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Reducing the Readmissions Through Multidisciplinary Rounds in Older Adults

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
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Walden University
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Abstract

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by

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MSN, Walden University, 2016

MPH, Hahnemann University, 2002

BS, London University, 1983

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

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Abstract

Hospital readmissions are a reflection of poor quality of care. The readmission rate in an

acute care for the elderly (ACE) unit was above the national benchmark in 2017. The

specific problem includes lack of communication, collaboration, and coordination among

the interdisciplinary team. Further, in older adults, the problem is accentuated by health

illiteracy, comorbidities, cognitive impairment, polypharmacy, and unclear discharge and

follow-up care instructions. Poor care transition costs Medicare 17.4 billion dollars a

year. Multidisciplinary rounds (MDRs) have been adopted by many hospitals as

evidence-based interventions to reduce readmissions within 30 days. This Doctor of

Nursing Practice (DNP) project was an evaluation of a quality improvement (QI)

initiative, and sought to evaluate whether MDRs as evidence-based practice would

demonstrate a reduction in readmissions in the ACE unit. The MDRs were implemented

as the intervention from October 2018 to May 2019. The practice-focused question for

this DNP project was: if the use of MDRs as QI initiative in an ACE unit would

demonstrate a reduction in readmissions during the implementation. The aggregate

readmissions data for 9 months before, during, and after implementation were accessed

retrospectively to compare the means of pre-, during, and post-MDR performance using

paired-samples t test. Although 5 out of 9 months the readmissions were below the mean

during preimplementation, there was no statistical significance. Recommendations were

made to repeat the pilot study for at least a year having structure and process guidelines

for participation in MDRs. This problem affects quality of life, and this capstone project

aimed to bring about a social change by reducing readmissions in vulnerable older adults.

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Dedication

I dedicate my DNP project to my family. A special feeling of gratitude to my loving husband, Emmanuel Tisseverasinghe, for his constant support, words of encouragement, and the endless sacrifices he made throughout this journey.

I dedicate my work to my loving parents, Cecilia and Gnanamani Antony, who placed an importance on education over wealth. I am forever appreciative of Papa, who instilled the love for learning in me and, most of all, believing in me.

I appreciate my daughter, Lia Tisseverasinghe, who helped me with my earlier work proofreading my papers. I am grateful for my daughter, Lia, son, Anthony, daughter-in-law, Meera, and my grandson, Syon Tisseverasinghe, who gave up family time so I can accomplish this goal.

My special thanks to my brothers, sisters, brothers-in-law, sisters-in-law, nieces, and nephews who supported me along the way through their admiration and encouraging words.

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Section 1: Nature of the Project

Introduction

The quality improvement topic for this Doctor of Nursing Practice (DNP) project was the transitions of care. For patients in an Acute Care of the Elderly (ACE) unit who are 65 years and older, care coordination and transitions of care are of utmost importance for better clinical outcomes. Patients' discharge destinations may be to a rehabilitation center, extended care facility, or home. Regardless of the next step, it is essential to communicate the plan for the next level of care.

When patients return to the hospital within 30 days of discharge, payers may hold back money for the care rendered. A major challenge is when a patient goes home from the hospital (Hung et al., 2018). The problem exists when patients are not included in decision making regarding their discharge from the hospital and when the discharge teaching is incomplete, unclear, or poorly performed. At discharge, health literacy may be a barrier for patients and families to understand the next steps in their plan of care. Discharge planning, which starts on admission, might be derived from faulty assumptions about the posthospitalization needs. This scholarly project focuses on creating a positive change for a vulnerable population using an evidence-based practice for quality improvement.

Problem Statement

The problem this DNP project addressed was the gap in the performance of acceptable readmissions within 30 days in the geriatric population. The acute care hospital at the study site has a maximum capacity for 261 beds and provides services to a

significant percentage of elderly patients. The over 65-year-old population in the community is approximately 17.04%, compared to the statewide average, with the national average of 13.23% and 12.41%, respectively (Zip Atlas, 2016. There are also many senior living communities as well as assisted living and long-term care facilities. When people from this segment of the population seek services at the partner site and get admitted to the ACE unit, there is a need for coordination of services.

In the aging population, there are chronic illnesses that contribute to comorbidities. Chronic diseases in the elderly increase the healthcare costs for the population, and when readmissions occur, the burden is even higher. The complex and complicated nature of care transition in older adults costs Medicare approximately $17.4 Billion per year (Arbaje et al., 2014). Arbaje et al. (2014) also noted that it is not easy predicting who is at risk for readmission. Health illiteracy, cognitive impairment, comorbidities, and polypharmacy are some of the barriers for the elderly. The Institute of Medicine challenged health care providers to deliver safe, efficient, effective, and coordinated care (Nursingworld, 2017).

Coordinated care across the continuum is essential to reduce the risk of readmissions. Older patients leaving the ACE unit are at risk for fragmented care while in the hospital and less optimal follow-up care at home, which puts them at risk for readmissions. Further, hospital readmissions are a reflection of the quality of care rendered in the organization (Pickens & Ahn, 2017). The national benchmark for readmissions within 30 days of discharge was 8.54% in 2017 (CMS, 2020). For the same period, the rate of readmissions on the ACE unit at the study site was 13.64%. It was

evident that there was a gap in performance to provide safe care for the segment of the population who needs the use of evidence-based practices to bridge the gap in performance.

A DNP program positions the student to improve the quality of care through interprofessional collaboration (American Association of Colleges of Nursing, 2006). Multidisciplinary rounds (MDRs) are a patient-centered care model that has shown to improve communication and collaboration among the members of the team for better patient outcomes. The members of various disciplines discuss aspects of patient care in real-time to identify discharge needs (IHI, 2015). The make-up of the team includes a physician, a clinical pharmacist, a physical therapist, an occupational therapist, a dietitian, a case manager, a social worker, a nurse leader, and the primary care nurse. Each member of the team brings their area of expertise to the rounds to coordinate patient care, establish priorities, and plan for safe discharges.

Purpose Statement

The purpose of this DNP project was to study the effectiveness of the quality improvement (QI) initiative. Using interdisciplinary teams to address the problem of readmissions has been adopted by many healthcare organizations to decrease hospital readmissions and promote safe and effective care for patients (IHI, 2015). At the partner organization, from October 2018 to May 2019, MDRs were used to reduce readmissions on an ACE unit. This intervention was intended to bridge the gap in performance for the rate of readmissions, which has been higher than the national benchmark.

The MDR, as an evidence-based intervention, removed the barriers to communication and collaboration. The interdisciplinary team members who previously worked in silos fostered fragmentation of care. However, the MDRs allowed the interdisciplinary team to step out of their silos to communicate and collaborate to provide seamless care across the continuum.

The practice-focused question for this DNP project was as follows: Will a QI evaluation of the use of MDRs in the ACE unit demonstrate a reduction in readmissions between October 2018 and May 2019? The MDR as an evidence-based intervention removed the barriers to communication and collaboration. The interdisciplinary team who worked in silos fostered fragmentation of care. However, the MDRs allow the interdisciplinary team to step out of their silos to communicate and collaborate to provide seamless care across the continuum (Patel et al., 2019).

Nature of the Doctoral Project

The sources of evidence collected included the effectiveness of MDRs and the organizational performance of the rate of readmissions within 30 days. The Care Management team provided the baseline information on the rate of readmissions. The national benchmark data came from the Center for Medicare and Medicaid Services (CMS). After institutional review board (IRB) approval, the data collected during the time frame of October 2018 through May 2019 were analyzed.

The strength of the evidence determined the success of the outcome after the implementation of MDRs. The effectiveness of the program after the QI initiative was analyzed by comparing the preimplementation and postimplementation data on

readmissions. The impact of the problem is financial, and it also affects the quality of life for elderly patients. An older adult who is independent performing their activities of daily living may need rehabilitation after a hospitalization. At times, the elderly patients may need to be placed in long-term care facilities after a short stay at the hospital with certain illnesses, injuries, and changes to their physical and mental baseline. O'kere et al. (2016) noted that "effective multidisciplinary collaboration is essential for cost-effective, safe delivery of high-quality, patient-centered care" (p.217). The authors also noted that poor communication among the multidisciplinary team results in poor planning for discharge and may extend the length of stay (O'kere et al., 2016).

The care management team collects readmissions data every month. These data get scrubbed to ensure correct diagnostic related group (DRG) codes are assigned to capture the actual percentage for all readmissions. Preimplementation data were compared to the readmissions of postimplementation to gauge success.

A literature review from peer-reviewed scholarly journals pointed to MDRs as an evidence-based practice to reduce readmissions. A systematic review of two studies conducted by the authors revealed that MDRs also decrease mortality and the average length of stay (Gurses & Xiao, 2006). Communication is vital for patient safety in healthcare settings. Care providers communicate and collaborate to attain shared goals. The purpose of this QI was to mitigate the risk factors for readmissions in older adults through MDR.

Significance

The significance of the doctoral project impacts patients, families, interdisciplinary teams, the organization, and healthcare as a whole. This doctoral project meets the challenge made by the Institute of Medicine to deliver safe, efficient, effective, and coordinated care (Nursingworld, 2017) across the continuum. The QI initiative can reduce readmissions and improve quality of life for patients and can empower families to continue to care for them at home. The interdisciplinary team can engage in meaningful work functioning to their full potential. At the same time, the organization can enjoy financial health, and the healthcare system as a whole gains by promoting wellness and preventing healthcare waste.

The contribution to nursing practice through this doctoral project comes from improved communication and collaboration. The ease of workflow and empowerment of having the necessary information can help nurses to plan the appropriate care and prepare patients and families for safe discharge. Upon discharge, when the patient goes home with the follow-up appointments and the needed support and services, patients and families benefit. In addition, the organization can enjoy financial gain and the healthcare as a whole saves on healthcare costs by not having readmissions.

The work done for this doctoral project is transferrable to all inpatient nursing units. Lack of communication and concerted effort to collaborate often results in fragmented care, which can lead to unsafe care for patients. Bringing the team together to share information and tap into the expertise of the interdisciplinary team members is an

essential aspect of care in the hospital. The QI initiative for this project can result in successful outcomes in any setting at a hospital.

Further, this project supports Walden's mission of fostering positive social change by applying evidence-based practice to address the problem for the geriatric population in hospitals. Planning care across the continuum of care is vital for the elderly because the community-dwelling older adults with cognitive impairment cannot thrive without social support. By addressing these issues in MDRs, the risk of readmissions become lower.

<div align="center">**Summary**</div>

Transitions of care for elderly patients leaving the hospital are subpar, and for that reason, they are at risk for readmissions. Readmissions can lead to poor quality of care and impact the patients, families, hospitals, and the healthcare system as a whole. For safe discharges, there should be improved communication and collaboration among interdisciplinary teams. There is evidence in the literature to support that MDRs decrease readmissions and the length of stay. The purpose of this doctoral project was to evaluate the effectiveness of the QI initiative in the ACE unit. Sources of evidence collected included rates of readmissions pre-, during, and post-implementation of the MDRs. Analysis of the retrospective data reflect the effectiveness of the intervention in reducing readmissions in the over 65-year-old population. Further, evaluating the transferability to other settings within the hospital can enable the findings to reach a broader audience.

Section 2: Background and Context

Introduction

The readmission rate within 30 days is a metric that healthcare organizations focus on because the reimbursement for care is impacted. For this DNP project, the term *readmission* meant the patients' unplanned return for service within 30 days of discharge. Nationally, hospitals face financial difficulties due to skyrocketing healthcare costs and are under critical review by the payers, and in particular, the CMS (Aicher et al., 2019). CMS is the largest payer who implements a fee-for-service program to reward and take punitive actions by continually evaluating clinical outcomes in the elderly beneficiaries (Kelly, 2011). Patients may be at-risk when discharged to the skilled nursing facility. However, the patients are at higher risk for readmissions when they go home from the hospital. This risk is even higher in 65-year-old and older patients whose care is complex and necessitates receiving care from various settings (Schoenborn et al., 2013). Health literacy plays a significant role in the patient/family understanding the next steps in their plan of care. When care providers do not include the patient/family in decision making regarding their discharge from the hospital and communication is poor, they are ill-prepared and are often unable to maintain follow-up care at home (Kelly, 2013; Schoenborn et al., 2013). The practice-focused question for this DNP project was as follows: Will a QI evaluation of the use of MDRs in the ACE unit demonstrate a reduction in readmissions between October 2018 and May 2019? The implementation of the intervention to reduce readmissions was from October 2018 to May 2019. The purpose of this doctoral project was to evaluate if MDRs are effective in improving

outcomes for the discharged elderly patients from the ACE unit. Further, when the patients get home, they are often unsure of how to best care for themselves without immediate supervision and adequate support from healthcare providers. The lack of empowerment and interdependency may lead to preventable readmissions.

In this section, I discuss the application of selected concepts, models, and theories. In addition, the role of the DNP student, and the relevance to nursing practice are explored.

Concepts, Models, and Theories

Discharge planning and safe discharges are very complex, and the logic model uses existing evidence and makes assumptions about the impact as the initiative moves through key elements. Moreover, the components of the logic model allow the researcher to make an impact at the planning stages as well as at the evaluation stage (Kettner et al., 2017). The logic model treats a program as a unit, and it allows the identification of the needed resources and matching with the need. The five components of the logic model include situation, inputs, outputs, outcomes, and impact (Ahmady et al., 2014). The situation was the main issue, which is readmissions within 30 days. The social, political, and economic aspects of the situation needed review. In this case, the input was the interdisciplinary team members and the time resource they allocated for the MDRs. In this DNP project, the output of the logic model was the comprehension of discharge instructions by the patient and the family. The desired outcome was the reduction in readmissions in elderly patients. Finally, the impact stage allows gauging the impact of the program in a specific population. Using the logic model was a suitable strategy to

evaluate the effectiveness of MDRs to reduce readmissions at the study site within 30 days.

Improving clinical outcomes means providing quality of care. The MDRs are evidence-based tools to improve outcomes in the geriatric population through communication among a team of physicians, nurses, social workers, case managers, physical therapists, speech therapists, clinical pharmacists, and clinical dietitians.

Relevance to Nursing Practice

The issue selected for discussion was the continuum of care. For patients in an ACE unit who are 65 years and older, care coordination and care transitions are key issues to focus on for better clinical outcomes. Regardless of the discharge destination, whether it is rehabilitation centers, extended care facilities, or home, it is vital to hand off the care rendered while in the hospital and the plan for the next level of care to the receiving facility (Nash et al., 2016). Patients are often not included in decision making regarding their discharge from the hospital, and the discharge teaching may be incomplete, unclear, or poorly performed. The discharge planning, which starts on admission, might be derived from faulty assumptions about posthospitalization needs. Further, at discharge, health literacy may become a barrier for patients and families to understand the next steps in their care plan.

MDRs have also shown that they are evidence-based tools to improve patient throughput, and they may reduce the length of stay and improve patient satisfaction in addition to reducing readmissions. The multidisciplinary team meets to discuss functional status, psychosocial, family support, medications, discharge readiness and needs, and

follow-up care and services. This improved communication among the interdisciplinary team allows all members to work together and not be in a silo. Every team member knows what the other team members are doing. Further, the primary nurses arm themselves with relevant information from the subject matter experts to advocate for patients/families to foster safe discharges. Planning benefits patients and families to forecast the services and resources needed (Rice, 2013). Moreover, the MDRs avoid last-minute rushing around to do patient education, such as insulin teaching. Through improved communication, the team members can accomplish discharge teaching as they arise instead of waiting until the day of discharge. To align with the Affordable Care Act to improve quality and decrease healthcare costs, the evidence-based MDRs have shown to be efficient and effective (Nursingworld, 2017).

Discharges to skilled nursing facilities are a powerful indicator of readmissions back to the hospital. Poor communication and hand-off across the continuum of care are barriers to better clinical outcomes. The lack of understanding at the receiving end also leads to poor quality of care (King et al., 2013). Communication is a vital dimension of care delivery. The readmissions within 30 days are metrics that healthcare organizations nationwide focus on as the reimbursement depends on the outcome. Readmissions within 30 days affect the quality of life for the patients and the family. From the social impact perspective, the emotional burden for the family having to bring their loved ones to the hospital so soon after discharge can be frustrating. Further, there is a financial impact on patients and families losing workdays.

Before implementing the evidence-based MDRs as a strategy to bridge the performance gap, the primary care nurse performs discharge education at the point of discharge. In the meantime, the case manager arranges transport, services, and resources. Individual disciplines often work in their silos and do not have much effective communication, which has led to a lack of efficiency surrounding the discharge process.

Concerted efforts to reduce unplanned readmissions include a bundle of evidence-based tools such as the Better Outcomes by Optimizing Safe Transitions (BOOST) tool used during the MDRs (Krishnan et al., 2015). The BOOST tool fosters a multidisciplinary engagement to improve the discharge process. Organizations have also compared different models of rounds to reduce readmissions. The comparison between MDR models, a nurse/ pharmacist, and a pharmacist/ hospitalist was studied. Researchers have found that to reduce readmissions, there was no difference between the pharmacy/hospitalist model and the MDRs (O'kere et al., 2016). Another model that added an outpatient pharmacist to the multidisciplinary team reduced the readmission rate from 13.7% to 11.3% compared to the pre-and post-implementation of a pilot (Gilmore et al., 2015).

Local Background and Context

The acute care facility at the study site has a 261-bed capacity and serves a community of 13 retirement communities and several long-term care facilities and assisted living centers. The over 65-year-old population in the community is approximately 17.04% compared to the statewide average and the national average of 13.23% and 12.41%, respectively (Zip Atlas, 2016). In the aging population, there are

chronic illnesses that contribute to comorbidities. Chronic diseases in the elderly increase the healthcare cost for the population, and when readmissions occur, the burden is higher.

For this DNP project, the readmissions in the over 65-year-old population for all causes were of a matter of concern. In 2017, the readmission rate was 13.64% against the national benchmark of 8.54% (CMS, 2020). Aside from the national benchmark, the health system sets its internal benchmark to keep the focus on performance for the readmission metric and make comparisons internally among the hospitals within the health system.

MDR is a patient-centered care model that has shown to improve communication and collaboration among the members of the team for better outcomes for patients. The members of various disciplines discuss aspects of patient care in real-time to identify discharge needs (IHI, 2015). Each member of the team brings their area of expertise to the rounds to coordinate and collaborate for safe discharges.

In response to the Affordable Care Act, the Centers for Medicare and Medicaid Services instituted penalties for readmissions within 30 days of discharges through the Hospital Readmission Reduction Program (HRRP). In 2012, acute myocardial infarction, pneumonia, and heart failure were the three conditions that came under penalty for readmissions within 30 days (Krishnan et al., 2015). However, in October 2014, CMS expanded the scrutiny to six conditions/procedures (CMS, 2020). The three added items included chronic obstructive pulmonary disease, coronary bypass graft surgery, and elective total hip or total knee arthroplasty. The penalty entails withholding partial reimbursements for the cost of care rendered for the stay during the readmission. The

HRRP applies a readmission adjustment calculation to hold hospitals accountable for their outcomes for this metric. The payment reduction is capped at 3% (CMS, 2020).

Annually, hospitals get a confidential report on the payment reduction allowing organizations to raise concerns if calculations are wrong. After the review by the hospitals, the report is made public. The gap in performance is not just a financial concern. Public reporting on readmissions by the CMS on its website places the hospital's reputation at stake. Moreover, patients' quality of life suffers, and there are emotional and financial burden increases for the families. Among the many strategies the hospitals employ to prevent readmissions and meet the requirements of the regulatory agencies, the chronic disease management program helps patients after discharge. The chronic disease management team makes follow-up calls to ensure that the patients understand their discharge instructions, that they have filled their prescriptions, and that they have set up a follow-up appointment.

Role of the DNP Student

My role as the DNP student was to identify the problem and to partake in activities to search for an evidence-based practice to improve performance. I also attended the systemwide Transitions of Care Council to be part of the literature review and discussions on evidence-based practice to decrease readmissions. After the literature review, the team on the ACE unit selected the MDRs as the evidence-based practice to address the problem, implemented in October 2018. Once the implementation was in place for the QI initiative, I expanded my role to use team leadership skills to motivate

and encourage the team to attend and participate in MDRs. Enhancing team leadership skills was one of my goals for my practicum experience.

Geriatric patients belong to a vulnerable population, and families are impacted by both admissions and readmissions. Witnessing anger, frustration, and sheer exhaustion in some family members and caregivers, it is evident how they can be affected by readmissions. Emotionally charged caregivers come with the uncertainty an admission to the hospital may bring. Families may have to take time off from work or school to cope with the change in schedules for the loved one. Missed time in school and at work may also lead to financial consequences. Thus, the identification of the gap in performance and the witnessed impact on caregivers were the motivations for change.

There were no anticipated biases regarding the QI initiative from my perspective as I participated in the MDRs as an observer and not in my professional role at the partner site. Although lack of time and resources presented many barriers, the team continued the MDRs until May 2019. In May 2019, the strategic goal for the organization changed, and the focus of rounds changed to reducing the length of stay. There is an effort to bring back the MDRs, and a team continues to work on it.

Summary

The identified gap in performance was the readmission rates being higher than the national benchmark. The population of over 65-year-olds in the community is at 17.04%, which is significant. Therefore, a focus on serving the needs of this vulnerable population should be a priority. In the aging population, there are chronic illnesses that contribute to comorbidities. The chronic diseases in the elderly increase the healthcare costs for the

population, and when readmissions occur, the burden is higher. MDRs are the evidence-based practice implemented to improve clinical outcomes.

The MDRs foster collaboration among interdisciplinary team members, improve communication, and use the subject matter experts to weigh in on the discharge planning after needs assessment for postdischarge follow-up care. The logic model, which is rooted in complexity theory, was used to facilitate better clinical outcomes. After the implementation of the QI initiative, retrospective data on readmissions with 30 days were obtained and analyzed the differences for statistical significance. Comparisons of preMDR, duringMDR, and postMDR were made to gauge if the change was due to the intervention and not by chance.

This DNP project aligned with the mission of Walden University to foster positive social change by applying evidence-based practice to solve problems in the geriatric population. Transforming healthcare and being recognized as a leader for positive change is the mission of the partner site.

Section 3: Collection and Analysis of Evidence

Introduction

This DNP project addressed safe discharges in elderly patients who are over 65 years old, who make up 17.04% of the residents in the community (Zip Atlas, 2020). When patients from this segment of the population seek services at the practicum hospital and get admitted to the ACE unit, there is often a need for coordination of services. Chronic illnesses, comorbidities, polypharmacy, and cognitive impairment exacerbate the situation of health illiteracy. Healthcare costs to treat elderly patients are overwhelmingly high as is, and readmissions cause an additional burden.

Moreover, healthcare organizations monitor readmissions as they reflect the quality of care rendered in the organization (Pickens & Ahn, 2017). The national benchmark for readmissions within 30 days of discharge was 8.54% in 2017 (CMS, 2020). For the same period, the rate of readmissions on the ACE unit was 13.64%. CMS publicly reports readmissions data on its website, and in 2017, there was a large gap in performance for readmission rates (CMS, 2020). As of October 2014, the CMS instituted penalties for readmissions within 30 days of discharges through the HRRP. The penalty entails withholding partial reimbursements for the cost of care rendered for the stay during the readmission.

Besides having the organizational reputation suffer and having to pay the penalty, poor performance can affect the quality of life for the patient. The purpose of this DNP project was to study the effectiveness of the QI initiative. At the partner organization, from October 2018 to May 2019, MDRs were implemented to reduce readmissions in an

ACE unit. MDRs are a patient-centered care model that can improve communication and collaboration to foster a safe discharge. The intervention was intended to bridge the gap in performance for the rate of readmissions, which has been higher than the benchmark. The goal was to focus on reducing preventable readmissions. The purpose of this scholarly project was to study the effectiveness of the MDRs in reducing preventable readmissions within 30 days of discharge in older adults. In this section, I also outline the practice-focused question and sources of evidence and give a brief summary on analysis and synthesis.

Practice-Focused Question

The unit performance for readmissions within 30 days of discharge was 13.64% in 2017, which is higher than the 8.54% benchmark. The elderly population in the community often seeks service at the hospital, and this concern is more pronounced in the over 65-year-old population. The practice-focused question for this DNP project addressed if a QI evaluation of the use of MDRs in an ACE unit demonstrated a reduction in readmissions between October 2018 and May 2019. The implementation of the intervention to reduce readmissions was from October 2018 to May 2019. The purpose of this doctoral project was to study the effectiveness of the MDRs in improving outcomes for patients whose discharge destination was home. The purpose of this scholarly project aligned with the practice-focused question by studying the effectiveness of the MDRs as a QI initiative to reduce readmissions.

For this DNP project, two operational terms needed definitions to clarify the concept of the project. These included MDR and readmissions.

Multidisciplinary rounds (MDRs): Sessions in which the members of various disciplines come together to discuss aspects of patient care in real-time to identify needed resources and services for safe discharges (IHI, 2015). The makeup of the team includes a physician, a clinical pharmacist, a physical therapist, an occupational therapist, a dietitian, a case manager, a social worker, a nurse leader, clinical nurse educator, care transition nurse, elder life specialist, and the primary care nurse.

Readmissions: Readmissions are all admissions of patients to the hospital within 30 days of discharge from their previous visit.

Sources of Evidence

The sources of evidence that were collected included the effectiveness of MDRs and the benchmark for acceptable readmissions within 30 days. The literature review included key terms such as *readmissions, older adults, transitions of care, multidisciplinary rounds, safe discharges,* and *collaboration.* I searched the data bases CINAHL Plus, MEDLINE, and ProQuest Nursing and Allied Health Sources. Peer-reviewed scholarly journals pointed to the MDRs as the evidence-based practice to reduce readmissions. The evidence of the bundle of tools, MDR, and the BOOST tool aimed to improve communication and promote safe discharge. Improving communication and collaboration can promote efficient, effective, patient-centered quality of care. The quality initiative was intended to improve organizational performance for the rate of readmissions.

The care management team provided the aggregate percentages for the baseline data on readmissions. The national benchmark data came from the CMS. Although I

knew the baseline data , the postimplementation data were blinded until the IRB approval came through. After the IRB process, aggregate data on readmissions were obtained for analysis from the care management team retrospectively.

The data collected during the time frame of October 2018 through May 2019 was compared to the preimplementation readmission rates. Moreover, the readmission rates during the implementation were compared to the postimplementation gauge effectiveness. This analysis indicated if MDRs had reduced readmissions within 30 days of discharge during the period of study.

Archival and Operational Data

The hospital network has outcome analysts who produce reports on readmissions within 7 days and 30 days for chronic diseases and for all causes. This report is made available at the end of a month for the previous month's data. Each hospital in the network is responsible for validating the DRG codes by the utilization review managers to ensure that they correctly apply billable codes. In addition, the confirmation of readmission takes place. The data separate Medicare participants (age 65 and older) from other patients. Moreover, validation of rehospitalization is conducted by the methods mentioned above, and a retrospective chart review occurs. Although there is a lag time for publicly published data, the private collection of data is timelier than the ones posted by CMS. The department managers receive this report for on-going monitoring as reducing readmissions is one of the strategic goals. For the purpose of this scholarly project, the rates of readmissions within 30 days of discharge were studied. The care

management team can run reports on the aggregate data for readmissions on a monthly

basis.

The limitation of the data is the inability to capture the patients who return for

care elsewhere outside the hospital network. However, the data were captured for all

patients returning to any one of the hospitals within the network.

Evidence Generated for the Doctoral Project

In this scholarly project, I evaluated the evidence-based MDRs to gauge the

impact on readmissions. The patients who were at-risk for readmission had the MDRs

using the BOOST tool to delve into their needs so the team could address those needs

before discharge (AHRQ, 2014).

As the next step, this doctoral proposal underwent the IRB approval process at

Walden University and at the partner site. Because the partner site is part of a health

system, the parent entity needed to approve as well. The IRB approval was granted as the

findings from this DNP project would help the vulnerable elderly population, without any

risk to patients because no patient identifiers are revealed. Only the aggregate data on

readmissions were studied. The IRB approval number is 05-19-21-0338151.

The readmission rates were accessed for the scholarly project to test the question

if MDRs reduced readmission rates in elderly patients. The care management team who

tracks the readmissions as their daily work provided the readmissions data in percentages.

The confidential information followed protection according to the policies of the partner

site (Grove et al., 2013). For this DNP project, to gage if the QI had reduced the

readmissions, I needed to know the percentages of readmissions before, during, and after

implementation. As only the aggregate data were used, no patient identifiers were

disclosed and privacy was protected. Further, I will ensure that the partner organization's

name or location will not be identifiable in project write-ups or in any dissemination

presentations.

Analysis and Synthesis

The care management team collects the data on readmissions within 30 days on

an ongoing basis. Readmissions for January to September 2018 before the

implementation of the MDR were the baseline data. The implementation of MDR was

from October 2018 through May 2019. Readmissions during the implementation

underwent an assessment if the change occurred as a result of implementing evidence-

based practice. In order to test the problem statement, I selected the paired samples t test.

The practice-focused question for this DNP project evaluated the use of MDR in the ACE

unit to reduce readmissions within 30 days of discharge.

Summary

Healthcare organizations monitor unplanned readmissions for their reputation and

financial well-being. The population of the elderly residents in the community the

hospital serves requires a heightened focus to improve the discharge process. The gap in

performance when compared against the benchmark for readmissions mobilizes the

healthcare teams to look for evidence based practices for improvement.

Many healthcare organizations have used MDRs as a means of improving

readmissions. MDRs bring interdisciplinary experts in one place to improve

communication and to collaborate to facilitate safe discharges to keep the patients well

and out of hospitals. After the MDRs were implemented, a retrospective look at the

readmissions before and after the QI initiative was taken. The partner organization

collected data on readmissions to share with the leadership team to keep the focus on the

gap in performance. The IRB approval process for this DNP project addressed the ethical

and confidentiality concerns. After the IRB approval, the already collected data

underwent a paired samples *t* test to show if the change occurred as a result of the MDR

or if it was by chance. After the statistical analysis, the inferences were made and

findings and implications are discussed. Further, recommendations are offered for future

efforts.

Section 4: Findings and Recommendations

Introduction

This DNP project addressed the need to evaluate the effectiveness of the MDRs in reducing readmissions in the geriatric population. The 261-bed acute care hospital provides services to a significant percentage of elderly patients. In addition, there are many senior living communities, assisted living, and long-term care facilities in the community. The over 65-year-old population in the area is approximately 17.04%, while the statewide average and the national average of 13.23% and 12.41%, respectively (Zip Atlas, 2020). When people from this segment of the population seek services at this community hospital and are admitted to the ACE unit, coordination of services is paramount. The national benchmark for readmissions within 30 days of discharge was 8.54% in 2017 (CMS, 2020). For the same period, the rate of readmissions for the ACE unit was 13.64%. The rate of readmissions exceeding the national benchmark on the ACE unit indicated that a quality improvement intervention was needed to reduce readmissions.

In the aging population, many risk factors may cause readmissions. Health illiteracy, cognitive impairment, comorbidities, and polypharmacy are some of the factors surrounding unplanned readmissions (Arbaje et al., 2014). Coordination of care across the continuum is essential to reduce the risk of readmissions. The discharge process in the elderly is complex and requires focused attention to accomplish safe discharge. The complicated nature of the transition of care in older adults costs Medicare approximately $17.4 Billion per year (Arbaje et al., 2014). Further, elderly patients are at risk for

fragmented care while in the hospital and may not have optimal follow-up care at home, putting them at risk for readmission and affecting their quality of life.

In this DNP project, I aimed to evaluate the effectiveness of the MDRs as the QI initiative. Many healthcare organizations have adopted the use of multidisciplinary rounds as their strategy to reduce readmissions. Research has shown that MDRs decrease hospital readmissions and promote safe and effective care for patients (IHI, 2015). MDRs are evidence-based patient-centered care models that have been shown to facilitate communication and collaboration among the interdisciplinary team members to provide the added benefit of working together. Each team member brings their expertise to the rounds to coordinate patient care, establish priorities, and plan for safe discharges.

The support for the MDR as the evidence-based practice was collected from scholarly journals to reduce preventable readmissions within 30 days. The literature review included key terms such as *readmissions, older adults, transitions of care, multidisciplinary rounds, safe discharges*, and *collaboration*. I searched the databases CINAHL Plus, MEDLINE, and ProQuest Nursing and Allied Health Sources. These peer-reviewed scholarly journals pointed to the MDRs as the evidence-based practice to reduce readmissions. The evidence of the bundle of tools, MDR, and the BOOST tool aims to improve communication and promote safe discharge. Improving communication and collaboration can promote efficient, effective, patient-centered quality of care.

After the literature review, the team on the 40-bed ACE unit selected the MDRs as the evidence-based practice to address the problem and implemented them in October 2018 continuing through May 2019. The readmissions data from 2017 provided

awareness that the gap in performance needs to be bridged. In 2018, the concern continued. Figure 1 illustrates the gap in performance and the need for this scholarly project. The overarching goal of the quality initiative was to improve organizational performance for the rate of readmissions. The evaluation was intended to identify if the use of MDRs impacted readmission rates on the ACE unit. The practice-focused question for this DNP project was as follows: Will a QI evaluation of the use of MDRs in the ACE unit demonstrate a reduction in readmissions between October 2018 and May 2019?

When the readmission rates for January to September 2018 were compared to the internal benchmark, the unit had met the goal only 4 out of 9 months (see Figure 1). The care management team collects readmissions data every month. These data are validated to ensure correct DRG codes are assigned to capture the actual percentage for all readmissions. Preimplementation data of readmission rates in an aggregate form were compared to the readmissions of postimplementation to gauge success. The baseline for the DNP project was the period from January to September 2018. The MDRs were implemented from October 2018 through May 2019.

Findings and Implications

As the implementation of the QI initiative was ongoing, the evidence-based practice duration became the postintervention. This point clarifies that the 30-day timeline starts for the patients discharged on the first day of MDR implementation. Therefore, the intervention period during MDR was also the postintervention time. Further, the effect of MDR on the discharges in May 2019 is reflected in June 2019. Therefore, the aggregate readmissions data for January 2018 to September 2018 were

compared from October 2018 to June 2019 to evaluate the effectiveness of the MDRs.

Another set of data on readmissions for July 2019 to March 2020 was also accessed to

compare with the implementation/post-MDR period to analyze whether there was a

change after the MDRs stopped occurring. Figure 2 depicts the cases, readmissions, and

the percentages of readmissions for the pre-, during, and post-intervention timelines. The

aggregate data on monthly readmission rates from January 2018 to March 2020 were the

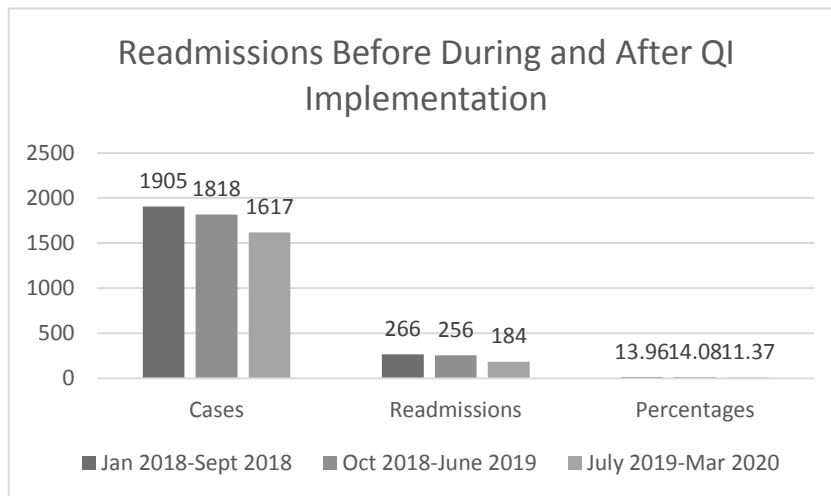data set needed to carry out the statistical analysis.

Figure 1

Readmissions Vs the Benchmark in Jan-Sept 2018
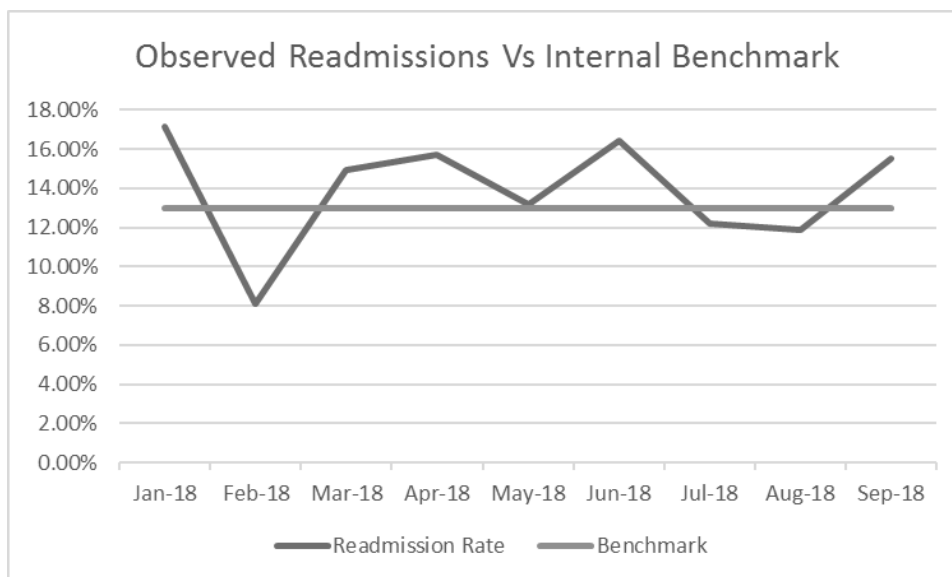
Figure 2

Cases and Readmissions During Study Period

In Table 1, the readmission rates by month are tabulated for preMDR.

duringMDR, and postMDR. Data analysis was conducted by IBM SPSS Statistics

Version 25 applying the paired samples *t* test to compare the readmission rates for the

three periods. The null hypothesis (H_0) is that the difference between the paired sample

means is equal to zero (Grove et al., 2013). The alternate hypothesis (H_1) is that the

difference between the paired samples means is not equal to zero (Grove et al., 2013).

The hypotheses for comparing Pair 1 duringMDR and preMDR are defined as

follows:

$H_0$1: The difference between the sample means of duringMDR and preMDR is

equal to zero.

$H_1$1: The difference between the sample means of duringMDR and preMDR is

not equal to zero.

The hypotheses for comparing Pair 2 postMDR and duringMDR are defined as follows:

$H_0$2: The difference between the sample means of postMDR and duringMDR is equal to zero.

$H_1$2: The difference between the sample means of postMDR and duringMDR is not equal to zero.

The first pair duringMDR group and the preMDR group were tested and found to have means of 14.64% and 13.89%, respectively, with a p-value of 0.392 (See Tables 2 and 3). The p-value should be less than 0.05 to have statistical significance. In this comparison, the p-value is greater than 0.05, and the null hypothesis $H_0$1 was accepted. There was no relationship between the variables and the change in percentage of readmissions between preMDR and duringMDR did not occur because of the MDRs as the QI intervention.

Table 1

Readmission Rates by Month for Project Duration

Month	preMDR	duringMDR	postMDR
1	17.14%	16.75%	16.75%
2	8.11%	12.79%	14.80%
3	14.91%	12.44%	5.65%
4	15.74%	15.79%	.00%
5	13.17%	18.18%	14.14%
6	16.43%	16.35%	8.60%
7	12.17%	11.54%	10.68%
8	11.85%	12.74%	11.34%
9	15.49%	15.18%	12.94%

Table 2

Paired Sample Statistics DuringMDR Paired With PreMDR

		Mean	N	Std. Deviation	Std Error
Pair 1	During	14.6400	9	2.31852	.77284
	PreMDR	13.8900	9	2.85228	.95076

Table 3

Paired Samples Test- DuringMDR Paired With PreMDR

		Mean	Std. Deviation	Std. Error Mean	95% Conf. Interval Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	During-PreMDR	.7500	2.4874	.82905	-1.16179	2.66179	.905	8	.392

The postMDR and duringMDR were tested as the second pair and found to have means of 10.54% and 14.64%, with a *p*-value of 0.052 (See Tables 4 and 5). The change in this comparison does not have statistical significance either as the *p*-value is not equal or less than 0.05. H_02 was accepted. Thus, the difference between the means did not occur due to the termination of the MDRs.

Table 4

Paired Sample Statistics- PostMDR Paired With DuringMDR

		Mean	N	Std. Deviation	Std Error
Pair 2	PostMDR	10.5444	9	5.18240	1.72747
	During	14.6400	9	2.31852	.77284

Table 5

Paired Samples Test- PostMDR Paired With DuringMDR

|		Mean	Std. Deviation	Std. Error Mean	95% Conf. Interval Lower	Upper	t	df	Sig. (2-tailed)
Pair 2	PostMDR-During	4.09556	5.39221	.1.79740	-8.24038	.04926	-2.279	8	.052

Statistical Significance

As shown by the statistical tests in Tables 2 to 5, the project results did not show a statistical significance. However, the readmission rates for 5 out of 9 months during the intervention period were lower than the mean readmission rate of the preMDR period (see Figure 3) before the QI initiative implementation.

In addition, readmission rates were higher in January, February, and March 2019, and the same trend was seen for January and March of 2018. The increased readmissions at the beginning of years 2018 and 2019 raises the question of whether seasonality plays a role in readmissions within 30-days, which also offers an opportunity for further study.

Figure 3

Comparing Readmissions DuringMDRs Vs Mean Rate Preimplementation
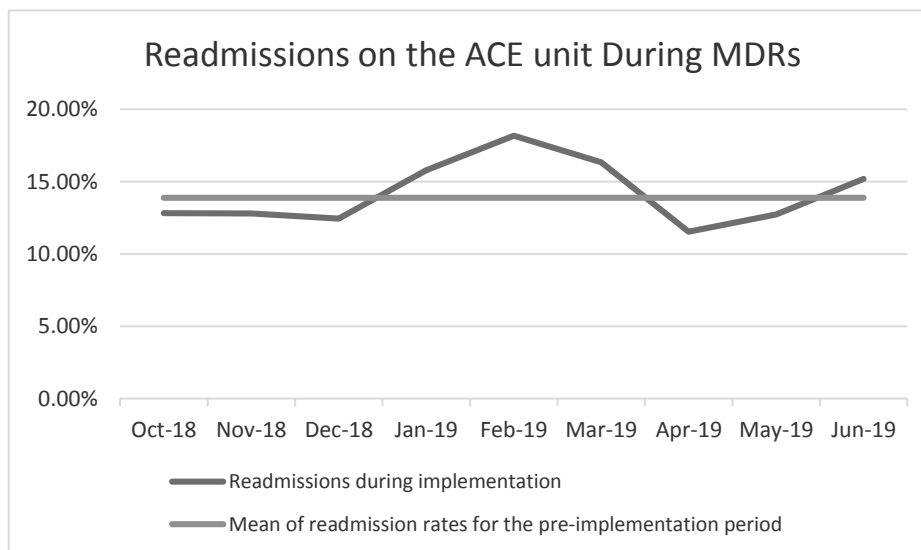
The QI initiative improves the quality of life for patients and empowers the

families to continue to care for them at home (Krishnan et al., 2015). The

interdisciplinary team engages in meaningful work functioning to their full potential. At

the same time, the organization enjoys financial health, and the healthcare system gains

by promoting wellness and preventing healthcare waste (Kelly, 2010).

The MDRs contributed to nursing practice by improving communication and

collaboration. The collaboration eases the workflow and empowers the nurses to have the

necessary information to plan the appropriate care and prepare the patients and families

for safe discharge. Upon discharge, when the patient goes home with the follow-up

appointments and the needed support and services, the patients and families benefit. In

addition, the organization protects its reputation and financial health, and healthcare

saves on cost by not having readmissions.

Recommendations

Based on the findings, there was no statistical significance for the change that occurred as a result of the intervention. I used the lessons learned from the DNP project to make the following recommendations.

First, the consistent physical presence of the interdisciplinary team may be of importance for success. At the inception of the MDR, all the interdisciplinary team members made time to attend the rounds. However, with time, depending on their availability, email communication of their thoughts and recommendations replaced their actual physical presence. Further, a physician was not always available. Thus, future pilot studies need to have structure and process guidelines about participation.

As mentioned before, a change process, leadership, and/or organizational changes may skew the data. For that purpose, comparing the data for the previous 2 years would have accounted for those extraneous factors. Moreover, the pilot study was cut short due to a change in organizational strategy to reduce the length of stay. Therefore, the pilot study duration needs to continue for at least a year.

In addition, the current study findings cast doubt whether seasonal factors impacted the readmission rates. I could not access the archived data from previous years to study this aspect. In future projects, evaluation of the pre-and post-implementation period should reflect the same months of the year as the intervention. Then comparisons can be made for similar months to gauge the impact of seasonal factors affecting the readmissions in older adults.

Finally, adding a qualitative inquiry of the interdisciplinary team and comments from the patients and families through patient satisfaction surveys to the quantitative data would enhance the evaluation and afford opportunities to study other benefits besides the readmission rates.

Strengths and Limitations of the Project

Strengths for this DNP project include shared goals and a strong culture of collaboration among the interdisciplinary team. One of the strategic priorities for the organization is reducing readmissions and currently there are other strategies employed at the hospital. For example, the chronic disease management team educates patients during hospitalization and provides follow-up consultations after discharge to prevent readmissions related to their co-morbidities and initial reason for admission. The chronic disease management team has been in place for several years and is continuing. This pilot initiative is not intended to replace those efforts but rather addresses the communication and collaboration among the disciplines to plan safe discharges and improve health literacy. The efforts by the chronic management team act as an adjunct for many years and may not be a factor to skew the results of this project as this is a constant variable before, during and after implementation of the pilot study.

There are some significant limitations to this project. This DNP project started before EPIC implementation at the health system. Previous electronic medical record (EMR) systems could not capture the patients who return for care elsewhere outside the hospital network. So, the readmission rates may have been underestimated. Further, this student could not analyze the data for October to May for two years before

implementation and two years after to evaluate the effectiveness as planned. The organizational change transitioning to EPIC archived the data from past years. It became a barrier for this DNP student to access it to do further analysis. It is also noteworthy that the implementation of EPIC in October 2019 has caused the loss of capture of readmissions in September and October 2019, resulting in an unusually low rate of readmissions in September and zero percent in October 2019 (See Table 1). The data for these two months with missing values skewed the mean for the postMDR group. Although the data for at least a year after the completion of intervention was desired, the major pandemic event in March impacted the outcome. Therefore, postimplementation data for nine months after the pilot was used to compare and study the effectiveness.

Unforeseeable events during the timeline of this project resulted in having a small sample to allow for rigorous statistical analysis. Learning lessons from this capstone project, recommendation is made to repeat the pilot study for at least a year to get a bigger sample.

Section 5: Dissemination Plan

The transfer of study findings to the point of care is the most important step in a scholarly project (Schmidt & Brown, 2012). Internally, the study findings were shared with the project site research council who approved the evaluation of the QI project. In addition, many resources were used to implement the MDRs, and the interdisciplinary team invested time. At the project site, the quality and safety council meets monthly with the membership of the interdisciplinary team members. At these council meetings, performance improvement projects are reported out. I will request to be added to the agenda to present the study findings to the quality and safety council.

Moreover, the team on the ACE unit is anxious to know the findings, and attendance at their unit-based council meetings will offer an opportunity to share the results and the recommendations. The next step is to present study results to the senior leadership, who can allocate resources. Presenting to the senior leaders is important as the implementation of the MDR was challenging for the interdisciplinary team, who had competing priorities and was challenged with a lack of resources.

Externally, publishing in journals is a great way of reaching a broader audience. For example, abstract submissions to professional organizations may lead to a poster presentation at professional nursing conferences and notably to the audience at geriatric nursing conferences such as Nurses Improving Care for Health System Elders.

Analysis of Self

This journey to achieve a terminal degree in nursing resulted in developing myself as a scholar-practitioner, a nurse leader, and a project manager. As a scholar, the learning

objectives were aligned with the DNP essential of promoting quality outcomes through interprofessional collaboration (American Association of Colleges of Nursing, 2006). The two learning objectives focused on were learning how to overcome the resource constraints of the interdisciplinary team to maximize efficiency to reach common goals and learning how to foster better outcomes for patients through this DNP Project.

The DNP program prepares a nurse to participate in "multilevel system changes, Magnet preparation, strategic planning, project management, and interdisciplinary leadership" (Waxman & Maxworthy, 2010, p. 33). This program developed me as a scholar-practitioner through team leadership of the multidisciplinary rounds to implement an evidence-based practice for better outcomes.

The DNP program has developed me as a nurse leader in both interdisciplinary collaboration and change management. However, it is difficult to get the buy-in from the stakeholders when the resources are scarce. Kotter's (2007) change model was used to maintain the momentum of the change for quality improvement through developing a vision, sharing that vision, and creating common goals; interdisciplinary collaboration became a reality.

Project management skills were sharpened in changing direction when the new organizational strategic goals of decreasing length of stay presented some barriers to continuing the DNP project. This challenge allowed me to reconcile organizational-level strategic goals against frontline priorities and resource constraints. Further, the biggest challenge presented was an enormous change the organization underwent in recent years. For example, when EPIC clinical documentation was implemented, the physicians,

nurses, and allied health partners changed at the same time. Managing this successfully through communication, leadership visibility, and on-site support was a very valuable lesson. Further, when relying on change management strategies, even with the scarce resources, the quality improvement initiative continued without losing the common vision and goal.

My role in the DNP project was to conduct a retrospective evaluation of a QI initiative. The challenges mentioned above have been learning lessons. Moreover, when the pandemic hit, the steps to complete the project came to a standstill. IRB review meetings were canceled at the project site. In addition, I had to leave my job for personal reasons, which created new challenges in accessing the data at the organization as an unaffiliated student. The lessons learned include patience and staying the course because what is going on with the COVID pandemic is beyond anyone's control.

Summary

In conclusion, in this DNP capstone project, I aimed to evaluate the QI initiative's effectiveness in reducing the readmission rates on a unit designated for the elderly. Thirty-day readmission rates for all causes were compared before, during, and postimplementation of the MDRs. There are competing priorities for the interdisciplinary team to carve out time from their daily work to participate in the MDRs. While the patients included in the MDRs may have benefited, this DNP project was not designed to benefit an individual patient directly. If MDRs are effective, future patients could benefit from having the resources for MDRs. Studying the effectiveness of an evidence-based tool such as the MDR can enable the nurse leaders to advocate for resources to continue

the pilot as a performance improvement activity for a better quality of care. I was seeking whether the expected change occurred as a result of the implementation of the MDRs through this quality improvement evaluation. The aggregate data on readmissions for preMDR, duringMDR, and postMDR groups were compared, and when a statistical test was administered, the null hypothesis was accepted. Therefore, the answer to the practice-focused question of if a QI evaluation of the use of MDRs in the ACE unit demonstrates a reduction in readmissions between October 2018 and May 2019 is that the changes before and after implementation of MDRs were not statistically significant.

However, the results prompted another way of looking at the data and analyzing them for seasonal impact on readmissions. Although this evaluation did not yield the expected outcome, the team working together to communicate and collaborate can lead to efficiency and continuity of care.

Through this scholarly project, I noted some significant limitations and challenges to the study. Unforeseeable events posed some challenges to complete the project as planned. However, the many lessons learned have been presented as recommendations to be incorporated in designing future projects.

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