Improving Hospital Outcomes Through Implementation of a Triad Model of Case Management

by

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Dedication

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Abstract

The purpose of this scholarly project was to implement a Triad model of acute care case management. Participants in this project included nurse care managers, social workers and a utilization review specialist on an acute care medical-oncology unit. Acute care organizations are challenged to strategize operational practices for innovative ways to optimize case management services to meet and improve objectives during challenging times in healthcare. An evidence based collaborative care management model was implemented to facilitate optimization of each discipline with the aim to decrease length of stay (LOS), earlier discharge times and improved patient satisfaction. Length of stay decreased each month consecutively during the project with an overall decrease of 23.5% exceeding target. The percentage of patients discharged before noon increased during the first month of the project from 6% to 9% and decreased each consecutive month thereafter for a final reduction of 10.3% of patients discharged before noon; thus, not meeting the target goal of a 5% increase. Patient satisfaction scores related to the three discharge care questions within the "Transitions" global domain of the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey increased from 46.3% to 46.8%; however, did not meet target of 2% increase. Implementation of a Triad model of case management successfully improved LOS and patient satisfaction yet did not meet the targeted goals for discharges before noon and patient satisfaction.

Key words: case management model; care management; utilization review; triad model case management; hospital case management; nurse case manager; social worker; length of stay, patient satisfaction score

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Chapter One: Overview of the Problem of Interest

An ever-changing healthcare environment requires strategic planning and implementation of strategies to improve quality care for healthcare consumers while decreasing the costs of care. The Institute for Health Improvement (IHI; 2019) maintains innovation is necessary to optimize patient experience, improve the health of populations, and reduce costs of care. Over the years' case management (CM) services have revolutionized the nursing practice model. However, the move to a healthcare environment rooted in value-based care has caused nursing leaders to rethink CM models to influence patient satisfaction and financial outcomes. Through innovation and redesign of outdated, ineffective CM models, healthcare organizations can optimize CM service and be better equipped to meet organizational goals and objectives through these challenging times in healthcare.

The purpose of this chapter is to provide background information, the significance of the clinical problem and discuss the guiding elements of this quality improvement (QI) project. The overall goal of this project was to redesign a CM model of care with change theory to achieve improved quality and financial outcomes for an acute care healthcare organization. The presentation of a QI project, through the implementation of a multidisciplinary, triad CM model inclusive of nurse case managers (NCM), social workers (SW) and utilization review (UR) specialists within a large tertiary care center is further discussed.

Background Information

The practice of CM was led by nursing and established in the 1980s due to the origination of the Prospective Payment System (PPS) in which Medicare payment is based on a fixed amount. This new clinical CM nursing model gave nurses, as case managers, the authority to manage a group of patients through an episode of care while in the hospital. NCMs would

ensure the efficient transition, provision of handover to the next level of care, and ease patient and family concerns regarding their plan of care. Not long after the role of the NCM was introduced in hospitals, the extension of CM was introduced to include community-based services allowing for a transitional care approach. During the 1980s hospitals across the nation adopted what would become the foundation for CM today and included services that provided advocacy for patients and families, coordination of care across the continuum, and securing services to optimize health (Daniels, 2011).

Despite the implementation of this innovative nursing practice model change, primary discharge planning activities continued to be the role of the staff nurse. In the 1990s healthcare payment models continued to evolve during healthcare reform driving hospitals to streamline services to improve financial outcomes even more. It was during this time a second-generation model of CM emerged leading to the foundation of what would be often referred to as the dyad model of CM. This model primarily included two disciplines; UR nurse and the SW. Hospitals established separate CM departments within healthcare organizations dedicated to this specialized service (Daniels, 2011). The UR nurse's main function at that time was determining medical necessity for hospitalization and regulatory compliance. The staff nurse provided for discharge planning activities, and the SW's main function was the facilitation of patients being placed in a nursing home. However, over time the role of the SW evolved even further in the 1990s to include discharge planning activities thus taking those tasks away from the staff nurse. This began the evolution of the dyad model of case management (Daniels, 2011).

Over the last decade, numerous models of CM would emerge combining roles of the NCM, SW, UR specialist, and at times the clinical documentation specialists who ensure medical coding is accurate. Today there are various models of CM throughout hospitals across the

county which are largely defined by the UR tasks and discharge planning activities performed by the multiple disciplines within the specialty. A triad model of care is one that incorporates three primary disciplines and within the practice of CM, those disciplines include the NCM, SW and UR specialist. Working with other disciplines allows nurses to develop and implement strategies that improve patient satisfaction and outcomes (Emich, 2018).

The Patient Protection and Affordable Care Act (ACA) continues to challenge healthcare organizations to strategically identify ways to improve quality and service while reducing cost. NCMs are in a unique role that can positively affect changes in health care. There are several national organizations dedicated to the service of those specialists in CM. The American Case Management Association (ACMA, n.d.) is one of those organizations and defines CM as a collaborative practice model that provides for advocacy, communication, resource management, quality and cost-effective outcomes (ACMA, n.d.).

Significance of Clinical Problem

Despite the various types of CM models, challenges continue within hospitals to provide efficient services, reduce the length of stay (LOS) and improve patient satisfaction; thus, meeting initiatives of the ACA (Phillips & Fitzsimons, 2015). Hospital CM programs are integral services in bridging successful strategies to improve services, cost, and quality. By implementing a collaborative triad CM model that incorporates the specialized roles of the NCM, SW and UR specialist, hospitals can improve the quality and cost of care (Cesta, 2016). Hospital LOS, discharge times and patient satisfaction are significant financial and quality indicators for healthcare organizations. Implementation of the collaborative triad model of CM at the targeted project site could decrease hospital LOS, improve discharge times, and improve patient satisfaction (Cesta, 2016).

Under the diagnosis-related group (DRG) payment system controlling a patient's length of hospital stay allows for efficient and high-quality treatment (Kainzinger, Rabel, Pietrek, Muller-Nordhorn & Willich, 2009). CM models need to be structured in such a way to reduce LOS. CM services that are oriented to LOS provide integrated interventions that optimize operations and improve outcomes. Models of CM that incorporated LOS measures including those that avoid unjustified procedures, provide transparency and efficient discharge management reduced LOS (Kainzinger et al., 2009).

Delays in discharging patients from the hospital can impact quality and financial aspects of care and have an impact on hospital throughput which often leads to capacity constraints. Improvement in discharge times has been evidenced by utilizing a multidisciplinary approach with the incorporation of CM taking the lead in identifying a discharge date and time based on input from providers, NCMs, SWs and UR Specialists (Kane et al., 2016).

Readiness for discharge is a complex process and incorporates both physical and emotional elements that impact the patient's perception of care (Weiss, et al., 2015). NCMs are in a pivotal role with the ability to influence and impact patient satisfaction scores through coordination of services. Through a collaborative triad CM model of care, practical case management strategies can positively influence the improvement of patient satisfaction (Park & Park, 2018).

Question Guiding Inquiry (PICO)

The four elements of PICO drive the systematic approach in the formulation of a clinical question that serves as the foundation for a project (Moran, Burson, & Conrad, 2017). PICO is an acronym for the patient population, intervention, comparison, and outcome. The clinical question guiding this inquiry asks, "*In an acute tertiary care center, does the implementation of*

a triad model of CM decreased LOS, improve discharge times, and improve patient satisfaction?"

Population. The targeted population consisted of Bachelor prepared nurses in the NCM role, associate prepared nurses in the UR specialist role, and either Bachelor or Master's prepared SWs who provides services to the oncology population. Participants had a varying degree of experience in CM services, all were adults 18 years of age or older, and included both genders. This group case managed patients on the medical-oncology, 48-bed patient care unit at a tertiary acute care hospital.

Intervention. The targeted intervention consisted of the implementation of a unit-based triad model of CM within the existing organization's CM department. The establishment of a collaborative triad model of CM has been shown in the literature to reduce LOS, improve discharge times, and improve patient satisfaction (Kainzinger et al., 2009; Kane et al., 2016; Park & Park, 2018). Daniels and Frater (2011) identifies a triad model inclusive of a NCM, SW and UR specialist as a model that improves the quality and financial activities of a healthcare facility.

Comparison. There is no comparison group. However, pre and post data assessment related to the LOS, discharge times and patient satisfaction scores for intervention unit was completed.

Outcomes. Three outcome metrics were identified for this EBP change project. The first defined outcome was to improve LOS. LOS has been evidenced to decrease when a collaborative triad model of CM is utilized (Hajewski & Shirey, 2014; Kainzinger, et al., 2009). Decreasing LOS for acute care hospitals can positively impact the financial status of an organization.

The second defined outcome was to achieve earlier patient discharge times with a goal of discharging patient before noon each day. A collaborative approach to CM that includes team members from both utilization review services and case management has evidenced improvement in discharge times Kane et al., 2016). Patients discharging prior to noon allows new patients to be expeditiously admitted and improves overall throughput for the organization (Kane et al., 2016).

The third defined outcome was to have an increase in patient satisfaction related to care transitions and facilitation of discharge from hospital. The Hospital Consumer Assessment of Healthcare Providers and System (HCAHPS) scores were assessed. HCAHPS surveys are required by Center for Medicare and Medicaid Services to be performed by all hospitals in the United States. Three questions specifically related to transitions of care were measured. CM as a service across healthcare organizations has been evidenced to positively impact improved patient satisfaction (Park & Park, 2018).

Summary

CM is an easily adopted care model that can be applied in a variety of healthcare setting, and although many hospital CM models have been utilized since the inception of CM, healthcare organization continue to struggle to meet goals related to quality and financial outcomes. The collaborative triad model is one that best meets organizational needs and aligns with initiatives that are focused on improvement of quality, and services while reducing costs. The literature evidences support for the triad model in reducing LOS, improving discharge times and patient satisfaction (Kainzinger et al., 2009; Kane et al., 2016; Park & Park, 2018). Encompassed within the triad model of CM are the three specialized roles of the NCM, SW and UR specialist working collaborative with all disciplines to provide for efficient, timely discharge coordination.

Following identification of the clinical issue, supporting evidence needed to be thoroughly appraised to ascertain an appropriate solution.

Chapter Two: Review of the Literature

Case management (CM) is a service provided across the healthcare continuum and acute care hospital CM programs must be optimized to ensure strategies that will produce favorable outcomes in an everchanging healthcare arena. A collaborative triad CM model incorporates the roles of the nurse case manager (NCM), social worker (SW) and utilization review (UR) specialist (Cesta, 2016). Collaboration is necessary within the roles of hospital CM. Within a CM model that is focused on quality and financial improvements, the roles within CM become dependent on each other to work efficiently; otherwise the case managers become task driven rather than outcomes driven (Cesta, 2016). Developing CM models that incorporate a collaborative triad model of care inclusive of the NCM, SW and UR specialist prepare hospitals for achieving improved quality and financial outcomes. To determine evidence-based interventions for improving a CM care model, a comprehensive literature review was completed.

Methodology

Sampling strategies. A comprehensive electronic literature search was conducted using the following databases: PubMed, Cochrane Library, Cumulative Index to Nursing and Allied Health Literature (CINAHL), OVID, and internet. Keywords used in the search were: case management, care management, hospital case management, discharge planning, case management models, acute care case management, acute care inpatients, social worker, nurse case manager, utilization review, utilization review specialist, triad case management model, dyad case management model, implementing hospital case management models of care, case management models of care and collaborative case management models. Keywords were combined using Boolean operator "AND" and "OR" to generate additional evidence. The initial unlimited search yielded evidence that was overwhelming in relation to CM. Therefore,

limitations were then applied which included the last five years (2014-2019) but was expanded to include the early 2000's to capture historical reference within this nursing specialty. Other limitations applied included: English only, full text, full free text, core clinical journals, nursing journals, and evidenced-based practice.

Several evidenced-based sources on the internet were reviewed. Although interesting, no information pertinent to CM models in the acute hospital settings were identified. Among Web sites accessed included American Case Management Association and Commission for Case Management Certification.

Finally, consultation with expert team members from a leading healthcare consultation group, Premier, Inc., were interviewed regarding the triad model of CM. The consulting team consisted of three registered nurses specializing in care transitions. This consulting group was engaged and actively serving CM within the project site.

Evaluation criteria. Literature was selected as evidence for inclusion in the quality improvement (QI) project based on relevance to the clinical question and intervention of implementation of a collaborative triad model of CM on an acute care unit of a tertiary care hospital. Each study was critically assessed by asking the questions: What were the results?; Are the results valid?; and How can the results assist in the EBP change project plan? Studies were selected to identify the clinical problem of identifying the most effective CM acute care model, provide background and significance of a CM model of care, support the intervention of transition to a triad model of CM to improve length of stay (LOS), improve discharge times and improve patient satisfaction.

Literature that was selected for inclusion was assigned a level according to the Rating System for the Hierarchy of Evidence for Intervention/Treatment Questions that Melnyk and

Fineout-Overholt (2015) described as: Level I - Systematic review & meta-analysis of randomized controlled trials; clinical guidelines based on systematic reviews or meta-analyses; Level II - One or more randomized controlled trials; Level III - Controlled trial (no randomization); Level IV - Case-control or cohort study; Level V - Systematic review of descriptive & qualitative studies; Level VI - Single descriptive or qualitative study; Level VII - Expert opinion. All evidence levels were included for review; however, the selected literature included levels IV, V, VI, and VII. Most of the studies were level IV, V, and VII with common characteristics of reinforcing the use of a collaborative approach to CM to improve healthcare outcomes. The critical appraisal of the selected studies for inclusion of this integrative review of literature is provided (see Appendix A).

Literature Review Findings

In a systematic review, Phillips and Fitzsimons (2015) concluded that CM services within acute care hospitals are key services necessary for impacting improvement in quality and reducing costs. Historically, there have been several different models of CM since the inception of the role. Two models that have been utilized within hospitals over the past two decades include a dyad model of CM, which does not include UR services and a triad collaborative model, which incorporates UR services along with NCM and SW CM services (Daniels, 2011; Johnson & Schubring, 1999).

As healthcare has evolved over the years' evidence has shown greater support for the triad model of CM. A case study was conducted of two models of CM at two separate hospitals. One model integrated the registered nurse (RN), SW and UR specialist within CM services, and the other was less collaborative. Cesta (2016) concluded that a collaborative, fully integrated

triad model with inclusion of the RN, SW, and UR specialist role within CM services evidences a forward-thinking strategy towards successful organizational outcomes.

An additional pre and post descriptive study was reviewed in which a redefined patient care delivery model was implemented on a 60-bed acute hospital unit. This multidisciplinary model included the roles of the NCM, SW, and UR specialist (Hajewski & Shirey, 2014). On further review, Terra (2007) examined evidence available at the time to support selection of an acute care model of CM. Although Terra was inconclusive of one best practice for a CM model, the evidence did support a foundation for successful CM services that included several key factors driving a successful model. Those key factors included: direct patient contact by CM team member, defined measurable outcomes including reducing cost, LOS, and improved outcomes encompassed an integrated model to include the SW and provider (Terra, 2007). Daniels and Frater (2011) provided an expert opinion of the positive influence on hospital outcomes evidenced when a triad model of CM was embedded in hospital operations.

Implementation of a collaborative CM model has demonstrated improvement in hospital outcomes inclusive of LOS, patient satisfaction, readmissions, discharge times and denial rates (Park & Park, 2018). Improvement in LOS was evidenced in a study of a retrospective review of 168 inpatient cases in which interventions were implemented based on a LOS CM model of care (Kainzinger et al., 2009). This model of care incorporated avoidance of unjustified procedures, provision for transparency, and efficient discharge management (Kainzinger et al., 2009). Hajewski and Shirey (2014) noted improved LOS as well as patient satisfaction in their pre-post study of implementation of a triad model of care. Furthermore, factors that improve patient satisfaction in a community-based care management model were identified through a secondary data analysis conducted over 4-year period. These identified predictors associated

with improved patient satisfaction include capacity to change, patient-perceived time spent with case manager, support, and emotional connectedness (Park & Park, 2018).

Kane et al. (2016) conducted a pre-post interventional study to determine the effects of two hospital-wide interventions on achieving an increase in volume of patients discharged-before-noon. The study was conducted on 19 inpatient units in a 484-bed academic teaching hospital. One intervention implemented included case managers identifying patients that could be discharged by noon. Kane et al. noted increased percentage of discharges by noon with a pre-intervention rate of 14% to a post-intervention rate of 24%.

Limitations of Literature Review Process

The specialty of CM is rich with evidence related to the benefits of incorporating the services within healthcare organizations. There is a notable increase in evidence related to acute care CM from the early to mid-2000. Since the passing of the Affordable Care Act (ACA), literature addresses CM across the continuum of patient care rather than specific to hospital-based service. Most of the nursing literature related to models of CM in a hospital setting was literature reviews, case studies, and shared expert opinions as opposed to studies with a true experimental design. Higher levels of nursing research in hospital CM models is recommended. A lack of Level I, II and III studies with more recent studies from Level VI and Level VII is apparent. Although there was literature supportive of a collaborative triad CM model with inclusion of the NCM, SW and UR specialist function, specific evidence of a triad model was limited.

Discussion

Conclusion of findings. CM services is a valuable commodity within healthcare organizations with the ability to improve quality and financial outcomes through the services

provided to patients and families. A model of CM that is collaborative in nature, whether in a hospital or community-based, positively affects the quality and financial outcomes for the healthcare institutions. Implementation of a collaborative triad model of CM that includes NCM, SW and UR specialists improves LOS, discharge times and patient satisfaction. The intervention of implementing a collaborative, triad model of CM is supported by the literature evidence.

Advantages and disadvantages of findings. One dominant characteristic of a collaborative case management model, both within the acute care setting and a community-based setting, incorporate at least two of the three core roles seen within CM which include NCM, UR specialist and SW. A second advantage evidenced in the literature is demonstration of a synergistic approach to CM services reduces LOS and improves patient satisfaction. In addition, evidence recognizes CM as a vital service to achieve improved quality outcomes for healthcare organizations.

One disadvantage of the literature evidence is there is no one identified preferred model of CM specific to the acute care setting that incorporates all three roles independent of each other in their services. Another disadvantage is the literature evidence does not provide specific details as to the responsibilities of the key roles in CM. Lastly, an identified disadvantage is the outcomes of a collaborative CM model focus primarily on LOS and readmissions rather than provision for outcomes focused on patient satisfaction and experience.

Utilization of findings into practice. Implementation of a unit-based triad model of CM inclusive of NCM, SW and UR specialist roles has the potential to decrease LOS, secure earlier discharge times, and improve patient satisfaction. Furthermore, implementation of a triad model can provide recommendations for the most effective model for use throughout all acute care

patient areas within the hospital as well as across the healthcare system. Policies and protocols can be developed based on the triad model which can standardize CM practice and reinforce compliance with interventions that drive improved quality and financial outcomes. A collaborative pathway to CM services has been shown to have positive effects on health care quality and financial targets (Cesta, 2016; Hajewski & Shirey, 2014; Kane et al., 2016; Terra, 2007).

Summary

In summary, there is empirical evidence that supports the proposition of the QI project for implementation of a unit-based triad model of CM within an acute hospital setting. The triad model of CM provides a framework for CM operations. Implementing a triad model aligns healthcare organizations in a unique position to fully garner the benefits of this valuable collaborative service. The triad model for CM is the optimal model that positions healthcare organizations to achieve measurable outcomes and ensure quality patient care.

Chapter Three: Theory and Concept Model for Evidence-based Practice

Nursing concepts and theories construct the foundation for practice and dissemination of quality improvement (QI) project. The conceptual framework for QI project is much like a road map connecting all aspects of the project including setting, interventions, and outcomes. An effective theoretical framework guides the QI project by providing a foundation for translation of evidence into practice (Johnson & Webber, 2015). Nursing theory is defined as a conceptualization of reality that is expressed for the purpose of prescribing nursing care (Meleis, 2018). The Doctor of Nursing practice educated nurse has culminated expertise in both conceptual and theoretical frameworks to successfully implement a QI project. The purpose of this project was to answer the question: "*In an acute tertiary care center, does implementation of a triad model of case management decrease length of stay, improve discharge times, and improve patient satisfaction?"* The focus of this chapter is to analyze an identified concept, a theoretical framework and a practice change theory in the context of the nursing leader's ability to improve length of stay, discharge times, and patient satisfaction through implementation of a QI project.

Concept Analysis

Collaboration is a critical concept across healthcare disciplines particularly nursing. Collaboration has been identified as a key concept for advanced practice nursing. Nurses working collaboratively alongside other healthcare disciplines help to identify, develop and implement strategies to improve healthcare outcomes for both the patient and organization (Emich, 2018). Federal regulations governing healthcare practices have stimulated healthcare organization to focus on collaboration to avoid financial penalties imposed by Centers for Medicare and Medicaid Services (Emich, 2018). Collaboration is a partnership between

individuals that share the same focus and commitment to the same goal. Likewise, case managers are the embodiment of collaboration with the nurse case manager (NCM), utilization review (UR) specialist and social worker (SW) working as a team with other healthcare professionals to improve patient care.

Definition. The term collaboration originated from the mid-19th century Latin word collaboration which means working together. As defined in Lexico's online dictionary, collaboration is the action of working with someone to produce something (2019). Lexico's online dictionary also defines collaboration with a negative connotation as a traitorous cooperation with an enemy (2019). Collaboration is used across many professional arenas. In nursing, collaboration may refer to intra-professional interactions between healthcare disciplines working alongside of nursing (Emich, 2018). The conceptual definition of collaboration within nursing is a process by which nurses unite to share resources and knowledge to solve a healthcare system or patient problem (Emich, 2018).

Theoretical Framework

An established nursing theory represents concerted principles and laws that nurses use when conducting QI projects. Established theory contributes to the validity and reliability of information derived from research and continued application of established theory in practice promotes ongoing evidence of the theory's validity and predictability (Johnson & Webber, 2015). Thus, it was essential to select an established theory to guide an EBP change project.

Swanson's Theory of Caring. Kristen Swanson's Theory of Caring was explored and identified as a theoretical framework to guide the development and implementation of this QI project. Swanson's Theory of Caring is composed of five sequenced caring core principles including caring, knowing, being with, doing for, enabling and maintaining belief (Lillykutty &

Samson, 2017). This middle range theory gives definition to caring and links the caring process with patient well-being through real nursing behavior (Lillykutty & Samson, 2017, Swanson, 1993). Swanson's Theory of Caring speculates that nurses caring about a patient is as important to a patient's well-being as the nursing interventions conducted for a patient (Tonges and Ray, 2011). Thus, the use of this theory provided a clear course for design and implementation of a triad model of case management for the NCM, SW and UR specialist (see Appendix B) Three of the five core principles of the Theory of Caring directly related to the EBP change project are knowing, being with and doing for.

NCMs, UR specialists and SWs gain knowledge of patient needs through assessment of clinical and psychosocial components. Likewise, Swanson's theory of caring identifies the domain of knowing as the tether for nurse and patient (Swanson, 1993). Caring is essential to gaining trust and in order for case managers to partner with patients and families to facilitate transitions of care, they must develop a sense of empathy and trust. Swanson (1993) describes this characteristic within the domain of being with. Hospital case managers work with patients who are vulnerable and unable to provide for themselves. Often patients are alone and lack family and community support system, and thus the case manager becomes the key to facilitating which otherwise may not be possible. Swanson described the caring domain of doing for as the act of doing for others what they cannot do for themselves (1993). This is evidenced daily in the actions of a hospital case manager.

Application to practice change: The concept of collaboration along with the theory of caring was explored during the development and implementation of a triad model of case management at a tertiary care center in eastern North Carolina. Nursing behaviors inclusive of a caring style that incorporates a humanistic view of others with empathy and respect describes the

'knowing' component (Swanson, 1993). Nurses that embody this component of Swanson's Theory of Caring take time to gain an understanding of the patient situation, analyze and interpret the situation. When a nurse is physically and mindfully present in the situation, they can identify and appreciate social influences from cultural backgrounds, health care experiences, length of stay, and environmental and economic factors (Lillykutty & Samon, 2017). A triad model of case management allows case managers to utilize their expertise collaboratively to identify patient needs and implement a discharge plan that facilitates a positive patient experience.

Qualities of the 'being with' component include trust, availability, faithfulness, patience and compliance (Swanson, 1993). A nurse with these qualities is emotionally present and able to calm patient fears, anticipate patient needs and behaviors that decrease the risk for harm and danger (Lillykutty & Samon, 2017). By applying the qualities of the being domain, NCMs, UR specialists, and SWs can gain patient trust and establish a report which will facilitate a timely and safe transition of care.

The 'doing for' component involves interventions performed by the nurse on behalf of the patient's best welfare (Swanson, 1993). Those interventions include comforting, anticipating needs, performing procedures in which they are skillfully trained, and preserving patient dignity (Swanson, 1993). Competence, education, training and clinical knowledge are necessary components of the 'doing for' aspect. NCMs and UR specialists are specially trained nurses who recognize a key component to 'doing for' patients include collaboration. The QI model incorporates collaboration with SWs.

EBP Change Theory

Care models for case management must change to meet the ever-changing needs of patients and healthcare organizations. Identifying a change theory was essential for alignment of project needs with outcomes. Lewin's Theory of Change describes social habits as a resisting force to achieving change, and there must be an additional force present that is enough to break the undesired habit (Lewin, 1947). The process of reaching change consists of three stages. The first stage is 'unfreezing' or breaking the existing habit. This is best achieved through changing attitudes and behaviors through an emotional purging of unwanted behaviors (Burnes & Bargal, 2017). The second stage of change is 'moving' and is the step when the change occurs, and the third stage consist of 'refreezing', or the adoption of a new habit or process (Burnes & Bargal, 2017). One belief within Lewin's Change Theory is that the process of change is best achieved in individuals through group encounters (Burnes & Bargal, 2017). This belief along with the identified steps to achieve change signifies why Lewin's Change Theory is the ideal change theory for the QI project.

Application to practice change. Lewin's Change Theory provided a systematic approach necessary to promote the QI project. Each step of the change process provided guidance in the development and integration of the change. Each stage of change is described outlining the practice change project journey:

Stage 1: Unfreezing. Changing a case management model of care from a dyad to a triad approach provides for collaboration between team members with potential to decrease hospital LOS, improve discharge times, and improve patient satisfaction (Cesta, 2016). During this first step a nursing leader must incorporate the human side of change with attention towards providing information with integrity (Bakari, Hunjra & Niazi, 2017). Planning, education and

communication are key aspects during the unfreezing stage with emphasis on the why the change is occurring (Hussain, et al., 2016). Employee involvement, leader transparency and the nursing leader's role as a change agent are three core strategies for a successful unfreezing stage (Hussain, et al., 2016).

Stage 2: Moving. Once individuals understand why change is happening, the actual implementation occurs. This is a process of learning and applying new behaviors. Three activities identified for implementing change include; integrating change tasks that are explicitly tied to the organizational goals, identifying persons or groups committed to the change process, and change structure identified for managing change (Hussain, et al., 2016). Once the evidenced based model is implemented and NCMs, SWs and UR specialists begin intervening and completing role specific interventions outlined in the triad model of care, the process of moving will be evidenced.

Stage 3: Refreezing. The final stage of Lewin's Change Theory is refreezing. The change from a dyad model to a triad model has occurred, and acceptance begins during this stage. A new status quo emerges, and nursing leadership must make every effort to ensure the new behavior is accepted and risks for drifting into old behaviors is minimized. Leadership support and reinforcement of the new case management model will enhance compliance.

Summary

Collaboration was identified as a key concept for this EBP change project. Swanson's Theory of Caring provided the theoretical framework necessary to develop and execute this QI project. Three of the core principles of the nursing theory applied directly to the QI project and included knowing, being with and doing for. The foundation for this project was established on the concept of collaboration and embedded with the core principles of caring and implemented

based Lewin's Change Theory. Through the process of change, intervention become established processes that lead to a successful implementation of the project. In the following chapter pre-planning for the project's implementation will be discussed.

Chapter Four: Pre-implementation Planning

The focus of this chapter is to delineate the planning processes of the quality improvement (QI) project. During the pre-implementation planning phase of this EBP several factors were considered to ensure optimal implementation. Initially, planning focused on ensuring the project composed of quality improvement criteria and was followed by identification of the systematic processes to identify organizational readiness for change, collaboration, risk management, project approval, and technology components. Other factors addressed in the pre-implementation planning phase included planning for data management and evaluation of outcomes measures.

Project Purpose

The purpose of this QI project was to answer the question: "*In an acute tertiary care center, does implementation of a triad model of case management (CM) decrease length of stay (LOS), improve discharge times, and improve patient satisfaction?"* Case Management is an integral service provided within healthcare. Aligning the services of the nurse case manager (NCM), social worker (SW) and utilization review (UR) specialist in a model of care that optimizes outcomes is necessary for successful outcomes.

Project Management

Organizational readiness for change. The QI project is aligned with one of the project site's strategic initiatives for improving patient throughput. Organizational readiness for change was evidenced in conversations with key stakeholders. The project site champion, nursing leader and members of the case management team were elicited to better assess organizational and participant readiness for change and feelings of value for the proposed project. The site champion, nursing unit leader verbalized buy in and offered support for the project.

Furthermore, after discussing the QI project details, including resources and nursing environment with several of the case managers, it was determined staff members were ready for change. With both nursing leadership and staff member engagement and support of the project, it was determined the organization was overall ready to undergo the EBP project. No barriers were identified toward readiness for change and implementation of the EBP.

Inter-professional collaboration. Members of the inter-professional team included the project lead, site champion, patient care unit nursing leader, nurse case manager (NCM), utilization review (UR) specialist and one social worker (SW) from within the project site. The collaboration between inter-professional team members was instrumental in the implementation of the project. A doctoral prepared nursing executive served as the site champion for this project and a master's prepared nursing administrator of the oncology nursing care unit served as the nursing leader on the unit in which the project was conducted. Additional inter-professional collaboration with the NCM, UR specialists and SW was essential to successful facilitation of the project.

Prior to implementation, the project team lead provided individual educational sessions to stakeholders regarding the triad model of care and project outcomes measures. Most of the involvement in the EBP quality improvement project involved collaboration between the NCM, UR specialist and SW. However, team members from the Office of Quality and analytic experts from Information Systems provided support towards obtaining outcome data. All project team members collaborated, advocated and supported engagement of team members working on the pilot project unit.

Risk management assessment. A risk assessment was completed using a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis (see Appendix C). This analysis

allowed for a compilation of areas that aided in strategic development of the QI project. A SWOT analysis is used frequently in healthcare.

Strengths. Following assessment of internal attributes, several areas in which the organization exceled were identified. Those strengths of the QI project included project site support, pre-established case management and utilization roles, minimal costs, and ease of implementation. Identifying strengths of the project allowed for the project leader to focus on the strengths as building blocks for the interventions.

Weakness. Although there were numerous strengths identified through the analysis, areas of weaknesses were also identified. Weaknesses of the QI project included siloed case management roles with a focus on tasks rather than organization goals, complexity of the discharge process and established project site culture. Identifying and having knowledge of the internal weaknesses of the organization allowed the project leader to develop interventions that allow for optimal success of the project.

Opportunities. It is equally important to assess external factors that may enhance the success of the QI project. External opportunities identified for the project are due to complexity of technology, lack of established relationships between project participants and lack of education and training on the triad model of case management. These opportunities may give the project an advantage and excel success.

Threats. External threats can harm a project and cause increased risks. Threats identified include established employee culture within clinical and business practices and time constraints due to the fast-paced healthcare environment. Recognizing the threats allowed the project leader to develop interventions and auditing tools that will reduce risks associated with the identified threats.

Organizational approval process. The process for organizational approval consisted of obtaining a letter of support from the project site. Following discussion with the Vice President of Care Coordination at the site, support was verbalized, and subsequently a formal letter of support was provided (see Appendix D).

Information technology. The use of information technology in this QI project is limited to non-protected health information. Non-patient information was maintained on a computer hard drive for ease of accessibility as needed throughout the project. Information technology utilized included the use of Windows 10 computer with Microsoft Excel for data collection on desktop and laptop devices. A site-specific computer-based program dedicated to monitoring throughput of the organization was utilized to obtain unit length of stay information and unit discharge times. This program is called the Monocle. Technology was also utilized to enhance participant education through power point, large projection screen, email and video updates and reminders throughout the course of the project.

Cost Analysis of Materials Needed for Project

Developing a financial budget for a QI project must include items relevant to planning, financial forecasting and controlling processes. This allows current initiatives to remain consistent with the overall healthcare system's financial mission and vision (Reiter & Song, 2018). Activity based costing is an upstream approach to costing that relies on the premise that all costs in an organization stem from activities in or across the system related to activities, equipment, supplies, and direct and indirect overhead costs (Reiter & Song, 2018). Items included in the project budget are reflective of costs associated with supply expenses. Incurred costs for the project included educational booklets, participate work name badge cards, project

flyers, pens, paper, and lamination and printing supplies and equipment. Projected cost for project implementation is estimated at $331.50. A detailed budget is provided in Appendix E.

Completion of a cost benefit analysis was instrumental in identifying the financial value of the project. The associated cost of the project is minimal and related to implementation expenses. No associated staffing resource costs are identified as existing staff will be utilized for the project. This project aligned with the healthcare system's financial initiative focused on achieving a decrease of length of stay by .25 days in fiscal year 2020. Decreasing LOS for project site's affiliated healthcare system equates to millions of dollars in savings over the next year.

Plans for Institutional Review Board Approval

The project site utilizes a University Institutional Review Board (IRB) modified verification process. The first step was completion of the Quality Improvement Program Evaluation Self-Certification. After obtaining approval from the Faculty Lead, the tool was submitted online. The project was deemed to be quality based and an immediate response was received stating the formal IRB review was not required (see Appendix F).

Plan for Project Evaluation

Demographics. Target group for this QI project is NCM, UR specialist and SW assigned to the medical oncology unit at the project site. Demographic information collected included age, gender, race, team member role, years' experience and highest educational level. Due to the small number of project participants, each data category was evidenced in actual numbers and displayed in bar graphs. Age was categorized as 20-30-year-old, 31-40-year-old, 41-50-year-old and greater than 50-year-old. Categories of race included White, Black or African American, American Indian or Alaska Native, Hispanic, Latino or Spanish Origin, Asian, and

Other. Categories of gender included Male and Female. Categories of team member role included RN Case Manager, Social Worker and Utilization Review Specialist. Years' experience was evidenced in categories of 5-year intervals, and level of education was captured in categories of Associate, Bachelor, Master and Doctorate Degree (see Appendix G).

The overall goal for this quality improvement project is implementation of a triad model of case management on one patient care unit at the project site. Successful implementation of the project will afford leaders in the organization insight into interventions to enhance care coordination, communication and collaboration which will allow for an informed decision regarding implementation of this collaborative model throughout the healthcare system. The long-term outcome is for this model of care to be systematized throughout case management services within the healthcare organization. Three outcome measures related to this quality improvement project include unit length of stay, unit discharge times and patient satisfaction.

Outcome measurement. The first desired outcome for this quality improvement project was improvement in patient throughput evidenced by a decrease in unit LOS. Identification of unit LOS specific for this project unit allows nursing leaders within the project site to make sound decisions related to patient care and expansion of the project to other nursing units. Decreasing unit LOS will allow for efficient patient movement on the nursing unit.

Evaluation tool. In order to evaluate this information, the organization's established data reporting application, Monocle, was accessed and data evaluated and captured utilizing run charts. Unit LOS is reported in days and each additional day is calculated at midnight. Unit LOS is monitored throughout the hospitalization and discussed during progression of care multidisciplinary rounds each day.

Data analysis. After the run charts were populated with data on a monthly basis, the project lead assessed for trends, shifts and variations in data. Data captured during the project period from February 17, 2020 through May 8, 2020 was compared to baseline data from fiscal year 2020 quarter one (October, November and December of 2019). The comparison was utilized to assess the effectiveness of the project with a target of 5% decrease in length of stay.

Outcome measurement. The second desired outcome for this QI project was improvement in unit discharge times. Most often discharges on the project unit occur in the afternoon and earlier discharge times will facilitate effective patient throughput for the organization.

Evaluation tool. The Monocle was also utilized to capture automated data on patient discharge times. Run charts were utilized to provide visualization of data on a monthly basis.

Data analysis. Data captured during the project period from February 17, 2020 through May 8, 2020. The comparison data from October 2019 through December 2019 was utilized to assess the effectiveness of the project with a target of 5% increase in volume of discharges before Noon.

Outcome measurement. The last outcome measure is patient satisfaction. Patient satisfaction is a measure utilized by Medicare and Medicaid Services to improve healthcare delivery in the United States. By utilizing patient satisfaction scores as an outcome measurement for this project, effectiveness of the project will assist with influencing healthcare executives at the project site on decisions of project expansion.

Evaluation tool. The organization's established patient satisfaction survey tool was utilized to review and assess satisfaction scores specific to three discharge care questions within the Transitions global domain of the Hospital Consumer Assessment of Healthcare Providers and

Systems (HCAHPS) survey. This survey solicits patients to share their healthcare experiences within multiple healthcare delivery systems. The three discharge care questions evaluate the patient's perception of receiving assistance at discharge, information on what symptoms to look for after discharge, and understanding of discharge medications (see Appendix J).

Data analysis. Run charts were utilized to visually evaluate baseline data from October 2019 through December 2019, and data over the 12-week project period from February 17, 2020 through May 8, 2020. Descriptive statistics will be used to include the number of surveys completed, and percentage of each rating within the survey scale. The survey scale ratings include responses of strongly disagree, disagree, agree, and strongly agree for each of the three questions within the Transitions domain. The defined target was a 2% increase in overall in the overall global domain of Transitions with the HCAHPS survey.

Over the course of the project, a systematic review of the processes will be completed to assess the need for revisions and improvements. This four-step review process known as Plan-Do-Study-Act (PDSA) helps to identify what works and what does not within the processes of the project. The PDSA cycle will assess the role specific interventions for the NCM, SW and UR specialist within the triad model. The PDSA cycle will be completed every week and changes to processes made as indicated. Utilizing the PDSA process on this small-scale project will facilitating control over all aspects of the processes (see Appendix I).

Data management. Although, personal health information was not collected during this QI project, data security was maintained by assigning each project participant an identification number. In order to facilitate efficiency, accuracy and security, audits and questionnaires were void of personal identifiers and coded using a participant assigned number. Only the project leader had access to the coded number for purpose of data collection and the coded sheet in a

separate location from the project data in a locked drawer. Caution was given to avoid collection of unnecessary data. Throughout the 12-week, project handwritten anecdotal notes were maintained by the project leader of issues and updates related to progress of the project.

Primary storage of data, including run charts and transcribed notes, were maintained within an Excel spreadsheet that was kept on a password protected laptop computer in a locked office. Handwritten notes were shredded immediately following translation by the project leader into an electronic Word document for ease of review. Secondary storage included backing up data on an encrypted external hard drive in order to ensure security. Data was kept for three years and will be deleted from each respective hard drive based on project site policy.

Summary

Each step of the planning phase of this QI project has been discussed in this chapter. Details regarding organization readiness, inter-professional collaboration, risk management assessment, approval process, cost analysis and outcome measures and tools support the purpose of the project. The following chapter will assimilate pre-implementation steps into actualization of the QI project.

Chapter Five: Implementation Process

This quality improvement (QI) project was implemented over the course of 12 weeks and was geared towards implementing a new triad care management model in an acute hospital with the intent to reduce LOS, obtain earlier discharge times and improve patient satisfaction for a medical oncology patient population. This model of care is collaborative in nature with participation of the nurse case Manager (NCM), social worker (SW) and utilization review (UR) specialist. This chapter provide insight into specific details regarding the implementation processes. The setting, participants, recruitment, implementation process and variations in the plan are discussed.

Setting

The evidence-based QI project was conducted at an acute care medical center in Eastern North Carolina. The hospital is a not-for-profit, academic medical center with over 1,000 beds, that serves more than 1.4 million people in 29 counties. The project was conducted on a 40-bed medical oncology unit serving an adult patient population. The organization has established case management and utilization review services that provides care to the identified population of patients with discharge planning and psychosocial needs and interventions.

Participants

Participants of this QI project included established case management team members in either a nurse case manager or social worker role. Each of the nurse case managers (NCM) had a bachelor's degree in nursing and at least two years clinical nursing experience. All the social workers (SW) had a master's degree in social work and at least two years social work experience. Other participants in the QI project included a utilization review (UR) specialists with an associate degree in nursing and greater than eight years nursing experience, and a

minimum of five years' experience in utilization review. All participants were English speaking, adult females and had a minimum of two years of case management experience. Each of the participants were assigned the medical oncology unit as their primary patient population for the duration of the pilot. Exclusion criteria included those case managers hired within two months from the start of the project implementation and are not assigned to oncology as the primary patient population.

Recruitment

Participants were first identified and recruited based on the identified unit selected for the project. Identified case management staff members assigned to the project unit participated in a group meeting to share information about the project, processes, goals and participant expectations. Each potential candidate was provided with a project flyer with information about the project roles (see Appendix K). Following education, the potential participants could ask questions and discuss the details of the project. It was a departmental expectation for the existing case managers assigned to the pilot unit to participate. Following completion of the informational awareness session with case management team members, the participants verbally shared agreement for participation in the EBP project and excitement about the opportunity. Each participant was provided the opportunity to review pertinent established case management policies in place for the project site.

Implementation Process

The first step to implementation was to educate the case management and utilization review team members about the goals, audit tools, and specific interventions that each participant would be expected to complete during the project 12-weeks period. An educational PowerPoint was developed, and a meeting was held with the primary participants assigned to the project

units as well as those team members that may provide supplemental average during absences of the primary participants. During this educational session information was provided regarding the purpose of the project, who was to complete the assigned interventions, who and when the audits were to be completed and the time frame of the project. In addition, the outcomes measures of the project were discussed in relation to the interventions and how they would be notified of the results. Education also included provision of a badge card tool for each participant which shared the key interventions of the pilot for each discipline (see Appendix L).

Following the project go-live date, the audit tool was utilized weekly by the project lead to assess compliance with the expected interventions. The project lead met with the participants on a biweekly basis and reviewed the project and provided feedback on the project progress. A minimum of five audits were completed each week for the first four weeks. This was to evaluate an understanding of the role specific interventions through compliance with completing the interventions. The results of the audits were shared with the participants to facilitate communication regarding opportunities to improve the project. This four-step review process known as Plan-Do-Study-Act (PDSA) was utilized. Utilizing this process allowed for the project leader to identify the need for modifications to the project. Throughout the duration of the project, the PDSA cycle continued to be utilized, adjusting the project as the need was identified while observing and learning from the process. Throughout the project implementation the following items were reviewed through the audit process: NCM assigned functions including completion of discharge planning assessment and identification of potential discharges and facility transfers, SW assigned functions including facilitation of facility placements, identification of palliative care appropriate referrals and family conferences, and UR specialist

assigned functions including completion of clinical review, identification of goal length of stay, and identification of delays in discharge.

Education and Tools. Several educational tools were utilized during the initial educational sessions for participants. The primary route of education was verbal lecture with use of PowerPoint visual aid. The presentation provided more detail for participants on the specifics of the project than the informational session provided for those seeking general information prior to signing up to participate. A laminated badge card was provided to each participant. This badge card provides an avenue to quickly review the key elements of the EBP and serves as a reminder of the expectations for each individual discipline**.**

Interventions. Each healthcare discipline involved in the triad model of case management was designated specific key interventions. The NCM, UR specialist and SW all had a minimum of three separate interventions that tied into each key role, responsibilities and ability to impact the sought-after outcomes.

The NCM was expected to complete a discharge planning assessment utilizing the organization's established assessment tool within EPIC electronic medical record. This assessment tool is a comprehensive questionnaire that addresses clinical indicators as well as psychosocial determinants of health indicators. The assessment should be completed as soon after admission as possible, and in person if the patient's orientation and ability to participate allows. During the assessment intervention, the NCM is determining patient's county of residence which is the initial indicated of the potential for return back to an affiliated community-based hospital within the healthcare system. In order to facilitate timely throughput for the organization early discharges are necessary. The NCM was expected to identify three patients each day that could be discharged by noon.

The SW was expected to complete the transitions of care for those patients being discharged to a skilled nursing facility or assisted living facility. In addition, the SW was expected to identify a minimum of three patients daily that would benefit from palliative care referral. The Social Worker was expected to coordinate and facilitate family conferences for patients with a length of stay of 20 days or greater. The SW interventions within this project are identified as key interventions that help facilitate throughput.

The UR specialist reviews clinical information on each assigned patient case. This is a governmental requirement for all Medicare and Medicaid patients. The review is an established process within the project site, and through the review, the UR specialist was assigned to identify a goal length of stay based on the patient's diagnosis. In addition, the UR specialist was expected to identify any delays in care which may be related to consultations, treatments, or services necessary for the patient. The UR specialists continued to document in the patient's record according to established site documentation guidelines.

Plan Variation

Two identified factors contributed to variation in the EBP implementation process: staffing modifications and low census. Four weeks after implementation of the 12-week project, the project site experienced a state of emergency related to the COVID-19 pandemic. This state of emergency led to organizational implementation of interventions necessary to prepare for an anticipated patient volume surge in the upcoming months. These interventions involved reducing the hospital census through reduction of elective surgical procedures and postponement of other medical procedures and hospitalizations.

This reduced census resulted in the necessary modifications of staffing for NCMs, SWs, and UR specialists, project participants. The project unit was staffed with a NCM or a SW, and

each alternated weeks from project week four through 11. Therefore, during these weeks, the participants were not able to fully complete identified project interventions. In order to reduce the risk of employee infection, the organization recommended staff work remotely when feasible. Therefore, the UR specialist was transitioned from working onsite to working remotely from home at week four of the project and continued through completion of the project. The collaboration between the NCM, SW and UR specialist was not as anticipated due to variation in staffing model which was dictated by the project site.

Patient volume was lower than normal during the pandemic emergency state. This lower patient volume contributed to variations in patient population on different unit. The project unit was a medical oncology unit. However, during this project the project unit had various patient population, including those that were COVID positive and/or suspected positive. Staff members were guided to limit the use of personal protective equipment; therefore, NCMs and SWs did not personally meet with patients with a higher risk for contamination. Discharge planning assessments were primarily completed telephonically and by medical record review. A lack of connectivity and interaction with patients during the project was a variation in the interventions and risk to the success. Coordination of family conferences at day 20 of hospitalization was an identified intervention for the SW. However, visitation was restricted during this pandemic emergency state and alternative communications with and between family member and patients were utilized.

Summary

This 12-week project which involved implementation of a triad model of case management in an acute hospital was implemented as outlined. The setting, participants, recruitment, education and implementation was accomplished, and project initiated on time and

as planned. Four weeks into the project, the organizational site experienced an emergency state related to the COVID-19 pandemic. Variations to the implementation plan were primarily related to project site reduction in patient volumes and staffing modifications mandated throughout the project time frame.

Chapter Six: Evaluation of the Practice Change Initiative

The purpose of this scholarly project was to implement a Triad model of case management through a collaboration with the nurse case manager (NCM), social worker (SW) and utilization review (UR) specialist. This quality improvement (QI) project was conducted over the course of 12 weeks to improve hospital length of stay (LOS), discharge times, and patient satisfaction regarding transitions and discharge from hospital. This chapter highlights the project findings.

Participant Demographics

In total, five participants agreed to participate in this 12-week project. Participants' age was categorized as 20-30-year-old (n=3), 31-40 year old (n=0), 41-50 year old (n=0) and greater than 50 year old (n=2). All participants were female (N=5). Race was represented with one participant self-identified as Black or African American (20%) and four self-identified as White (80%). One UR specialist participated, two SWs and two NCM. Sixty percent (n = 3) of participants had less than five years hospital care management experience and 40% (n=2) of participants were more seasoned with up to 15 years' experience. Three levels of education were represented including Associate, Bachelor and Master level degree (Associate, 20% (n=1); Bachelor, 20% (n=1); & Masters, 60% (n=3).

Intended Outcomes

The intended outcomes of this QI project were improved LOS, increased volume of patients discharged before noon, and improved patient satisfaction scores. Baseline data was obtained from October 1, 2019 through December 31, 2019 for LOS and discharge times, and 82 days pre-project timeframe for patient satisfaction scores. Data for the 12-week project period from February 17, 2020 through May 8, 2020 was obtained and analyzed. The first desired

outcome was to improve LOS. The second desired outcome was to achieve earlier patient discharge times with a goal of discharging patients before noon each day and the third desired outcome was to have an increase in patient satisfaction related to care transitions and discharge from hospital.

Findings

Over the course of 12 weeks the multidisciplinary team of five care management participants participated in the project. Compliance rates of the application of assigned case management interventions for each discipline were audited throughout the project. The NCM documented 98% of assigned interventions, the SW documented 77% of assigned interventions and the UR specialist documented 66% of assigned interventions. Length of stay and discharge times were obtained on the 20th of each month during the project. Patient satisfaction scores were obtained pre-post project and assessment of pre-COVID and post-COVID patient satisfaction scores were also assessed. The QI project evidenced decreased LOS, fewer discharges before noon, and minimal improvement in patient satisfaction scores.

Outcomes

At implementation of the project the LOS was noted at 4.46 days. After the first month, the LOS decreased by 4.5% to 4.26 days. There was a continued trend in reduction of LOS each consecutive month of the project. LOS decreased 19% during the second month and an additional 1.1% during the last month for an overall reduction in LOS of 23.5% for a total of 1.05 days, which is well above the target of 5%. Figure 1 illustrates the monthly reduction of LOS for project unit.

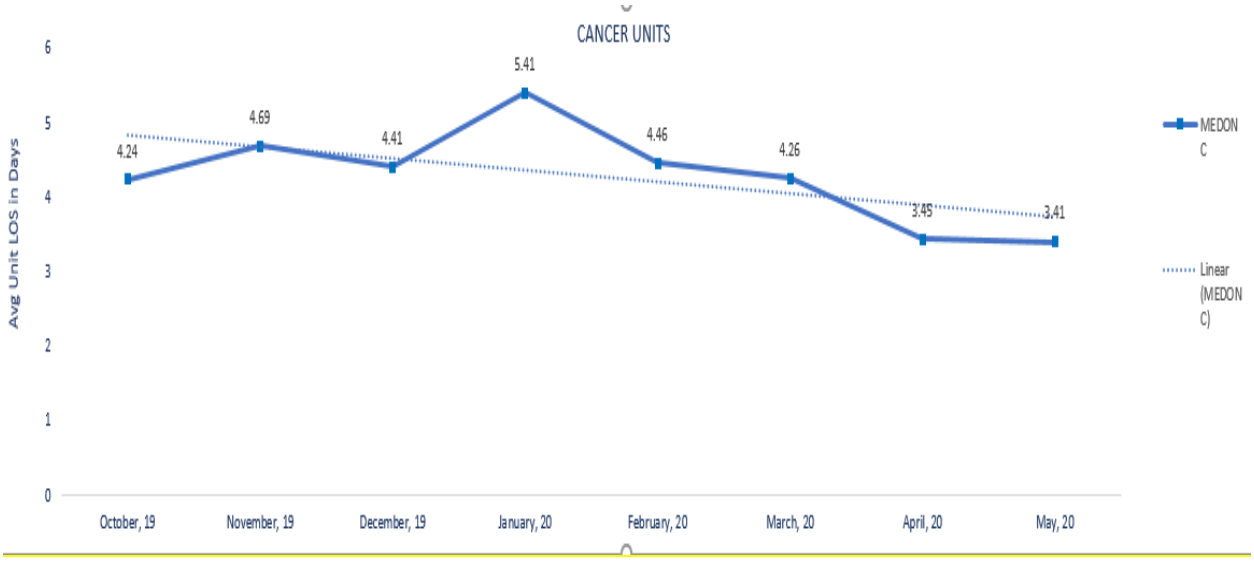

Figure 1. Length of stay (LOS) Medical Oncology Unit Vidant Medical Center; Monocule, 2020.

The second outcome measure was increasing the volume of patients discharged before Noon each day and analysis of the data revealed the target of a 2% increase was not achieved. At project implementation in February 2020, 6% of discharges occurred by Noon and although there was an initial improvement of 3% noted in March, a continued decrease in volume of discharges by Noon was evidenced with 5% in April, and zero percentage of discharges before Noon during May. Figure 2 illustrates monthly discharges by Noon.

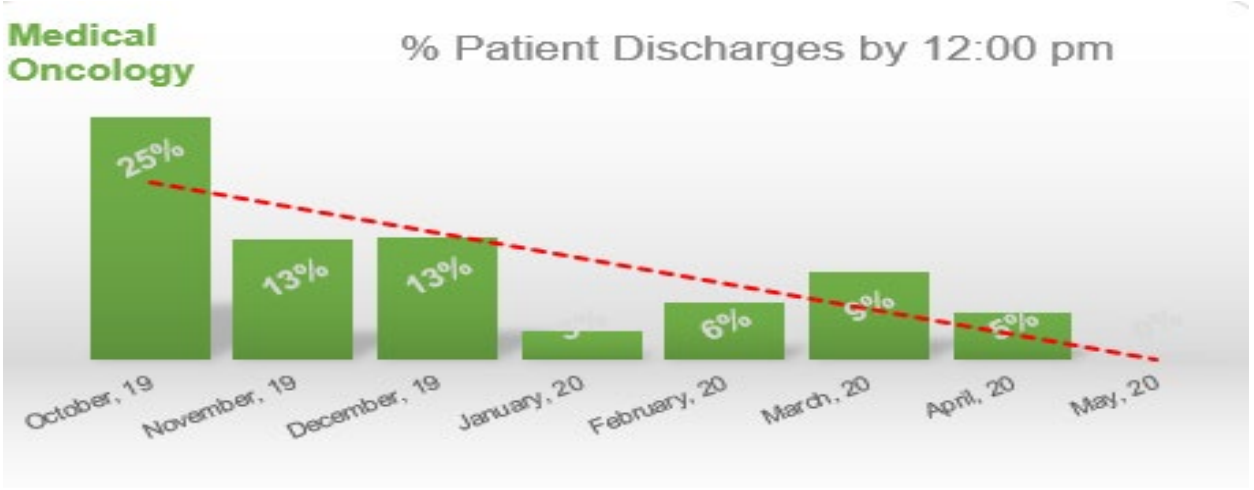

Figure 2. Percentage of discharges before Noon from Vidant Medical Center; Monocule, 2020.

The Hospital Consumer Assessment of Healthcare Providers and System (HCAHPS) scores were assessed and the three questions specifically related to transitions of care were measured (see Table 1). Patient satisfaction scores were analyzed based on the total duration of the project of 82 days and included only the survey responses that were in the top two category responses such as very good and always. The first HCAHPS survey question evaluated the perception of hospital staff considering the patient's preferences and evidenced a 10-percentage point increase. Question two evaluated the patient's perception of having a good understanding of managing health and evidenced a decreased of 7.8 percentage points, and the third question evaluated the patient's perception of understanding medications which evidenced 1.0 percentage point decrease in score. An overall increase in the care transition domain of the HCAHPS survey of 0.5 percentage point improvement in patient satisfaction from the pre-project to post-project time period was evidenced, which did not meet the assigned target goal of a 2% improvement.

The COVID-19 pandemic was an impactful variable during the project. The onset date of the pandemic at the project site was March 15, 2020. Patient satisfaction scores for the project unit were evaluated related to onset of COVID-19 pandemic and compared to those scores during pandemic. Overall, there was a 2.0 percentage point improvement in patient satisfaction even during the pandemic. Interestingly, patient satisfaction scores during the pandemic time frame did meet target goal of 2% improvement.

Table 1

Care Transition HCAHPS Scores

	Pre-project (11/26/19 – 02/16/20) 82 Days		**Post-project (2/17/20 – 5/8/20 82 Days**		**Project Pre-COVID (2/17/20 – 3/14/20)**		**Project Post-COVID (3/15/20 – 5/8/20)**	
	N	**% Top Box**	**N**	**% Top Box**	**N**	**% Top Box**	**N**	**% Top Box**
CARE TRANSITION -OVERALL	**41**	**46.3%**	**40**	**46.8%**	**11**	**45.5%**	**29**	**47.5%**
Hosp staff took pref into account	40	35.0%	40	45.0%	11	45.5%	29	44.8%
Good understanding managing health	41	48.8%	39	41.0%	11	45.5%	28	39.3%
Understand purpose of taking meds	41	55.3%	40	54.3%	11	45%	29	58.3%

Note. HCAHPS scores Vidant Medical Center, 2020.

Summary

In summary, data from the three outcome measures for this QI project was analyzed and evaluated regarding project implementation. Consistent with the current literature available on the Triad model of case management, an observed improvement in LOS and patient satisfaction was evidenced. However, there was no evidence of an increased volume of discharges by Noon. The implementation of this project illustrates the benefits of a collaborative approach to case management that includes the NCM, SW and UR specialist. The onset of the COVID-19 pandemic was an impactful variable during this project and affected the consistent implementation of interventions throughout the duration of the project thus potentially impacting

the outcomes. Project limitations related to the COVID-19 pandemic as well as significance, recommendations and implications for practice will be discussed further in the concluding chapter.

Chapter Seven: Implications for Nursing Practice

The American Association of Colleges of Nursing (AACN) has established core competencies that must be in existence throughout the Doctor of Nursing Practice (DNP) curriculum. These Essentials guided this quality improvement (QI) project in compliance with the foundation for advanced practice nursing. Each of the eight Essentials are embedded in this QI project and guided the application of best nursing practice.

Practice Implications

According to the AACN (2006) there are several benefits of doctoral programs that are focused on the practice of nursing and include advanced knowledge to improve nursing practice, enhanced leadership skills and practice and provision of advanced educational knowledge and practice. Doctoral prepared nurses enter practice prepared for a variety of nursing practice roles. Specifically, those nurses interested in organizational leadership will have a focused path for understanding healthcare organizational leadership. The DNP Essentials are built on an eight-core competency framework. This framework is the foundation for the advanced practice nursing curriculum that prepares nurses to practice as advanced practice nurses (AACN, 2006).

Essential I: Scientific underpinnings for practice. The DNP prepared nurse utilizes scientific underpinnings to guide practice. These underpinnings are rooted in science and research and are focused on policies and laws that guide life processes, interventions that optimize health status and human behavior in correlation with the environment (AACN, 2006). This DNP project demonstrated the significance of a multidisciplinary approach to patient care in the healthcare specialty of case management. As outlined in the literature a multidisciplinary, collaborative approach to case management will reduce hospital length of stay and improve discharge times and patient satisfaction. This multidisciplinary approach to care management,

which is inclusive of the nurse case manager (NCM), social worker (SW) and utilization review (UR) specialist provides opportunity to optimize healthcare outcomes for the project site organization and patients within the current everchanging environment of healthcare.

Essential II: Organization and systems leadership for quality improvement and systems thinking. The DNP graduate should be prepared to incorporate organizational and system leadership into practice. Incorporating the mindset of systems with an organizational approach to leadership allows for quality improvement and improved patient outcomes. The DNP graduate optimizes leadership that is geared towards quality improvement by applying a systems practice with a broad population approach, embracing new care delivery model, incorporating policy and regulations, ensuring emerging practice is at the forefront, and supporting an ethical approach to practice (AACN, 2006). This QI project was geared towards implementing a new triad case management model in an acute hospital with the intent to reduce LOS, obtain earlier discharge times and improve patient satisfaction. This project evidenced Essential II through the change process and implementation of a new care delivery model for case management. This QI project was performed on one acute hospital unit, but the approach was such that this emerging model of case management could be applied to the larger organization and healthcare system.

Essential III: Clinical scholarship and analytical methods for EBP. The DNP prepared nurse should competently apply the knowledge discovered from research into application of practice. Scholarship goes beyond identification of a problem and into the application of practices that improve healthcare outcomes and nursing practice. The DNP nurse will identify practice needs, solve practice problems and implement change. This QI project was developed due to the identification of delayed patient throughput in an acute care hospital.

Following review of evidenced based literature and data related to throughput at the project site, the project was developed implemented. Evidence to support project development included longer than average length of stay and discharge times on several of the acute care units. This information was utilized to develop the project and specific project aims. Recommendations would include continued data tracking of length of stay and discharge times. Ongoing data tracking of these two key performance indicators can drive expansion of interventions to more nursing units throughout the organization.

Essential IV: Information systems/technology and patient care technology for the improvement and transformation of healthcare. The DNP prepared nurse has abilities to use information technology to support and improve patient care through application of new knowledge, management of aggregate level data, and technology for specialized nursing arenas (AACN, 2006). This QI project utilized information technology in various ways. The participants completed discharge planning assessments within the organizational electronic medical record in accordance with standard practice and policies of the project site. An organizational data management platform, Monocle, was utilized for monitoring and gathering data related to identified outcomes metrics of LOS and discharge times. Information systems and technology will continue to play an integral adjunct to ongoing support for improvement in patient care as there is a tremendous amount of patient information available within the electronic medical record. Patient satisfaction was measured related to transitions of care with many aspects of transitions represented in the electronic medical record. Throughout the QI process, collaboration with information technology team members allowed for optimization of the project.

Essential V: Healthcare policy for advocacy in healthcare. The DNP nurse is readily prepared to design, influence, implement as well as advocate for healthcare policies that impact healthcare quality, finance, practice, safety and efficiency (AACN, 2020). During this QI project, policy and regulatory requirements were enforced. The NCM, SW and UR specialist performed interventions related to discharge planning and utilization review which are regulated by Centers for Medicare and Medicaid Services (CMS) with specific Conditions of Participation established for acute care hospitals. These Conditions of Participation govern the practices of case management and utilization review within a hospital. Compliance of these regulatory practices were ensured during the development and implementation of the project. This project has implications for national policy change related to criteria for mandated patient discharge planning assessment as well as organizational practices changes related to expectations for collaboration between the NCM, SW and UR specialist.

Essential VI: Interprofessional collaboration for improving patient and population health outcomes. The DNP prepared nurse should be able to effectively communicate and collaborate for achievement of implementing and influencing nursing practice. Through leading multidisciplinary professional teams, the DNP prepared nurse can analyze and positively impact organizational change. DNP prepared nurses hold leadership skills that allow for optimal delivery of nursing practice and care (AACN, 2006). The major focus of the QI project was the implementation of a triad model of care management which encompasses a multidisciplinary professional team implementing care that address a wholistic approach to discharge planning. In additional to the multidisciplinary model of care evidencing collaboration it was also evident throughout the project by both the project participants and the project lead. Communication, follow-up, gathering feedback and sharing of information

continued on an ongoing basis throughout the project's duration. This communication allowed for analysis and evaluation which facilitated optimization of the project. This DNP project has implications for practice change related to how and when NCM, SW and UR specialist communication, collaborate during progression of care rounds and prioritize tasks related to their specialty.

Essential VII: Clinical prevention and population health for improving the nation's health. The DNP prepared nurse should be able to identify, develop and implement evidenced-based strategies for improving healthcare for individuals, aggregates and populations (AACN, 2006). The focus of this project was implementing a triad model of case management with the aim of improving length of stay, discharge times and patient satisfaction for a medical oncology patient population within an acute care hospital. The existing dyad model of case management evidenced longer than average organizational length of stay and later discharge times. This provided opportunity to intervene specifically for this population of patients. In implementing a collaborative triad model of case management, the NCM, SW and UR specialist were able to address specific interventions geared toward this population of patients. This project has future significance for improving overall patient outcomes through timely transitions of care, decreased time in the acute hospital setting and greater facilitation and connectivity with resources for post-hospitalization care.

Essential VIII: Advanced nursing practice. The DNP prepared nurse should be able to design, implement and evaluate interventions that support improvement in quality nursing care all the while integrating cultural diversity, patient relationships, clinical judgement, mentorship, change agent practices, and analyzation of outcomes (AACN, 2006). The design, implementation and evaluation of this project embraced these aspects representative of advanced

nursing practice. The project lead identified the participant and patient population based on clinical experience. Following a thorough literature review, an evidenced quality improvement solution inclusive of a triad model of case management was implemented to improve outcomes. Throughout the project, the Plan Do Study Act (PDSA) cycle was utilized to identify necessary improvement to the project thus improving patient outcomes.

Summary

The eight *Essentials of Doctoral Education for Advanced Nursing Practice* (AACN, 2006) encompasses the guidelines and expectations for nurses practicing as advanced levels of nursing. These nurses are prepared to practice in a variety of settings at a level that exemplifies nursing expertise. From beginning to end, from discovery and planning to implementation and evaluation, this QI project has required an understanding and integration of skills outlined in the eight Essentials including but not limited to organizational sciences, systems leadership, scholarship information technology, healthcare policy and advocacy, and collaboration.

Chapter Eight: Final Conclusions

Healthcare organizations are challenged more today than ever with balancing quality care and financial stability. Doing so requires nursing professionals with the ability to strategically plan and implement innovative interventions that optimize healthcare services. One area of opportunity for optimization is within case management (CM) services through implementation of a Triad model of care. A collaborative Triad CM model incorporates the roles of the nurse case manager (NCM), social worker (SW) and utilization review (UR) specialist and through this quality improvement (QI) project the Triad model has evidenced improved patient satisfaction and quality outcomes for the project facility. By implementing a Triad model of CM, healthcare organizations can optimize existing CM service and be better equipped to meet organizational goals and objectives through these challenging healthcare times.

Significance of Findings

Challenges continue within hospitals to provide efficient services, reduce length of stay (LOS) and improve patient satisfaction indicating the need for implementation of a CM model that facilities the ability to improve outcomes. Findings from this project evidence the significance of implementing a collaborative Triad CM model that incorporates the specialized roles of the NCM, SW and UR specialist and by doing so hospitals can improve the quality and cost of care. Expansion of the collaborative Triad model into additional unit and patient populations can decrease hospital LOS and improve patient satisfaction.

Project Strengths and Limitations

There were two primary strengths relative to the QI project. First, working with a small participant group allowed the project leader to provide individualized monitoring of understanding and application of the identified case management interventions. Frequent

follow-up and feedback were elicited throughout the project and facilitated necessary interventions for optimization of the project. Secondly, the collaborative approach to this project incorporating the major roles within CM allowed for optimal implementation and engagement from the participants. The years of CM experience of the participants enhanced the understanding of each of the roles and each embraced the outcomes as a benefit for all.

The primary limitation of this project was related to timing of the project. Four weeks into the 12-week project the COVID-19 pandemic affected the project site and thus affected the project. Workforce reduction in hours and transitioning staff from onsite to remote were two organizational interventions implemented due to reduced census and mandated social distancing. The SW and NCM participants transitioned to a staffing model in which they alternated weeks of working on site with serving as a team member in the organizational resource pool to be utilized in an alternative role serving the organization. This alternative staffing model for the SW and NCM continued for three weeks during the project. The UR specialist transitioned from onsite to remote beginning with week four of the project and continuing throughout the duration. These organizational mandated interventions limited communication between all disciplines and with patients and families. The use of technology for discharge planning, progression of care rounds and preforming utilization review was increased to include telephonic and web based conferences.

Recommendations for Practice

With the dissemination of data showing positive outcomes related to LOS and patient satisfaction, it is anticipated the Triad model. Expansion of the Triad model is recommended for intermediate and general levels of care within the project site. This will allow for further data collection related to LOS, discharge times and patient satisfaction. Understanding the outcomes

for additional patient populations and levels of care will allow for further analysis of the impact to the overall organization. As healthcare moves into the post-COVID-19 pandemic phase, nursing leaders are challenged to reimaging ways in which healthcare can be provided in a cost-effective efficient manner. Additional projects that focus on a triad model of case management with an emphasis on technology as the primary source of communication with patients, families and multidisciplinary team members may be efficacious is further optimizing the Triad model.

The project's evidence-based Triad model of CM was disseminated within the project site for those affiliated with CM and operations of the organization. Sharing the impact of this project allowed organizational leadership and key stakeholders to engage in further implementation across the healthcare system. One local and national organization dedicated to the profession of CM is the *American Case Management Association* and dissemination to other case management professionals across the state and country in either a poster or podium presentation is essential for further growth of case management.

Final Summary

The results of the analysis of this evidence-based project indicates the Triad model of CM is sustainable within the project unit and potentially throughout the organization as well as the healthcare system. Implementing the Triad model of CM can positively impact LOS and patient satisfaction.

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Appendix A

Evidence Matrix

Article	**Level of Evidence** (I to VII)	**Data/Evidence Findings**	**Conclusion or Summary**	**Use of Evidence in EBP Project Plan**
Daniels, S. & Frater, J. (2011). Hospital case management and progression of care. *Healthcare Financial Management: Journal of Healthcare Financial Management Association*, 65(8), 108-113.	Level VII	Expert Opinion: Inclusion of NCM, SW & UR Specialist in CM model to improve hospital operations.	Expert Opinion: Inclusion of NCM, SW & UR Specialist in CM model to improve hospital operations	Expert Opinion, provides evidence to collaborative model influencing improvement in hospital outcomes. Limitation: Does not specifically identify LOS, discharge time or patient satisfaction as the outcomes.
Weiss, M.E., Bobay, K.L., Bahr, S. J., Costa, L., Hughes, R.G., & Holland, D. E. (2015) "A Model for Hospital Discharge Preparation: from case management to care transition" *The Journal of Nursing Administration*, 45:12 pp 606-614 doi: 10.1097/NNA.0000000000000273.	Level VII	Presents a model for conceptualizing the components of hospital discharge preparation. Type of model is a transitional care model spanning from inpatient to outpatient.	No outcomes available.	This article provides evidence of need to incorporate hospital discharge activities into the components of a transitional care model of case management.

Kainzinger, F., Raible, C., Pietrek, K., Miller-Nordhorn, J., & Willich, S. (2009). Optimization of hospital stay through length-of-stay oriented case management: an empirical study. Journal of *Public Health*. 17: 395-400. doi: 10.1007/s10389-009-02660-5	Level IV	Retrospective review of 168 inpatients for factors that decrease LOS management.	LOS decreased for intervention cases.	LOS Case Management model included interventions: Avoidance of unjustified procedures, transparency provided to ensure optimal discharge time, and efficient discharge management. Limitation: only Nurse Case Manager. Evidences case management with focus on LOS can reduce LOS.
Daniels, S. (2011). Introducing HCM v3.0: A standard model for hospital case management practice. *Professional Case Management*. 16:3, 109-125.	Level VII	A standardized approach to Hospital Case Management provides for achievable measurable outcomes.	Hospital CM models should have four components: advocacy, structure, operations and progression of care.	This article gives history of CM, and provides the four core principles of hospital case management which need to be applied to any model change.

Kane, M., Weinacker, A., Arthofer, R., Seay-Morrison, T., Elfman, W., Ramirez M.,… Welton, M. (2016). A multidisciplinary initiative to increase inpatient discharges before noon. *The Journal of Nursing Administration*, 46(12), 630-635. doi: 10.1097/NNA.0000000000000418.	Level VI	Discharge-before-noon percentage increased from 14% in an 11-month preintervention period to an average of 24% over the 11 month post-intervention period, patient satisfaction scores remained same.	Intervention: CM identified two patients each morning that can discharge before Noon. CM Collaborate with charge nurses who also identify two patients that can be discharged before noon. A green dot was placed on census board besides those patients.	CM collaboration improves discharge time. Limitation: does not specify whether the CM is an RN, SW or UR Specialist.
Phillips, M. & Fitzsimons, V. (2015). The affordable care act: impact on case managers. *Professional Care Management.* 20(6).	Level VII	Expert Opinion: Importance of CM as it relates to meeting ACA initiatives.	Expert Opinion: Importance of CM as it relates to meeting ACA initiatives through improvement in quality and service, reducing cost and unplanned readmission to acute care hospitals.	Evidence to support CM positive impact on ACA initiatives. Limitations: Not specific to a model of CM.

Park, C. S. & Park, E. (2018). Factors influencing patient-perceived satisfaction with community-based case management. *Western Journal of Nursing Research.* 40(11), 1598-1613. doi: 10.1177/0193945917711116	Level V	Significant predictors of patient perceived satisfaction with community-based case management included "capacity to change", patient-perceived time spent with a case manager", "support/advocacy", and "emotional connectedness"	Case managers can affect patient satisfaction through their intervention.	Relevant to project because it supports CM as a means to improve patient satisfaction. Limitations: does not specify the individual roles of CM, and does not speak to a specific model of CM.

Cesta, T. (2016). CASE MANAGEMENT INSIDER. Thinking of separating utilization management and case management? Think again. Hospital Case Management: The monthly update on hospital-based care planning and critical paths, 24(3), 35-28. Daniels, S. (2011). Introducing HCM v3.0: A standard model for hospital case management practice. Professional Case Management, 16(3), 109-125. doi: 10.1097/NCM.0b013e318212b5c1.	Level IV	Case study of two case management models at hospitals. Full integration of SW, RN and UR roles is forward thinking and provides for patent-centric care as opposed to task oriented CM services.	Collaborative model inclusive of RN, SW and UR specialist is not less expensive. CM services, roles, functions when integrated provide for greatest success.	Speaks to benefits of triad, collaborative model with integration of UR.
Johnson, K. & Schubring, L. (1999). The evolution of a hospital-based decentralized case management model. *Nursing Economics.* 17(1), 29-48.	Level IV	Case study on the development of highly integrated case management program at hospital. Dyad model.	This is a historical articles outlining a dyad approach to CM that does not include UR services.	Outlines dyad model, prior to ACA. Historical review of case management model prior to ACA.

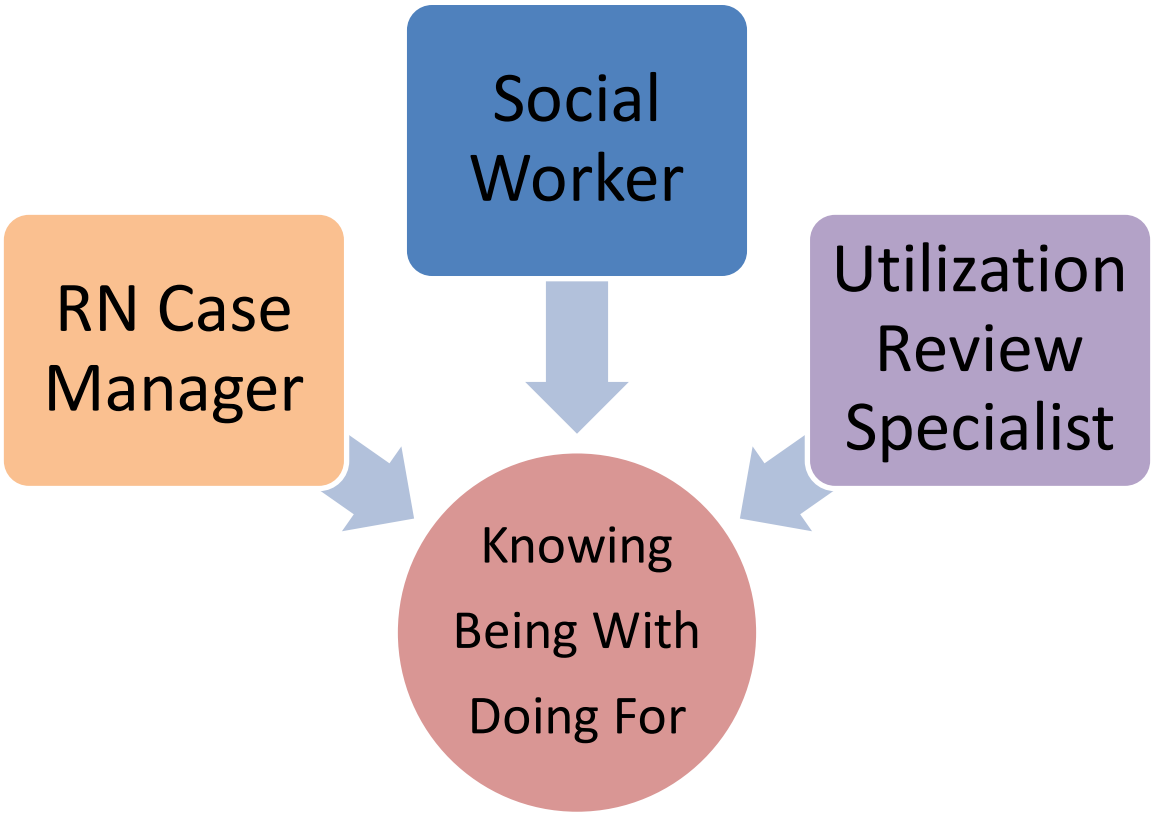
Terra, S. (2007). An evidenced-based approach to case management model selection for an acute care facility. *Professional Case Management.* 12(3).	Level V	Literature Review to evidence the best case management model; no one model can be identified as preferred; however, key factors are identified as the foundation for effective model: direct patient contact, must evidence measurable outcomes, reduce cost, LOS, and improve outcomes, integrated model, and recognition of providers as valued customers.	No one model identified; key aspects include integration of roles within CM to evidence outcomes.	Evidence supports project, and identified outcomes.

Hajewski, C. & Shirey, M. (2014). Care coordination: A model for the acute care hospital setting. *The Journal of Nursing Administration,* 44(11), 577-585. doi: 10.1097/NNA.0000000000000129.	Level VI	Pre-Post descriptive study of implementation of a patient care delivery model which included RN case manager, SW, and UR. This evidenced significant decrease in LOS, readmissions, patient satisfaction, quality measures, and cost of care.	Triad model evidences improved outcomes specific to LOS, quality measure and patient satisfaction.	Evidence supports project and related identified outcomes. Limitations; outcome of improved discharge time not identified.

Appendix B

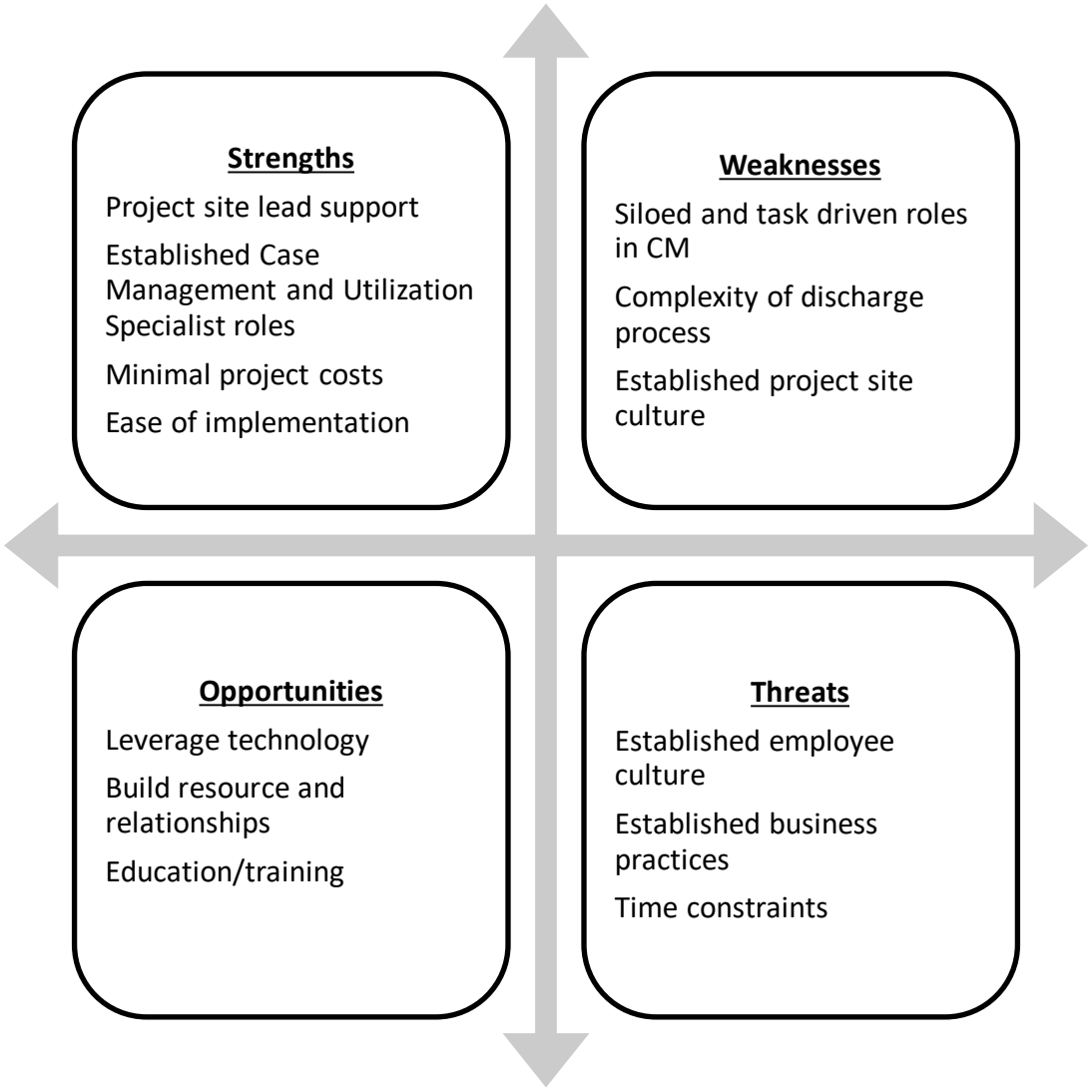
Swanson's Theory of Care

Triad Model of Case Management



Appendix C

SWOT



Appendix D

Organizational Support Letter

June 17, 2019

To East Carolina University College of Nursing:

We at [ ] have reviewed Amanda Hargrove's DNP Project Proposal *"Optimizing Case Management Services"*. Ms. Hargrove has organizational support and approval to conduct their Doctor of Nursing Practice student project within our institution. I will serve as the organization's liaison, or project champion, for the project.

We understand that the timeframe for this project is from the date of this letter through August 1, 2020. Implementation at the project site will occur January 2020 through April 2020, unless otherwise negotiated. We understand that for Ms. Hargrove to achieve completion of the DNP program, dissemination of the project is required by the University and will include a public presentation related to the project and submission to the ECU digital repository, The Scholarship. In addition, we understand that ECU College of Nursing encourages students completing exemplary scholarship to develop a manuscript for publication, but that is not a requirement. Our organization understands and agrees that the student will not use our organization's name in the formal project paper or any subsequent posters, presentations, or publications.

Our organization has deemed this project as a program or process development project. Our organization is aware that this project will be processed first through our organizational approval process and then through the ECU College of Nursing process, which may include a formal review through University and Medical Center Institutional Review Board of East Carolina University (UMCIRB), if needed. Our organization does have an Institutional Review Board (IRB). We are aware that in the absence of an organizational IRB, the project will be submitted through the ECU College of Nursing review process which may include UMCIRB review if needed.

Thank you,

Debra Thompson, DNP, FNP-BC, MAS-PHM

[ ]

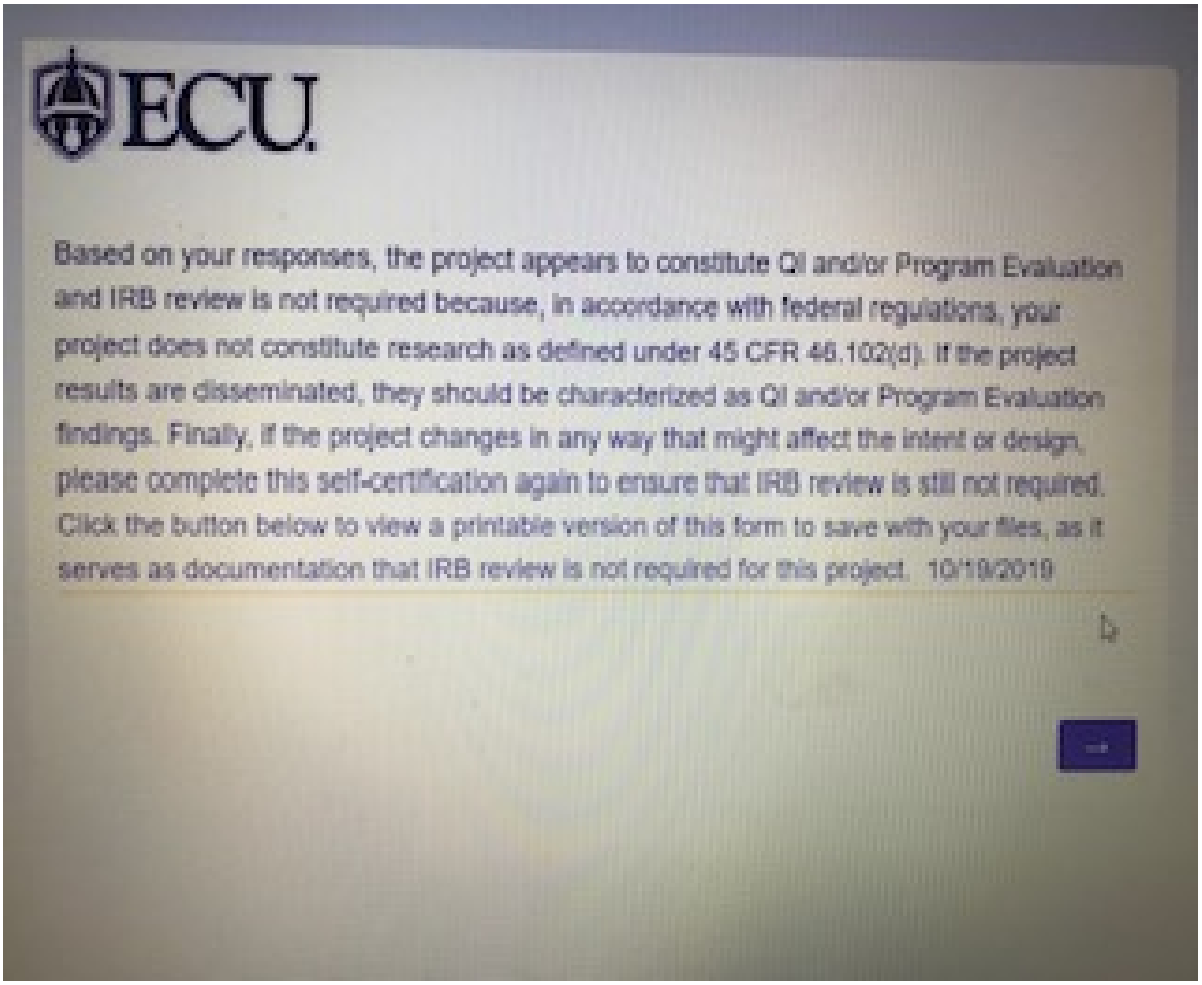
Appendix E

Budget Analysis

Item	Cost/unit	Quantity	Subtotal
Supply Expenses			
Paper	$8.00/pack	2 packs	$16.00
Laminator Machine	$80.00	1	$80.00
Laminating Paper	$20.00/pack	1 pack	$20.00
Pens	$8.00/pack	1 pack	$8.00
Printer	$75.00	1	$75.00
Ink (Color/Black)	$75/cartridge	1 cartridge	$75.00
Binders	$10.00	5	$50.00
Folders	$.75	10	$7.50
Total	---	---	$331.50

Appendix F

IRB QI Program Evaluation



Appendix G

Demographic Survey

Case Management Triad Model
Demographic Profile

Date _____ Participant # _____

What is your age?

- 20-30 years old
- 31-40 years old
- 41-50 years old
- Greater than 50.

What is your gender?

- Male
- Female

Which one of these groups would you say best represents your race?

- White
- Black or African American
- American Indian or Alaska Native
- Hispanic, Latino/a or Spanish Origin
- Asian
- Other

What is your role?

- RN Case Manager
- Social Worker
- Utilization Review Specialist

How many years Hospital Case Management experience?

- 0-5 Years
- 6-10 Years
- 11-15 Years
- 16-20 years
- Greater than 20 years

What is your highest level of education?

- Associate Degree
- Bachelor's Degree
- Master's Degree
- Doctorate Degree

Appendix H

Chart Audit Tool

Triad Model of Case Management

Date_____

Yes/No	RN Case Manager
Yes/No	Discharge Planning Assessment Completed
Yes/No	3 Potential Back Transfers identified
Yes/No	3 Discharges by Noon identified

Yes/No	Social Worker
Yes/No	Facilitation of facility placement
Yes/No	Identify 3 palliative care appropriate patients
Yes/No	Schedule family conference at Day 20 LOS

Yes/No	Utilization Review Specialist
Yes/No	Completion of UR review
Yes/No	Identify goal LOS (MCG applied)
Yes/No	Identify delays in care

Appendix I

PDSA

Project Name: Improving Hospital Outcomes Through Implementation of a Triad Model of Case Management	Date of test: 1/13 through 1/24/20	Test Completion Date: 1/24/20
Overall team/project aim: "In an acute tertiary care center, does implementation of a triad model of CM decrease LOS, improve discharge times, and improve patient satisfaction?"		
What is the objective of the test? Evidence compliance with triad model of case management		

PLAN:

Briefly describe the test:

Implementation of Triad model of CM incorporating the NCM, SW and UR Specialist and assigning specific interventions related to each role.

How will you know that the change is an improvement?

RNCM, SW and UR Specialist will be compliant with identified interventions for triad model of care.

What do you predict will happen?

1. Decreased unit LOS
2. Increased volume of discharges by Noon daily
3. Increased patient satisfaction scores r/t two transition of care survey questions

PLAN

List the tasks necessary to complete this test (what)	Person responsible (who)	When	Where
1.RNCM will identify 3 patients for back transfers per day	RNCM	Daily	CC4
2.RNCM will identify 3 patients for discharge before Noon	RNCM	Daily	CC4
3.RNCM will complete 100% discharge planning assessments	RNCM	Daily	CC4
4.UR Specialist will identify the goal LOS for each patient	UR Specialist	Prior to discharge	CC4
5.SW will facilitate all facility placements	SW	Daily as necessary	CC4

DO: Test the changes.

Was the cycle carried out as planned? ☐ Yes ☐ No

Record data and observations.

What did you observe that was not part of our plan?

STUDY:

Did the results match your predictions? ☐ Yes ☐ No

Compare the result of your test to your previous performance:

What did you learn?

ACT: Decide to Adopt, Adapt, or Abandon.

☐ Adapt: Improve the change and continue testing plan. Plans/changes for next test:

☐ Adopt: Select changes to implement on a larger scale and develop an implementation plan and plan for sustainability

☐ Abandon: Discard this change idea and try a different one

6.SW will coordinate family conference for patients with LOS 20 or greater	SW	At day 20 LOS	CC4

Plan for collection of data:

Appendix J

Patient Satisfaction Survey – Transition of Care

Global Domain	**n**	**% Date**	**% Date**	**% Date**
Hosp staff took pref into account	Strongly Disagree Disagree Agree Strongly Agree Total			
Good understanding managing health	Strongly Disagree Disagree Agree Strongly Agree Total			
Understand purpose of taking meds	Strongly Disagree Disagree Agree Strongly Agree Not given meds Total			

Appendix K

Recruitment Flyer

CASE MANAGEMENT TRIAD MODEL PILOT

JANUARY 16, 2020 THROUGH APRIL 2020

[ ] Medical Oncology Unit

KEY PROJECT STAKEHOLDERS: RN CASE MANAGER, UTILIZATION REVIEW SPECIALIST AND SOCIAL WORKER

OUTCOME MEASURES: UNIT LENGTH OF STAY, DISCHARGE TIMES, PATIENT SATISFACTION

For Information Contact:
Amanda Hargrove, MSN, RN
East Carolina University,

Appendix L

Participate Badge Card

CM Triad Model of Care

Nurse Case Manager:
Complete Discharge Planning Assessment
Identify 3 Back Transfers Daily
Identify 3 Discharges by Noon Daily

Social Worker:
Facilitate Facility Placements
Identify 3 PC Appropriate Patients Daily
Schedule Family Conference at Day 20 LOS

Utilization Review Specialist:
Complete UR Review
Identify Goal LOS (MCG)
Identify Delays in Care
Attend POCR Daily

CM Triad Model of Care

Nurse Case Manager:
Complete Discharge Planning Assessment
Identify 3 Back Transfers Daily
Identify 3 Discharges by Noon Daily

Social Worker:
Facilitate Facility Placements
Identify 3 PC Appropriate Patients Daily
Schedule Family Conference at Day 20 LOS

Utilization Review Specialist:
Complete UR Review
Identify Goal LOS (MCG)
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Attend POCR Daily