to attend the final defense in support of this project on October 18th, 2021.

Conclusion

Routine depression screening in adults with stroke is critical for reducing morbidity and disability in this patient population (Dar et al., 2017; Towfighi et al., 2017). PSD is likely multifactorial, but this sudden change in self-identity and ability to be independent can lead to emotional and spiritual distress (Dar et al., 2017; Lapadatu & Morris, 2019; Pai et al., 2019; Towfighi et al., 2017). Therefore, addressing PSD treatment from a holistic standpoint is important as greater spiritual resilience may help these patients cope with the stress of this sudden shift from their normal life (Macdonald, 2017). The results of this QI project demonstrate how instituting a pastoral care consult protocol in response to a positive depression screening in stroke can be successfully implemented on an inpatient neuroscience unit.

The key elements for success followed the ADKAR Model for Change Management: engaging unit leadership and staff education (Awareness & Desire), providing clear guidelines and EMR refresher (Knowledge), providing supportive feedback, coaching and visual reminders (Ability), and sharing of results of each PDSA cycle with staff (Reinforcement). In addition, small, incremental changes were made with each PDSA cycle based on data analysis and stakeholder feedback throughout implementation and led to recommendations for the long-term sustainability of this protocol.

APPENDIX A: SITE LETTERS OF SUPPORT

From: **Norton, Crystal B.** Crystal.Norton@unchealth.unc.edu
Subject: Approval for Quality Improvement Project: Nurse-Driven Pastoral Care Consult in Poststroke Depression
Date: December 14, 2020 at 1:27 PM
To: Nursing Research (UNCMC) NursingResearch@unchealth.unc.edu
Cc: akanoy@email.unc.edu

CN

To whom it may concern:

My name is Crystal Norton and I am currently the interim nurse manager for 6 Neuroscience. I am writing this email to indicate my approval for the Quality Improvement project titled*: Nurse-Driven Pastoral Care Consult in Poststroke Depression* on our unit. Please let me know if anything additional is needed.

Thank you,

Crystal

Crystal L. Norton, BSN, RN-BC, SCRN| Interim Nurse Manager
6 Neuroscience
Team Surgery Service
UNC Health
101 Manning Dr
Chapel Hill, NC 27514
984-974-3379
Crystal.Norton@unchealth.unc.edu

From: **Burnett, Nicole** Nicole.Burnett@unchealth.unc.edu
Subject: Approval for Pastoral Care in Post Stroke Depression Research Project
Date: December 14, 2020 at 2:13 PM
To: Nursing Research (UNCMC) NursingResearch@unchealth.unc.edu
Cc: akanoy@email.unc.edu

NB

Good afternoon,
I am the nurse manager of the Comprehensive Stroke Program at UNC Medical Center and am sending my approval of Polly Kanoy's 'Nurse-Driven Pastoral Care Consult in Post Stroke Depression'. Please feel free to let me know if you have any questions or need anything else from my end. Thank you! Nicole

Nicole Burnett, MSN, RN, CNRN, SCRN, CCRN-K | Stroke Program Manager
UNC Hospitals Comprehensive Stroke Center
101 Manning Drive Chapel Hill, NC 27514
o. 984.974.2197 | p. 919.216.1480
Nicole.Burnett@unchealth.unc.edu
uncstroke.org

From: **Greene, Shay** Shay.Greene@unchealth.unc.edu
Subject: NRC approval
Date: January 22, 2021 at 4:27 PM
To: Nursing Research (UNCMC) NursingResearch@unchealth.unc.edu
Cc: Kanoy, Polly akanoy@live.unc.edu

Polly,
The Department of Pastoral approves the research concerning the application of pastoral care consults in the Nurse Driven Pastoral Care Consult in Poststroke Depression Study. We look forward to partnering with you and the staff of 6 NSH. We also eagerly await the results of your research.

Shay Montgomery Greene, M.Div., BCC
Director
Department of Pastoral Care
UNC Hospitals
101 Manning Drive
Chapel Hill, NC 27617
Office: 984-974-0214
Pager: 919-347-0169
Fax: 984-974-0330

APPENDIX B: IRB LETTER OF EXEMPTION

IRB Notice - 20-3567

IRB <no_reply@unc.edu>
Tue 1/12/2021 3:23 PM
To: Kanoy, Polly <akanoy@live.unc.edu>
Cc: Wilson, Susan Elizabeth <WilsonS@neurology.unc.edu>

To: Polly Kanoy and Leslie Sharpe
School of Nursing

From: Office of Human Research Ethics

Date: 1/12/2021
RE: Determination that Research or Research-Like Activity does not require IRB Approval
Study #: 20-3567

Study Title: NURSE-DRIVEN PASTORAL CARE CONSULT IN POSTSTROKE DEPRESSION

This submission, Reference ID 319105, was reviewed by the Office of Human Research Ethics, which has determined that this submission does not constitute human subjects research as defined under federal regulations [45 CFR 46.102 (e or l) and 21 CFR 56.102(c)(e)(l)] and does not require IRB approval.

Study Description:

Purpose:

The purpose of this quality improvement project is to improve access to spiritual care in the acute setting as a holistic component of poststroke depression (PSD) treatment by implementing a nurse-driven protocol to prompt a referral to pastoral care. Currently, there is no standard procedure for nursing to initiate spiritual care services for these patients as a component of PSD treatment. The nurse will place an order for referral to pastoral care for any adult stroke patient who screens positive for depressive symptoms, using a PHQ-9 score of 5 or greater. This project's desired outcomes include improvement in the PHQ-9 screening rate from 65.9% to >=80%, and the rate of pastoral care referrals placed for qualifying patients will be >=80%.

Participants:

Staff nurses of an intermediate neuroscience unit at UNC Medical Center.

Procedures (methods):

Nursing staff will be notified of this project at their monthly staff meeting in the month prior to planned implementation start date. There will be PowerPoint presentation of the evidence supporting this intervention to be played during the online Webex staff meeting in the month before the planned implementation start date. The DNP student leader will be in attendance to answer any questions. This should allow ample opportunity for staff nurses to address their concerns or ask questions. A copy of this recorded presentation will be provided electronically through email to all staff nurses of the unit and will include contact information for the DNP student leader.

The DNP student will obtain data from the EMR via chart auditing. PHQ-9 screening completion rates will be calculated from data obtained from the EMR by the DNP student. The rate of

subsequent pastoral care consult orders, the number of visits made, and the number of attempted visits will also be collected by the DNP student from the EMR via chart auditing. Data will be collected and analyzed weekly throughout the project implementation period. The nurses will be asked to voluntarily complete an online survey at the end of the implementation period to measure staff satisfaction and evaluate attitudes as they relate to the new protocol. Other outcome measures include PHQ-9 screening rate and rate of appropriate chaplain referrals. The DNP student will seek consultation from UNC School of Nursing's statistics department for analysis of data.

Please be aware that approval may still be required from other relevant authorities or "gatekeepers" (e.g., school principals, facility directors, custodians of records), even though IRB approval is not required.

If your study protocol changes in such a way that this determination will no longer apply, you should contact the above IRB before making the changes.

CC:
Susan Wilson, Neurology
Lisa Miller , School of Nursing Deans Office
Trent Hopper , School of Nursing Deans OfficeIRB Informational Message - please do not use email REPLY to this address

APPENDIX C: PHQ-9 SCREENING TOOL

Figure C.1

PHQ-9 Screening Tool

Nine-symptom Checklist

Name _____ Date _____

Over the *last 2 weeks*, how often have you been bothered by any of the following problems?	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

(For office coding: Total Score _____ = _____ + _____ + _____ + _____)

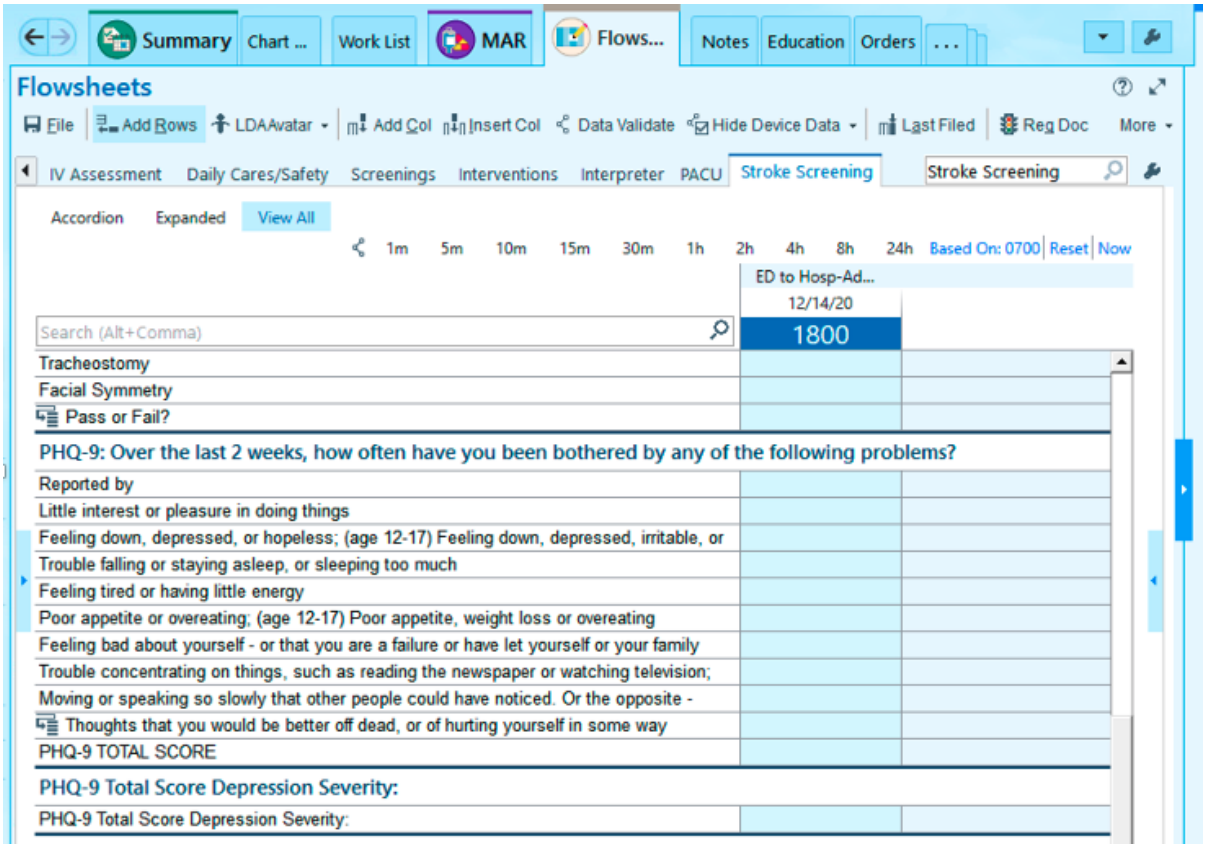
If you checked off *any* problems, how *difficult* have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult
☐	☐	☐	☐

Note: PHQ-9 screening tool. From "The PHQ-9: Validity of a Brief Depression Severity Measure," by K. Kroenke, F. L. Spitzer, & J. B. Williams, 2001, *Journal of General Internal Medicine, 16*(9), 606-613. Copyright 1999 by Pfizer Inc.

Figure C.2

PHQ-9 Depression Screening in Hospital EMR



APPENDIX D: SAMPLE SCRIPT

Sample Script

I would like to let you know that you can expect a visit from our hospital health care chaplain during your stay with us. As a part of your stroke care team, they will come by and speak with you about how they may be able to help support you while you are in the hospital.

APPENDIX E: NURSING SATISFACTION QUESTIONNAIRE

Nurse Survey of Pastoral Care Consult Protocol

As you fill out the following survey, please reflect on your experiences with referring stroke patients to pastoral care in the setting of positive PHQ-9 screenings over the past 3 months.

Please indicate the degree to which you agree with the following statements:

	Strongly Disagree	**Somewhat disagree**	**Somewhat Agree**	**Strongly Agree**
Stroke patients at this facility need help with depression.				
There is a relationship between depression and spiritual well-being.				
It is important to have a team approach to providing spiritual care to the stroke population.				
Nurses should help connect stroke patients to pastoral care in response to emotional distress.				
Helping stroke patients cope with emotional distress is within the chaplain's scope.				
I understand how pastoral care can promote positive outcomes for patients experiencing post-stroke depression.				
It is easy to place a referral to pastoral care as a response to a positive PHQ-9 screening score of ≥5.				
I believe that chaplain visits were meaningful experiences for my patients with post-stroke depression.				
I believe that chaplain visits had a positive impact on the outcomes of my patients with post-stroke depression.				

1. What went well with the implementation of this pastoral care consult protocol?

2. What barriers did you face in the implementation of this chaplain consult protocol?

3. Comments:

APPENDIX F: CHAPLAIN EXPERIENCE QUESTIONNAIRE

Chaplain Survey of Pastoral Care Referral in Poststroke Depression

1. For the past three months, nurses on the acute neuroscience floor were asked to place referrals to spiritual care for patients with a stroke diagnosis who screened positive for depression. What went well when responding to these referrals?

2. What obstacles or barriers did you experience responding to these referrals?

3. What changes would you recommend making this process more effective or efficient?

4. Do you think referrals for spiritual care were beneficial for stroke patients with depression?

5. Do you think the patients found these referrals for spiritual care in the setting of poststroke depression beneficial?

6. What lingering challenges do you see for chaplains to sustain a nurse-driven spiritual care consult protocol in response to positive depression screenings?

REFERENCES

Althubaiti, A. (2016). Information bias in health research: Definition, pitfalls, and adjustment methods. *Journal of Multidisciplinary Healthcare, 9*, 211-217. https://doi.org/10.2147/JMDH.S104807

Baker, D. C. (2000). The investigation of pastoral care interventions as a treatment for depression among continuing care retirement community residents. *Journal of Religious Gerontology, 12*(1), 63-84. https://doi.org/10.1300/J078v12n01_06

Boca, G. D. (2013). ADKAR model vs. quality management change. *Risk in Contemporary Economy, 14*, 246-253. https://www.researchgate.net/profile/Boca_Gratiela/publication/266310181_ADKAR_Model_vs_Quality_Management_Change/links/

Bone, N., Swinton, M., Hoad, N., Toledo, F., & Cook, D. (2018). Critical care nurses' experiences with spiritual care: The SPIRIT study. *American Journal of Critical Care, 27*(3), 212-219. https://doi.org/10.4037/ajcc2018300

Creehan, S. (2015). Building nursing unit staff champion programs to improve clinical outcomes. *Nurse Leader, 13*(4), 31-35. https://doi.org/10.1016/j.mnl.2015.06.001

Cunningham, J. L., Panda, M., Lambert, J., Daniel, G., & DeMars, K. (2017). Perceptions of chaplains' value and impact within hospital care teams. *Journal of Religion and Health, 56*(4), 1231-1247. https://doi.org/10.1007/s10943-017-0418-9

Dar, S. K., Venigalla, H., Khan, A. M., Ahmed, R., Mekala, H. M., Zain, H., & Shagufta, S. (2017). Post stroke depression frequently overlooked, undiagnosed, untreated. *Neuropsychiatry, 7*(6), 906-919. https://doi.org/10.4172/Neuropsychiatry.1000296

de Man-van Ginkel, J. M., Gooskens, F., Schuurmans, M. J., Lindeman, E., & Hafsteinsdottir, T. B. (2010). A systematic review of therapeutic interventions for poststroke depression and the role of nurses. *Journal of Clinical Nursing, 19*(23-24), 3274-3290. https://doi.org/10.1111/j.1365-2702.2010.03402.x

Donatella, B. (2012). *The performance of the Warwick Edinburgh Mental Wellbeing Scale as a screening tool for depression in the UK and in Italy.* Italy: University of Bologna.

Ellis-Hill, C., Payne, S., & Ward, C. (2008). Using stroke to explore the life thread model: An alternative approach to understanding rehabilitation following an acquired disability. *Disability and Rehabilitation, 30*(2), 150–159. https://doi.org/10.1080/09638280701195462

Ellis-Hill, C. S., & Horn, S. (2000). Change in identity and self-concept: A new theoretical approach to recovery following a stroke. *Clinical Rehabilitation, 14*(3), 279–287. https:/doi.org/10.1191/026921500671231410

Emery, E. E. (2013). Who am I with Parkinson's disease? A psychologist response to chaplain intervention in the context of identity theory. *Journal of Health Care Chaplaincy, 19*(3), 120–129. https://doi.org/10.1080/08854726.2013.807696

Esposito, N. (n.d.). Introduction to theory pt II: Models, frameworks, paradigms etc [PowerPoint slides]. https://sakai.unc.edu/portal/site/c8de084f-8743-4422-8faf-7b2d475e1e97/tool/074e8057-fad4-4fa7-a786-f8c20eb7c352?panel=Main

Flannelly, K. J., Weaver, A. J., & Handzo, G. F. (2003). A three-year study of chaplains' professional activities at Memorial Sloan-Kettering Cancer Center in New York City. *Psycho-Oncology, 12*(8), 760-768. https://doi.org/10.1002/pon.700

Galek, K., Flannelly, K. J., Koenig, H. G., & Fogg, S. L. (2007). Referrals to chaplains: The role of religion and spirituality in healthcare settings. *Mental Health, Religion & Culture, 10*(4), 363-377. https://doi.org/10.1080/13674670600757064

Greenhalgh, T. (2014). *How to read a paper: The basics of evidence-based medicine* (5th ed.). BMJ Books.

Hackett, M. L., Anderson, C. S., House, A., & Xia, J. (2008). Interventions for treating depression after stroke. *Cochrane Database of Systematic Reviews, 2008*(4), CDC003437. https://doi.org/10.1002/14651858

Hackett, M. L., & Pickles, K. (2014). Part I: Frequency of depression after stroke: An updated systematic review and meta-analysis of observational studies. *International Journal of Stroke, 9*(8), 1017-1025. https://doi.org/10.1111/ijs.12357

Hiatt, J. (2006). *ADKAR: A model for change in business, government and our community*. Loveland, Colorado: Prosci Research.

Holloway, R. G., Arnold, R. M., Creutzfeldt, C. J., Lewis, E. F., Lutz, B. J., McCann, R. M., Rabinstein, A. A., Saposnik, G., Sheth, K. N., Zahuranec, D. B., Zipfel, G. J., & Zorowitz, R. D. (2014). Palliative and end-of-life care in stroke: a statement for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke, 45*(6), 1887–1916. https://doi.org/10.1161/STR.0000000000000015

Hughes, D. (2019, June 14). *How humor can keep employees engaged.* Society for Human Resource Management. https://www.shrm.org/resourcesandtools/hr-topics/employee-relations/pages/viewpoint-how-humor-can-keep-employees-engaged.aspx

Institute for Healthcare Improvement. (2019). Herbert Kaufman: Common barriers to change. http://app.ihi.org/lmsspa/#/6cb1c614-884b-43ef-9abd-d90849f183d4/6d2b36c7-eee1-41b4-a852-67d1c4837404/lessonDetail/05411760-1c70-4ac0-a760-1916cba1f3dd/page/2

Institute for Healthcare Improvement. (2020). *How to improve*. http://www.ihi.org/resources/Pages/HowtoImprove/default.aspx

Institute for Healthcare Improvement. (2019). How to respond to resistance to change. http://app.ihi.org/lmsspa/#/6cb1c614-884b-43ef-9ab-dd90849f183d4/6d2b36c7-eee1-41b4-a852-67d1c4837404/lessonDetail/05411760-1c70-4ac0-a760-1916cba1f3dd/page/3

Kim, K., Bauck, A., Monroe, A., Mallory, M., & Aslakson, R. (2017). Critical care nurses' perceptions of and experiences with chaplains: Implications for nurses' role in providing spiritual care. *Journal of Hospice & Palliative Nursing, 19*(1), 41-48. https://doi.org/10.1097/NJH.0000000000000303

Kirkevold, M., Bronken, B. A., Martinsen, R., & Kvigne, K. (2012). Promoting psychosocial well-being following a stroke: Developing a theoretically and empirically sound complex intervention. *International Journal of Nursing Studies*, *49*(4), 386–397. https://doi.org/10.1016/j.ijnurstu.2011.10.006

Koenig, H. G., Bearon, L. B., Hover, M., & Travis, J. L. (1991). Religious perspectives of doctors, nurses, patients, and families. *The Journal of Pastoral Care, 45(*3), 254-267. https://doi.org/10.1177/002234099104500306

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine, 16*(9), 606-613. https://doi.org/10.1046/j.1525-1497.2001.016009606.x

Lamb, M., Buchanan, D., Godfrey, C. M., Harrison, M. B., & Oakley, P. (2008). The psychosocial spiritual experience of elderly individuals recovering from stroke: A systematic review. *JBI Library of Systematic Reviews, 6*(12), 432-483. https://doi.org/10.1111/j.1744-1609.2008.00079.x

Lamming, L., McDonach, E., Mohammed, M. A., Stoves, J., Lewington, A. J., Roberts, R., Samarasinghe, Y., Shah, N., Fluck, R. J., Jackson, N., Johnson, M., Jones, C., & Selby, N. M. (2019). Barriers and enablers to the implementation of a complex quality improvement intervention for acute kidney injury: A qualitative evaluation of stakeholder perceptions of the Tackling AKI study. *PLoS One, 14*(9), e0222444. https://doi.org/10.1371/journal.pone.0222444

Lapadatu, I., & Morris, R. (2019). The relationship between stroke survivors' perceived identity and mood, self-esteem and quality of life. *Neuropsychological Rehabilitation, 29*(2), 199-213. doi: https://doi.org/10.1080/09602011.2016,1272468

Macdonald, G. (2017). The efficacy of primary care chaplaincy compared with antidepressants: A retrospective study comparing chaplaincy with antidepressants. *Primary Health Care Research & Development, 18,* 354-365. https://doi.org/10.1017/S1463423617000159

Melnyk, B. M., & Fineout-Overholt, E. (2019). Making the case for evidence-based practice and cultivating a spirit of inquiry. B. M. Melnyk & E. Fineout-Overholt (Eds.), *Evidence-Based Practice in Nursing & Healthcare: A Guide to Best Practice* (pp. 7-32). Wolters Kluwer.

Øverland, S., Woicik, W., Sikora, L., Whittaker, K., Heli, H., Skjelkvåle, F. S., Siversten, B., & Colman, I. (2019). Seasonality and symptoms of depression: A systematic review of the literature. *Epidemiology and Psychiatric Sciences, 29.* e31. https://doi.org/10.1017/S2045796019000209

Pai, H. C., Li, C. C., Tsai, S. M., & Pai, Y. C. (2019). Association between illness representation and psychological distress in stroke patients: A systematic review and meta-analysis. *International Journal of Nursing Studies*, *94*, 42–50. https://doi.org/10.1016/j.ijnurstu.2019.01.015

Paun, M. (2014). Models of change. *Valahian Journal of Economic Studies, 5*(3), 7-14. https://search-proquest-com.libproxy.lib.unc.edu/docview/1685869695/fulltextPDF/767DD4186D534B97PQ/1?accountid=14244

Prosci. (n.d.). Prosci change management methodology. https://www.prosci.com/resources/articles/change-management-methodology

Purvis, T. E., Powell, B., Biba, G., Conti, D., Crowe, T. Y., Thomas, H., Carhuapoma, J. R., Probasco, J., Teague, P., & Saylor, D. (2019). Staff perceptions of chaplains in a neurosciences critical are unit. *Journal of Religion and Health, 58*(6), 2086-2094. https://doi.org/10.1007/s10943-019-00935-2

Risk, J. L. (2013). Building a new life: A chaplain's theory based case study of chronic illness. *Journal of Health Care Chaplaincy*, *19*(3), 81–98. https://doi.org/10.1080/08854726.2013.806117

Shepherd, M. L., Harris, M. L., Chung, H., & Himes, E. M. (2014). Using the awareness, desire, knowledge, ability, reinforcement model to build a shared governance culture. *Journal of Nursing Education and Practice, 4*(6), 90-104. https://doi.org/10.5430/jnep.v4n6p90

Siegel, B. I., Figueroa, J., & Stockwell, J. A. (2018). Impact of daily PICU rounding checklist on urinary catheter utilization and infection. *Pediatric Quality and Safety, 3*(3), e078. https://doi.org/10.1097/pq9.0000000000000078

Towfighi, A., Ovbiagele, B., El Husseini, N., Hackett, M. L., Jorge, R. E., Kissela, B. M., Mitchell, P. H., Skolarus, L. E., Whooley, M. A., & Williams, L. S. (2017). Poststroke depression: A scientific statement for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*, *48*(2), e30–e43. https://doi.org/10.1161/STR.0000000000000113

UNC Health. (2020). [Unpublished raw data set]. UNC Health.

Weinberger-Litman, S. L., Muncie, M. A., Flannelly, L. T., & Flannelly, K. J. (2010. When do nurses refer patients to professional chaplains? *Holistic Nursing Practice, 24*(1), 41-43. https://doi.org/10.1097/HNP.0b013e3181c8e491

Wilson, C. S., Forchheimer, M., Henemann, A. W., Warren, A. M., & McCullumsmith, C. (2017). Assessment of the relationship of spiritual well-being to depression and quality of life for persons with spinal cord injury. *Disability and Rehabilitations, 39*(5), 491-496. https://doi.org/10.3109/09638288.2016.1152600

Wilson, S. E. (2017). *Implementation and evaluation of depression improvement program in stroke care (DIPS)* [Unpublished doctoral dissertation]. University of North Carolina at Chapel Hill.

Wong, Q., Lacombe, M., Keller, R., Joyce, T., & O'Malley, K. (2019). Leading change with ADKAR. *Nursing Management, 50*(4), 28-35. https://doi.org/10.1097/01.NUMA.0000554341.7