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DECREASING HOSPITAL READINESS WITH POST-HOSPITAL DISCHARGE PRIMARY CARE CLINIC APPOINTMENTS

by

David Lee Snodgrass

A Doctoral Project
Submitted to the Graduate School,
the College of Nursing and Health Professions
and the School of Leadership and Advanced Nursing Practice
at The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Nursing Practice

Approved by:

Dr. Marti Jordan, Committee Chair
Dr. Carolyn Coleman, Committee Member

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ABSTRACT

The Centers for Medicare and Medicaid Services (CMS) continue to apply costly financial penalties for hospital readmission. Hospital readmission can stem from multiple causes which can lead to poor health outcomes or increased healthcare financial costs. However, with the use of an implemented 14-day post-hospital follow-up appointment with a primary care provider, hospital readmission could be reduced, and patient care improved. The multiple factors that can lead to hospital readmission include non-adherence to medication, socioeconomic factors, patient-related factors, condition-related factors, or health system-related factors. Through the implementation of post-hospital discharge follow-up visits within 14 days of discharge, hospital readmissions could be reduced.

The purpose of the Doctor of Nursing Practice (DNP) project was to identify factors that affect a patient's hospital readmission in an identified hospital facility with a general nonspecific discharge patient population with multi-discharge diagnoses. To identify these factors patients had a scheduled follow-up visit completed within 14 days of discharge from the selected hospital facility. In the follow-up visit the identified provider and researcher addressed the patient's concerns, medication reconciliation, pending or needed laboratory tests, or other concerns. A post-hospital transition of care form could also be completed within one to two business days post-hospital discharge. The results of the DNP project found that due to an unforeseen stoppage of the study the limited data did not support the use of a hospital discharge follow-up visit within 14 days. The results provided no evidence of any decreased rate of hospital readmission as the data was limited with small sample size. The DNP project suggested that further research

is needed to determine if follow-up visits within 14 days of hospital discharge provide decreased hospital readmissions.

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TABLE OF CONTENTS

ABSTRACT ii

ACKNOWLEDGMENTS iv

LIST OF ABBREVIATIONS viii

CHAPTER I - INTRODUCTION 1

Background 1

Significance 2

Purpose of the Project 4

PICOT 4

Needs Assessment 6

Factors of Social Determinants of Health of Selected Patient Population 6

Population and Health Diet 7

Community Collaboration 7

Stakeholder and Champions 8

Barriers for Patient Population 8

Synthesis of Evidence 9

Medication Reconciliation 10

Transition of Care 11

Financial Cost of Readmissions 12

View of Transition of Care 12

Electronic Health Records 13
Theoretical Background 15
DNP Essentials 15
DNP Essential I: Scientific Underpinnings for Practice 16
DNP Essential II: Organization and Systems Leadership for Quality Improvement and Systems Thinking 16
DNP Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice 17
DNP Essential IV: Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care 17
DNP Essential V: Health Care Policy for Advocacy in Health Caregiver 17
DNP Essential VI: Interprofessional Collaboration for Improving Patient and Population Health Outcomes 18
DNP Essential VII: Clinical Prevention and Population Health for Improving the Nation's Health 18
DNP Essential VIII: Advanced Nursing Practice 18
Logic Model 19
Summary 19
CHAPTER II - METHODS 21
Context 21

Target Population 21

Design 21

Procedures 22

Assumptions 23

Summary 23

CHAPTER III – RESULTS 24

Summary 24

CHAPTER IV – DISCUSSION 25

Interpretations 25

Limitations 26

Conclusion 27

APPENDIX A – Transition of Care Forms 29

APPENDIX B – Logic Model 30

APPENDIX C –IRB Approval Letter 31

REFERENCES 32

LIST OF ABBREVIATIONS

AACN	American Association of the Colleges of Nursing
AHRQ	Agency of Healthcare Research and Quality
APRN	Advanced Practice Registered Nurse
CDC	Center for Disease Control and Prevention
CMS	Centers for Medicaid and Medicare Services
CPT	Current Procedural Technology
ED	Emergency Department
IRB	Institutional Review Board
PDF	Portable Document Format
USM	The University of Southern Mississippi

CHAPTER I - INTRODUCTION

Discharging hospital facilities can sustain financial reimbursement penalties due to readmission of discharged hospital patients within specific times. The patient can also have adverse events post-hospital discharge due to poor discharge planning or unanswered questions after hospital discharge. Marcondes et al. (2019), completed a cohort study that found providing timely post-hospital discharge appointments resulted in a more timely follow-up appointment with a primary care provider. However, its impact on hospital readmission was unclear. The targeted population of interest is discharged hospitalized patients over the age of 18 years in a hospital status of observation, inpatient, or outpatient at discharge. The patient population discharged from the behavioral health and obstetrics units of the selected hospital facility was xcluded from the current study. The intervention consists of scheduling follow-up appointments for discharged patients within 14 days after their hospital discharge with the possible use of transition of care form, see Appendix A. The appointments are with the selected primary care provider in a primary care clinic setting. The goals of the study was to prove that scheduling hospital discharge follow-up appointments within 14 days of discharge can decrease hospital readmission rates and increase primary care clinic financial revenue. The following paper will focus on further identifying the patient population of interest and how the multiple factors affecting hospital readmission can be dealt with using primary care follow-up visits post-hospital discharge.

Background

Discharging hospital facilities can sustain financial reimbursement penalties due to readmission of discharged hospital patients within specific periods of time. The patient

can also have adverse events post-hospital discharge due to poor discharge planning or unanswered questions after hospital discharge. Marcondes et al. (2019), completed a cohort study that found providing timely post-hospital discharge appointments resulted in a more timely follow-up appointment with a primary care provider. However, its impact on hospital readmission was unclear. The targeted population of interest is discharged hospitalized patients over the age of 18 years in a hospital status of observation, inpatient, or outpatient at discharge. The patient population discharged from the behavioral health and obstetrics units of the selected hospital facility is excluded from the current study. The intervention consists of scheduling follow-up appointments for discharged patients within 14 days after their hospital discharge with the possible use of transition of care form, see Appendix A. The appointments were completed with the selected primary care provider in a primary care clinic setting. The goals of the study are to prove that scheduling hospital discharge follow-up appointments within 14 days of discharge can decrease hospital readmission rates and increase primary care clinic financial revenue. The following paper will focus on further identifying the patient population of interest and how the multiple factors affecting hospital readmission can be dealt with using primary care follow-up visits post-hospital discharge.

Significance

The importance of completing a hospital discharge follow-up appointment cannot be underestimated. However, very few studies have focused on a 14-day duration of time post-discharge. Most reviewed studies focused on a seven-day duration of time post-hospital discharge. The patient and discharging hospital facility have a vested interest in the discharged patient. The facilities used by patients can incur stresses such as decreased

financial insurance payments or increased health care demand due to health pandemics. Therefore, it is important that the patient completes a comprehensive discharge plan before leaving the hospital. However, if the discharge process is not completed appropriately, then a secondary process must be in place to address the issues that the patient may have after hospital discharge. Vernon et al. (2019), completed a study that found 15% of elderly patients were readmitted within 28 days after discharge. The study by these authors also showed that an intervention of a nurse contacting these geriatric patients caused a decrease in the 30-day readmission rate. The concept in the study provided evidence that contact with the discharged patient decreased readmission, but my intervention will be within 14 days from hospital discharge. Keim et al. (2020), noted that most hospital readmissions occurred within 14 days after hospital discharge. Through the scheduling of a 14-day post-hospital discharge primary care clinic appointment, hospital readmissions could potentially be reduced with decreased financial readmission penalties and improved patient care. Currently, hospital readmission can be financially costly to the discharging hospital due to current regulations in place. Panagiotou et al. (2019), found that hospital readmission cost to the Centers for Medicare and Medicaid Services (CMS) was 26 billion annually. Better technology has caused increased scrutiny of healthcare costs. Due to the current regulations and scrutiny, the net operating profit margin has continued to decrease at hospital corporations. If the hospital corporation is unable to sustain the financial cost, then there is a possible loss of services or providers. Unknown to most people, most of the hospital-owned primary care clinics do not make a net financial profit. An article by Smith (2018), reviewed revenues of primary care clinics that were privately owned versus hospital facility owned clinics. The article related that

that only the top 10%of primary care clinics made a net financial profit, leaving 90% of the other primary care clinics with an operating financial loss incurred to the hospital-owned facility.

Purpose of the Project

The purpose of this DNP project was to identify discharged hospital patients greater than 18 years of age who were discharged from the selected hospital facility and then sent to a selected primary care provider. There was an increased focus on completing the hospital discharge follow-up appointment within 14 days of discharge. It would then be determined if hospital readmissions within 30 days decreased, increase, or were unchanged after the intervention. The long-term goal of this DNP project will be to produce practice changes that will increase post-hospital discharge follow-up appointments' compliance in the primary care setting. Variables including gender, discharge date, clinic appointment date, completion of appointment in-office setting, readmission date, and diagnosis wereexamined. The findings of this DNP project are noted within the current DNP project. The executive summary is projected to show that the use of a follow-up visit within 14 days of discharge with a primary care provider is effective as a 7-day discharge follow-up visit in decreasing hospital readmissions.

PICOT

The focus of this research paper was on discharged hospital patients from a selected hospital facility with the exclusion of behavior health and obstetrics patients who were over 18 years old in a hospital discharge status of outpatient, inpatient, or observation status. The identified post-hospital discharge patients completed a primary care follow-up appointment within 14 days of hospital discharge at the selected primary

care provider clinic. A 30-day retrospective review was completed of all identified discharged patients who do and do not follow up with the identified primary care provider. Multiple interventions were completed to decrease hospital readmission. The first intervention implemented was an electronically generated hospital discharge summary of the selected primary care provider attributed to patients that were discharged from the selected hospital facility on a daily format. The selected primary care provider then reviewed the email daily for a generated list of discharged patients with an electronic transition of care summary. The discharged hospital patients were attempted to be contacted by the primary care provider of the clinic via a phone call within two business days post-hospital discharge. Through the phone call, completion of the transition of care form was possibly completed with any identified issues to be addressed at the scheduled hospital discharge appointment. The patient's follow-up hospital discharge appointment was scheduled within 14 days after hospital discharge with the selected primary care clinic provider. The limitation of the appointment consists of the availability of the identified primary care provider's office schedule. The last intervention was monitoring all identified hospital discharged patients attributed to the known provider for 30 days post-hospital discharge, regardless of whether the discharged hospital patient completed a follow-up visit in the primary care clinic setting. With the completion of the interventions, comparisons and statistical analysis were calculated. The first comparison was the readmission hospital rates for a patient who was discharged to the identified provider who did and did not complete hospital discharge follow-up in the primary care setting. The time of the DNP project encompassed a specific time with a possible general aggregate sample patient population of 15 patients needed. This patient population

encompassed patients that completed and did not complete hospital discharge follow-up at the primary care clinic provider's office. This allotted period would conceivably allow for an adequate number of patients to be reviewed and substantiate the data.

Needs Assessment

Hospital readmission has continued to be one of the main concerns of discharging hospital facilities. The selected population of interest is discharged hospitalized patients in a hospital status of observation, outpatient, or inpatient status with the exclusion of discharge areas of behavioral health and obstetrics units of the selected hospital facility. The goal is to capture a large general patient population with multiple ages and conditions within a rural health setting of Mississippi. The population of interest reviewed in the 2021 health rankings has an above-average percentage versus the United States population in smoking, obesity, physical inactivity, uninsured population under age 65, preventable hospital stays, and unemployment. The risk factors of this population predispose them to a higher risk of health complications and increased risk of hospital readmission.

Factors of Social Determinants of Health of Selected Patient Population

Hospital readmission has continued to be one of the main concerns of discharging hospital facilities. The selected population of interest is discharged hospitalized patients in a hospital status of observation, outpatient, or inpatient status with the exclusion of discharge areas of behavioral health and obstetrics units of the selected hospital facility. The goal is to capture a large general patient population with multiple ages and conditions within a rural health setting of Mississippi. The population of interest reviewed in the 2021 health rankings has an above-average percentage versus the United

States population in smoking, obesity, physical inactivity, uninsured population under age 65, preventable hospital stays, and unemployment. The risk factors of this population predispose them to a higher risk of health complications and increased risk of hospital readmission.

Population and Health Diet

The population health needs and factors of the selected patient population are scattered as the age, race and ethnicity are not of any similar characteristics. Through my known clinical practice, most of the identified patient population in the clinic setting being of European descent with some form of insurance being present in most of the patient population. The patient population does also contain other ethnicities, with most of this patient population having some form of insurance. The known population of the clinic however does reside in rural geographical areas of Mississippi. The same noted known risk factors of the state of Mississippi however still apply to this patient population.

Community Collaboration

The community collaboration consists of representatives from the selected hospital. From my known current practice, there are certain home health agencies within the vicinity of the hospital that would require representation. Durable medical companies would also need input as their guidelines continue to change but the need for their services is required. The input of the surrounding patient population and healthcare organizations are significant as they could possibly influence hospital readmission in the selected patient population.

Stakeholder and Champions

For the current population of interest, the main stakeholder would be the discharging hospital in association with the identified primary care provider. The hospital administration has a vested financial incentive to decrease readmission but also to improve publicly reported quality metrics. Rau (2020) reported in Kaiser Health News that CMS will penalize certain hospitals by as much as 3% in the future due to hospital readmission. The primary care provider's main goal was to provide quality care with decreased hospital readmission as statistical data is collected on individual providers by certain monitoring healthcare entities. The nursing and other ancillary staff need for the patient to continue to follow up post-hospital discharge as the discharged patient may conceivably use other hospital resources post-discharge or in the future. The community of the patient population has a vested interest due to the fact that the selected hospital and clinic could possibly provide healthcare to their family or friends.

Barriers for Patient Population

The identified general patient population of Mississippi has a large number of known barriers through learned knowledge in the clinic setting and literature review. A large number of patients in poverty in the state of Mississippi places these patients at increased risk of not being able to afford medications, post-hospital discharge services, or the ability to complete post-hospital discharge follow-up clinical evaluation. The population can have limited or unreliable transportation as most of the geographical area of the state of Mississippi is defined as rural. This rural geographical terrain may require extended drive time if transportation to the clinical visit is available. The patient population also has a large amount of obesity, contributing to other known or unknown

health problems. The limited amount of education in the patient population can also cause the patient to be unable to follow post-discharge directions. Limited education also increases the risk of the patient not being able to truly understand the significance of their health problem(s). These barriers are just some of the many health disparities facing the patient population of Southern Mississippi.

Synthesis of Evidence

The purpose of this literature review was to determine what evidence was currently available that showed decreased hospital readmission with an intervention of post-hospital discharge follow-up appointment within 14 days. The following databases were utilized in the search for scholarly articles related to the DNP project, which included the following: *CINAH*L with Full Text, *Consumer Health Comple*te *EBSCOhost, Health Source*: *Nursing/Academic Edition*, and *MEDLINE*. The first search contained keywords of hospital, transition of care, and discharge with filter criteria of full text, English language, evidenced-based practice, PDF full text, and the year 2016 to 2021. The search resulted in 842 articles with 88 articles being reviewed and only five being used for the current project. The second refined search used the same listed databases with keywords of hospital discharge, transition of care, and primary care with filter criteria of full text, English language, evidenced-based practice, PDF full text, and the year of 2016 to 2021. The search resulted in 59 articles with a review of 32 of the articles and only four articles being used for the current project. The initial data showed that little information is currently available for a general patient population being studied for hospital readmission with the use of primary care office visits within 14 days of hospital discharge. There were multiple articles reviewed pertaining to the use of post-

hospital discharge office visits, but all were defined to a selected patient population, medical diagnosis, or a certain amount of days post-hospital discharge. Therefore, there is a need for the current research project.

Medication Reconciliation

Hospital readmission continues to be a quality indicator of the discharging hospital facility. Through my current family medicine practice, multiple medication errors or duplication of medication have been identified in post-hospital discharge transition of care visits. Patel et al. (2019), completed a study of 600 patients with a control group versus a group with intervention. The article showed that discharged patients who are incorrectly or not taking the correct discharge medication(s) are at a higher risk of hospital readmission. This article provided evidence that post-hospital discharge follow-up appointments in the clinic setting can possibly decrease hospital readmission. A second article reviewed shed insight into the patient's perception of post-discharge medication management. Tomlinson et al. (2020), completed a study with results showing that through conversations with participants, health care professionals often lacked communication on made medication changes. The study identified areas of improvement, with better communication about medication changes and involvement from the family, was needed. The importance of this article provided evidence that if the discharged patient was incorrectly or not taking the correct medication(s), then a possible complication requiring readmission to the discharging facility may occur. Therefore, with the use of a 14-day post-hospital discharge clinic visit more communication about the patient's medication can be completed filling the knowledge gap.

Transition of Care

The use of transition of care visits post-hospital discharge has been reviewed with prior studies. These studies are usually inclusive of a selected specific discharge diagnosis with a defined patient population. Through the literature review, multiple studies contained many different interventions but were specifically associated with identified discharge diagnoses. The literature provided evidence for and against the transition of care visits decreasing hospital readmission. Otsuka et al. (2019), completed a retrospective cohort study to evaluate the impact of the interprofessional transition of care service on 30-day hospital readmission and emergency department visits. The results showed that patients who completed intervention with the interprofessional transition of care group had decreased 30-day hospital readmissions but had no impact on 30-day emergency department visits. The transition of care group consisted of nurses, pharmacists, physicians, and social workers. The importance of this article is that it provided evidence that using patient engagement in a post-hospital discharge, hospital readmissions were decreased. This intervention could be completed with a selected provider in the 14-day time from discharge with a possible reduction in readmissions. Another retrospective cohort study by Sorensen et al. (2020), evaluated a collaboration between community-based health coaches and primary care-based pharmacists with a goal of reduction of hospital readmission post-discharge. The results showed that patients who received the intervention of a health coach conducting home visits with information from the pharmacist had a significantly lower predicted probability of being readmitted within 30 days compared to the control group. The article also provided evidence that hospital readmissions could perhaps be reduced with a post-hospital discharge clinic

appointment with a primary care provider instead of a health coach that could similarly review the patient's medications.

Financial Cost of Readmissions

The financial cost of readmissions to a healthcare facility can be determinant. Ni et al. (2018), completed a non-randomized, observational cohort study of 830 referred patients that evaluated the impact of a pharmacy-based transitional care program on healthcare cost in an identified high-risk patient population. The results of the study showed with the pharmacy intervention there was an average decreased cost of 2,139 dollars per person lower versus the control group. The estimated financial savings was 1.8 million dollars. The importance of this article was that it provided evidence that transition of care visits could be beneficial to the patient and provide financial savings to the discharging hospital facility. It may also provide more efficacy for the use of a post-hospital discharge appointment with a primary care provider.

View of Transition of Care

Hospital readmissions are affected by many different influences and factors in the discharged patient population. There have been completed prior studies that have shown the environment, financial status or educational status of the patient population affects hospital readmission. Mitchell et al. (2018), completed multiple interviews of patients and caregivers to determine their experiences during care transitions and their desired outcomes from the health services. The results showed that through the interview process of patients and caregivers, there was a need to feel cared for by the medical provider. The second found outcome was a need for accountability from the discharging health care system. The last outcome was the need to feel prepared and capable of implementing the

plan of care. The importance of this article was that it showed that the transition of care visit provided the patient with a feeling that the healthcare provider and system had a concern for the patient. Therefore, if the transition of care visit occurs, the patient may be more likely to return to the known primary care clinic provider instead of the discharging hospital facility for possible readmission. Another study completed by Burke et al. (2018), reviewed an intervention by use of a transition nurse within the hospital and post-hospital process. The transition nurse scheduled the patient a primary care appointment within 14 days of hospital discharge. The transition nurse was also involved in contacting the patient post-discharge within 48-72 hours. The results of the study showed an increased rate of follow-up with the primary care provider within 14 days of discharge and a trend for fewer unplanned 30-day hospital readmissions. While this article only provided a trend, the current DNP project could provide further evidence that if a post-hospital discharge visit is completed within 14 days, it may cause a reduction in 30-day readmission. Another article by Liss et al. (2019), evaluated the effects of a transition care practice that addressed patients' medical and psychosocial needs post-hospital discharge. The study implemented a post-discharge appointment with a primary care provider who had partnered with the identified hospital. The results showed a decreased probability of an inpatient hospital admission over 90 days. While there was no specific reduction in 30 days noted, the study provided evidence that post-discharge appointments with a primary care provider are effective in hospital readmission reduction.

Electronic Health Records

The use of electronic health records has increased after prior healthcare laws increased the of use electronic documentation to meet regulation standards. The use of

the electronic health record has been viewed by providers as being possibly helpful with multiple factors influencing the provider's view. Munchhof et al. (2020), completed a review with surveys and interviews that examined how hospitalists and primary care providers shared electronic medical records with preferences to communication. The results of the study found that primary care providers preferred direct communication at discharge through a message within the electronic medical record. The hospitalists providers preferred a message within the electronic health record and email. The overlap is that both providers preferred direct communication at discharge through the electronic medical record. The article provided evidence that primary care providers want to know when their attributed patients are discharged. Currently, there is an electronic system of communication in place to identify the discharged patient(s) from the identified selected facility.

All these reviewed studies have provided evidence of different aspects affecting hospital readmission along with post-discharge transitional care visits. The articles have provided evidence that the views of the discharging healthcare facility and health members could perhaps affect the patient following up in the clinic setting. The use of the electronic health system could perhaps assist with the discharge process and transition of care visits. There continues to be a need for increased transition of care visits to address questions or concerns of discharged patients. The current research DNP project aims to provide further evidence that the use of post-hospital discharge transition of care visits with primary care providers can be financially beneficial to discharge facilities and decrease hospital readmission.

Theoretical Background

The choice theory was chosen and used for the research project. William Glasser, MD, created the choice theory while practicing psychology and counseling. The choice theory explains that the choices individuals make are driven by the needs of survival, love, freedom, belonging, fun, and power. The use of a "Quality World" was the image an individual has of a perfect world. The image of a perfect world is shaped from birth and continues throughout the individual's life with influences of role models, possessions, and beliefs contributing to the framework of the world. The individual is also shaped by human genetics. It was noted by Glasser (1998), that the human genome has many genes that have unknown functions still. A possible function of these genes is to provide a basis for our psychology and human behavior. The use of choice theory can be applied to human activities that can affect the health of the individual. The most important part of the theory is the use of fun or genetic reward for learning. "Fun is best defined by laughter" (Glasser, 1998, p. 41). Using post-hospital clinic visits, the patient will obtain knowledge in a controlled clinic environment that will foster trust in the patient and help meet the needs of the individual. The choice theory continues to contribute to patients' choices affecting their overall health.

DNP Essentials

The American Association of the Colleges of Nursing (AACN) has provided eight essential components required for completion of a Doctor of Nursing Practice degree. These essentials are foundational competencies and are required for all DNP graduates. This DNP project has addressed each essential requirement as outlined below.

DNP Essential I: Scientific Underpinnings for Practice

The first DNP essential completed was scientific underpinnings for practice. A review of literature and knowledge of the sciences was used to translate research findings that supported the current research DNP project. The use of a hospital discharge follow-up clinic appointment within 14 days in a primary care clinic setting is an example of the development and evaluation of the current practice approach that was theory-based in nursing. The significance and nature of the problem have been determined through literature review and prior patient interactions. The actions and advanced strategies to enhance post-hospital discharge were described with outcomes evaluated through descriptive review and analysis (American Association of Colleges of Nursing [AACN], 2006).

DNP Essential II: Organization and Systems Leadership for Quality Improvement and Systems Thinking

The organization and systems leadership requirement was completed by improving the safety of patients through post-hospital discharge office visits with the identification of possible adverse medication events. Questions about current or future care of identified current health conditions requiring office intervention were addressed. The need for a multi-modal approach to post-discharge appointments in the general patient population was assessed based on scientific, organizational, and economic sciences. The use of a post-hospital discharge hospital follow-up clinic visit was a method of communication that could potentially lead to improved quality, patient safety, and increased financial revenue within the facility for which it was developed (AACN, 2006).

DNP Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice

Prior to the increased focus and scheduling of hospital discharge follow-up appointments for the selected provider, only certain discharging diagnoses required a specific time for follow-up clinic visits from the selected hospital facility. Analytical methods were used to critically appraise the existing evidence to determine the best evidence for practice. Information technology was utilized, and research methods were applied to collect appropriate data to determine if the use of hospital follow-up appointments within a specific time decreased hospital readmission. Data will be analyzed with outcomes and patterns examined to identify gaps in the evidence. Through the use of current research, other healthcare providers and members may decide to engage in evidence-based practice to achieve better patient outcomes (AACN, 2006).

DNP Essential IV: Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care

The use of post-hospital discharge clinic visits and CPT billing as created using information systems/technology. The increased focus on hospital discharge visits in a clinic setting within a specific period with improving billing was designed to support the healthcare system and improve patient care. Through the use of garnered technical skills and conceptual ability, the development of the evaluation plan was formulated (AACN, 2006).

DNP Essential V: Health Care Policy for Advocacy in Health Caregiver

This essential requirement of advocacy was met through institutional decision-making of the healthcare facility to allow the transitional care visits to occur.

Organizational standards created a framework that allowed for patients to be identified and have scheduled post-hospital discharge. The use of follow-up appointments in the clinic setting adjudicated the healthcare provider advocacy. The engagement of the healthcare facility was central to allow the DNP research project to be partially completed. The policy put in place by the healthcare facility is inclusive of all healthcare patient populations. (AACN, 2006).

DNP Essential VI: Interprofessional Collaboration for Improving Patient and Population Health Outcomes

The development of the increased post-hospital discharge appointment in the clinic setting was executed through collaboration with the directors of the facility, the facility's stakeholders, and program faculty from The University of Southern Mississippi (USM). Through the use of interprofessional collaboration, research will be conducted to possibly improve health outcomes in the selected patient population (AACN, 2006).

DNP Essential VII: Clinical Prevention and Population Health for Improving the Nation's Health

This essential focuses on clinical prevention and population health for the health of the nation. Through enhanced communication among all members of the healthcare team, patient outcomes can be improved. The DNP project will inform other healthcare providers and members about the importance of hospital follow-up appointments in the clinic setting in a set time with a possible financial revenue implication (AACN, 2006).

DNP Essential VIII: Advanced Nursing Practice

The eighth and final essential was met through the design, implementation, and evaluation of hospital discharge follow-up appointments within the 14-day period in a

primary care clinic setting. The goals were to reduce hospital readmission and increase financial revenue through decreased hospital readmission. The interventions demonstrated an advanced level of clinical judgment with accountability in the design and delivery of the project. Evaluation of the evidence-based interventions through research will be utilized to improve patient outcomes (AACN, 2006).

Logic Model

A logic model was constructed to serve as a guide for interventions and desired outcomes of the noted changes. The model allowed for the outcomes to be completed with the ability to help guide future planning. The short-term and long-term outcomes were formulated from the current interventions. The short-term goals were generated with an understanding of the importance of hospital discharge follow-up appointments in the primary care setting and to the selected hospital readmission rate. The long-term goal was to provide an evidence-based approach to hospital discharge follow-up appointments with increased primary care clinic financial revenue that can decrease healthcare hospital readmission. The current DNP project logic model was noted in Appendix B.

Summary

Hospital readmission can be detrimental to patients and the discharging hospital facility. The patient and the healthcare facility incur risks that could conceivably result in irreversible damage to patients or impacts to financial revenue with long-term implications. The purpose of the DNP project was to complete hospital discharge follow-up appointments within a selected 14-day period to decrease hospital readmissions. A needs assessment was performed to determine the current need of the DNP project. The review of evidence showed that prior studies had been completed with mixed results,

however, no study was found on a general patient population with multiple discharge diagnoses with follow-up evaluation in the outpatient clinic setting within 14 days of hospital discharge. The theoretical framework and logic model were chosen to complement the current DNP project. The eight DNP essential requirements by the AACN will be fulfilled with the completion of this project. Through the noted interventions, healthcare providers can address multiple possible concerns or found issues of the discharged patient in the primary care clinic setting and improve the patient's quality of health. The methods from the DNP project are outlined in Chapter II.

CHAPTER II - METHODS

Context

The setting for this DNP project was in a rural family health clinic in South Central Mississippi. The facilities chosen consisted of a small rural primary care clinic that provides family care services to a multicultural patient population. The clinic facility provided care from the age of newborn to geriatrics. The operating healthcare hospital facility chosen provided care to the same patient population. Hospital readmission for this DNP project was designed as any readmission of the selected patient population within 30 days of hospital discharge in a hospital status of observation, inpatient, or outpatient. The target goal was to decrease general hospital readmissions within 30 days of discharge at the selected facility and improve patient care with the noted interventions.

Target Population

The population of interest for the DNP project consisted of 18 years of age and older adults who were discharged from the selected hospital facility and attributed to the known provider. The inclusion criteria were that the patient must be over age 18, discharged from the selected facility, and attributed to the primary care provider of the selected clinic. The exclusion criteria consisted of patients less than 18 years of age or younger, discharged from obstetrics or behavioral health unit, and not attributed to the known provider.

Design

A quantitative and descriptive design was used for this DNP project. A retrospective chart review of multiple data elements as noted was conducted over an eight-to-12-week period. The selected discharged patients meeting known criteria who

completed or did not completely follow up appointments within 14 days at the designated primary care clinic with the known provider. The patient population was subdivided into two populations. One population was those who made an appointment with the clinic, the other population did not make an appointment. The percentage of readmission rate can be completed on both populations with a 30-day retrospective review of these patients at the selected hospital facility. The data was collected from a known electronic health record of the clinic and the identified discharging hospital facility. The reviewed data was to determine if following up within 14 days of discharge from the hospital decreased hospital readmissions.

Procedures

The research project was approved by The University of Southern Mississippi Institutional Review Board, protocol number 21-227. Convenience sampling was used for this DNP project, targeting a minimum sample of at least 15 participants or more post-hospital discharge from the selected hospital facility. The participants must have been discharged from the selected hospital facility and be known to the identified clinic provider via a discharging hospital report daily. The DNP project was conducted with hospital discharge follow-up appointments being completed on a Monday through Friday basis at the selected clinic. The study was to be conducted for eight-to-12-week period. However, due to unforeseen changes with the researcher, the study was abruptly stopped due to a change in his employment.

Data collection occurred through a retrospective chart review. The practitioner developed and used an Excel spreadsheet of identified data elements. The data elements were reviewed on each individual chart to compile and organize the data efficiently. The

informed consent was included in standardized forms of the clinics with no limitations of the data. The data elements of the spreadsheet consisted of initials of patients, primary care provider, discharge hospital date, follow-up appointment scheduled or not scheduled, discharge summary, office visit date less than 14 days, 30-day discharge date, readmission in 30 days, and transition of care clinical form. The participants were identified by their discharge date from the selected hospital facility. The gathered partial complete data was then aggregated and reviewed. The patients were then arranged according to discharge date. After the partial results were obtained from the DNP project, no executive summary was able to be provided to hospital administration.

Assumptions

Of the data collected, assumptions were made that the information and documentation regarding the transition of care form and financial billing were correct. The main assumption for this DNP project was that post-hospital discharge primary care clinic visits within 14 days of discharge would decrease 30-day hospital readmission.

Summary

Chapter II outlined the process of what was to be completed for this DNP project. It also provides a detailed understanding of the target population and the current design of the study. The statistical analysis was limited due to an incomplete data set with limited capitulated on the generated data due to an unforeseen stoppage of the research project. The assumptions of the researcher were provided, and the subjects of the study were protected in full. Chapter III will discuss the results of this DNP project in further detail.

CHAPTER III – RESULTS

The partial completion of the DNP project resulted in limited data from the found hospital discharge population. Of the identified population of five, two patients completed follow-up in the clinical office setting with the use of the transition of care form being completed within two days of discharge. Of the other three participants, two patients did not follow up in the clinic setting. Due to the unforeseen abrupt stoppage of the DNP project, a 30-day follow-up period of evaluation from hospital discharge could not be completed. Several other participants had been identified, however, due to disruption of the study, no information could be ascertained on the individuals. Of the two identified patients seen in the clinical primary care setting, only one out of the two identified patients were able to be monitored for the full 30-day post-hospital discharge time period. Therefore, limited statistical analysis could be completed.

Summary

After completing the analysis of the limited data, one fully completed evaluation with an appropriate 30-day period of review and four other non-completed identified patients were reviewed. The use of the follow-up visit post-hospitalization on the one identified discharge patient led to no hospital readmission, thus a 100% non-readmission rate. The other four identified patients did not fully have all data element requirements; therefore an 80% non-completion rate was ascertained due to unforeseen circumstances and stoppage of the research project.

CHAPTER IV – DISCUSSION

According to the partially completed data from the post-hospital follow-up clinic visits and transition of care form, several post-discharge patient issues were identified on the two patients that could have potentially caused readmission or other complication. While there could be policy changes needed at the hospital facility, due to a stoppage of the research the limited findings were not able to be disseminated. From the limited data, interpretations and limitations of the study were ascertained.

Interpretations

There were multiple factors that influenced the limited compiled data of the identified patient population. The patient population of five was a small sample size due to the abrupt stoppage of the research project. The patient population identified did not meet the minimum standard population of 15 identified patients prior to the start of the research project. Due to the small sample size, a skew in the data occurred due to the limited sample size. A readmission rate of 0% was computed for the one patient who completed follow-up within 14 days and was monitored for 30 days. The other identified patient that was seen in the office was not monitored for 30 days post-hospital discharge. One significant finding of both patients seen in the clinical office setting was uncertainty over their medications. The two patients required medication reconciliation and adjustment for therapeutic treatment of their diagnoses. The two patients also did not have a scheduled follow-up appointment with the noted specialist providers as identified from the hospital discharge summary. Therefore, a 100% generalized correction rate of error post-hospital discharge was computed. It was also found that after assessment one of the two patients seen in the clinical office had significant mobility limitations. The

mobility issue required a medical device intervention of a wheelchair and adjustable bed to be ordered during the clinical office visit. One can only suspect that these interventions did assist one patient to not readmit to the hospital facility within 30 days of discharge. The possibilities of this study with adequate data are endless. With more data, it could have been determined if a post-hospital follow-up evaluation within 14 days is as effective as at 7 days. The study could then be repeated with a more specific patient population of interest or hospital discharge diagnoses. The data might then identify any trends or other found anomalies. These future studies could have been beneficial to the medical community because of increased stress on healthcare due to the current pandemic. The pandemic has caused an increased demand on an already overburdened healthcare system.

Limitations

Many factors have affected this research study. The main limitation to the research was the unforeseen removal of the research provider during the period of data collection. As the current researcher and health provider, the patient population attributed to me encompassed an established large population of geriatric patients along with other patients with chronic conditions that placed the patients at higher risk of hospital admission. From known patient hospital admissions in the past seen in the clinic, there was a population of patients that would have likely surfaced in the minimum population sample. Due to the limited population sample size, statistical analysis is limited and cannot be computed with sensitivity or accuracy.

Another limitation to the study was that the population selected was a general population with limited exclusion criteria. While this allowed for a large patient

population, it did not fully encompass the comorbidities of each individual patient. Due to a general sample population, if the research study was found to produce a result that showed that the active interventions taken did reduce hospital readmission, these results would more than likely be replaced by results from more specific patient population studies. The patient population is all diverse, however, there are multiple external factors affecting hospital readmission.

Another possible limitation of the study could be the use of the paper transition of care form. The form was completed was by the provider or researcher; however, it did not allow the provider to address the noted questions of concern such as the patient's medications and possible other needs. One could argue that it is imperative to complete the form because of the increased 14-day time for the patient to possibly be seen in the clinical office setting.

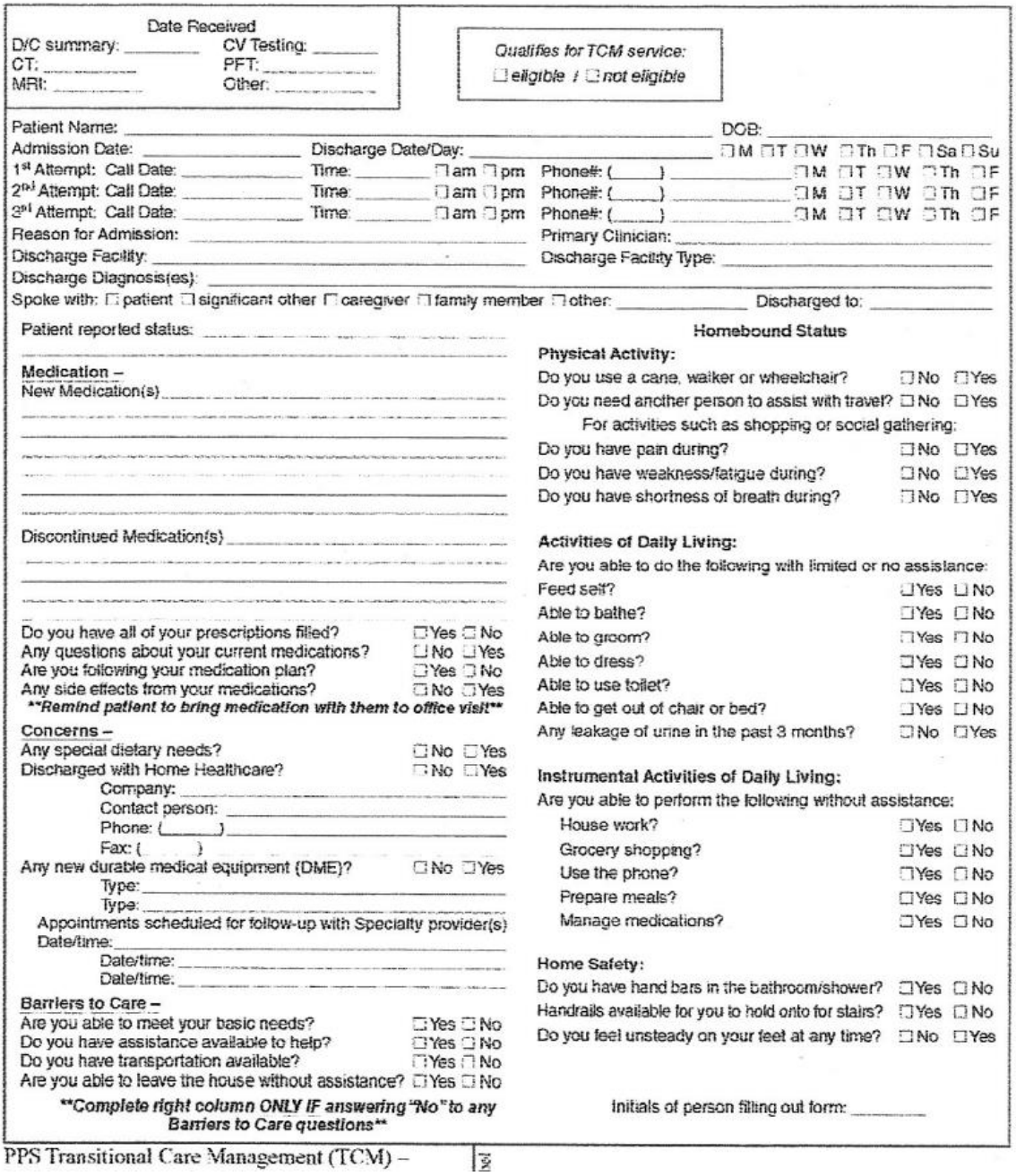
Another suspected limitation of the study was the current pandemic in the geographical area by the coronavirus pandemic. Due to the increased risk of possible transmission in the clinic office setting, patients may have been apprehensive to complete a follow-up clinic office visit. While this was not proven, through prior clinical experiences it is likely a possible cause of the two patients not wanting to complete follow-up in the office. While this limitation is an individual patient's choice, it still could perhaps affect the discharging hospital if readmission were to occur.

Conclusion

The current noted research study has a large amount of potential. If there had been no unforeseen limitation of the study, the data might have shown other factors that were not identified. If there had been an adequate sample size with the ability to fully complete

the follow-up review of the patient for a 30-day duration, it feasibly could have advocated for or against having the patient seen in a 14-day window from hospital discharge in the primary care setting. There would still have to be the use of the transition of care form, however, hospital follow-up clinical visitation could probably decrease stress on hospital facilities and primary care clinics that are attempting to care for more acute patients due to the current pandemic. Ultimately, the current study shows no finding for or against a 14-day follow-up office visit with a primary care provider. The study however does provide a future opportunity for continuing research with a multitude of possible implications.

APPENDIX A – Transition of Care Forms



Date Received
D/C summary: _____ CV Testing: _____
CT: _____ PFT: _____
MRI: _____ Other: _____

Qualifies for TCM service:
☐ *eligible* / ☐ *not eligible*

Patient Name: _____ DOB: _____
Admission Date: _____ Discharge Date/Day: _____ ☐M ☐T ☐W ☐Th ☐F ☐Sa ☐Su
1st Attempt: Call Date: _____ Time: _____ ☐am ☐pm Phone#: (_____) _____ ☐M ☐T ☐W ☐Th ☐F
2nd Attempt: Call Date: _____ Time: _____ ☐am ☐pm Phone#: (_____) _____ ☐M ☐T ☐W ☐Th ☐F
3rd Attempt: Call Date: _____ Time: _____ ☐am ☐pm Phone#: (_____) _____ ☐M ☐T ☐W ☐Th ☐F
Reason for Admission: _____ Primary Clinician: _____
Discharge Facility: _____ Discharge Facility Type: _____
Discharge Diagnosis(es): _____
Spoke with: ☐ patient ☐ significant other ☐ caregiver ☐ family member ☐ other: _____ Discharged to: _____

Patient reported status: _____

Medication –
New Medication(s) _____

Discontinued Medication(s) _____

Do you have all of your prescriptions filled? ☐Yes ☐No
Any questions about your current medications? ☐No ☐Yes
Are you following your medication plan? ☐Yes ☐No
Any side effects from your medications? ☐No ☐Yes
***Remind patient to bring medication with them to office visit**

Concerns –
Any special dietary needs? ☐No ☐Yes
Discharged with Home Healthcare? ☐No ☐Yes
Company: _____
Contact person: _____
Phone: (_____) _____
Fax: (_____)
Any new durable medical equipment (DME)? ☐No ☐Yes
Type: _____
Type: _____
Appointments scheduled for follow-up with Specialty provider(s)
Date/time: _____
Date/time: _____
Date/time: _____

Barriers to Care –
Are you able to meet your basic needs? ☐Yes ☐No
Do you have assistance available to help? ☐Yes ☐No
Do you have transportation available? ☐Yes ☐No
Are you able to leave the house without assistance? ☐Yes ☐No
Complete right column ONLY IF answering "No" to any Barriers to Care questions

Homebound Status

Physical Activity:
Do you use a cane, walker or wheelchair? ☐No ☐Yes
Do you need another person to assist with travel? ☐No ☐Yes
For activities such as shopping or social gathering:
Do you have pain during? ☐No ☐Yes
Do you have weakness/fatigue during? ☐No ☐Yes
Do you have shortness of breath during? ☐No ☐Yes

Activities of Daily Living:
Are you able to do the following with limited or no assistance:
Feed self? ☐Yes ☐No
Able to bathe? ☐Yes ☐No
Able to groom? ☐Yes ☐No
Able to dress? ☐Yes ☐No
Able to use toilet? ☐Yes ☐No
Able to get out of chair or bed? ☐Yes ☐No
Any leakage of urine in the past 3 months? ☐No ☐Yes

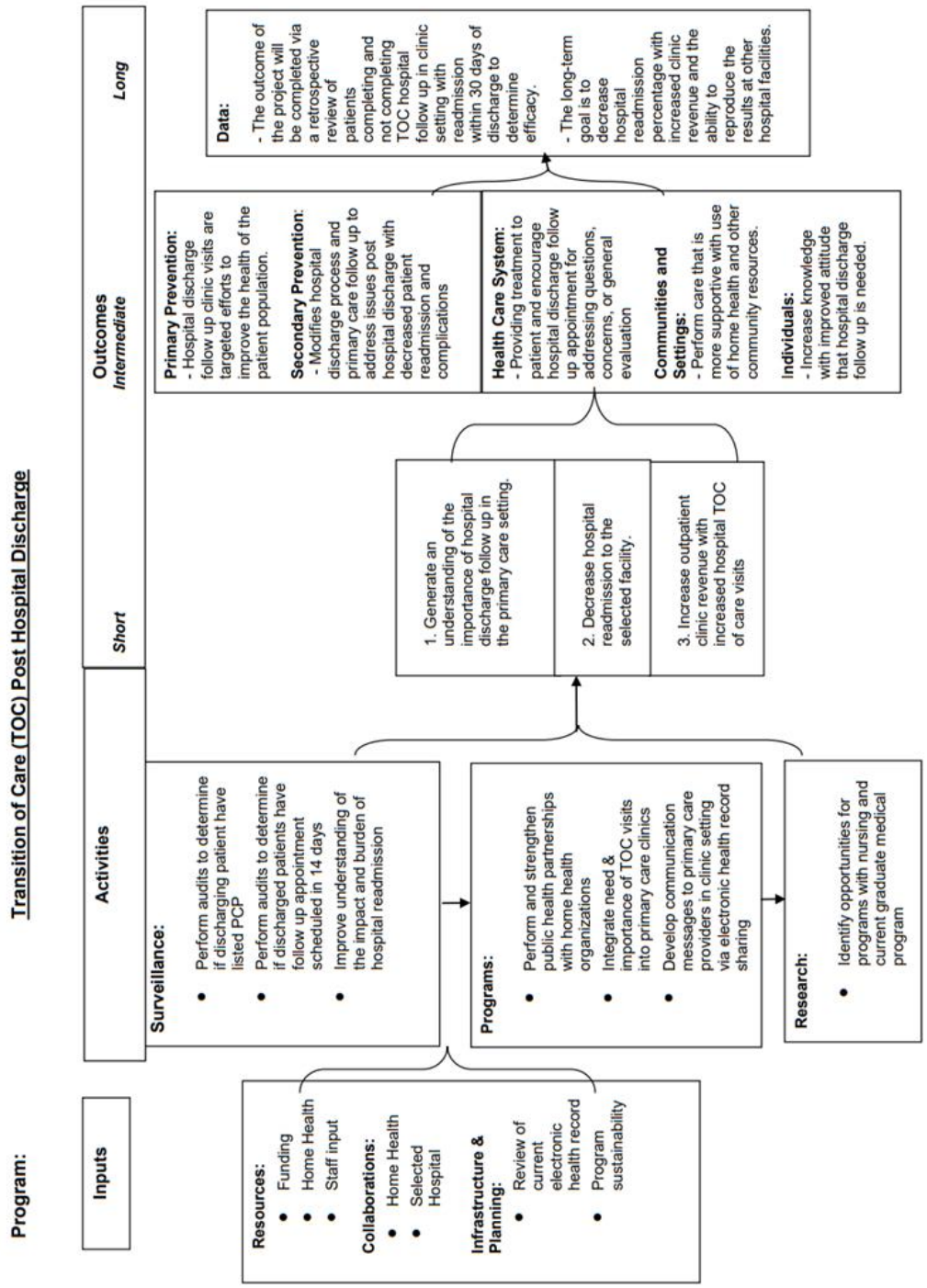
Instrumental Activities of Daily Living:
Are you able to perform the following without assistance:
House work? ☐Yes ☐No
Grocery shopping? ☐Yes ☐No
Use the phone? ☐Yes ☐No
Prepare meals? ☐Yes ☐No
Manage medications? ☐Yes ☐No

Home Safety:
Do you have hand bars in the bathroom/shower? ☐Yes ☐No
Handrails available for you to hold onto for stairs? ☐Yes ☐No
Do you feel unsteady on your feet at any time? ☐No ☐Yes

Initials of person filling out form: _____

PPS Transitional Care Management (TCM) –

APPENDIX B – Logic Model



APPENDIX C –IRB Approval Letter

Office *of*
Research Integrity

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

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NOTICE OF INSTITUTIONAL REVIEW BOARD ACTION

The project below has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services regulations (45 CFR Part 46), and University Policy to ensure:

- The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered involving risks to subjects must be reported immediately. Problems should be reported to ORI via the Incident submission on InfoEd IRB.
- The period of approval is twelve months. An application for renewal must be submitted for projects exceeding twelve months.

PROTOCOL NUMBER:	21-227
PROJECT TITLE:	Decreasing Hospital Readmission With Primary Care Clinic Appointment Within 14 Days of Hospital Discharge
SCHOOL/PROGRAM	School of Leadership & Advance Nursing Practice
RESEARCHERS:	PI: David Snodgrass Investigators: Snodgrass, David~Jordan, Marti~
IRB COMMITTEE ACTION:	Approved
CATEGORY:	Expedited Category
PERIOD OF APPROVAL:	16-Nov-2021 to 15-Nov-2022

Donald Sacco Jr.

Donald Sacco, Ph.D.
Institutional Review Board Chairperson")

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