2017

The Impact of Engagement Strategies on the Reduction of Patient Falls

Rosemary Martin
Walden University

Walden University

College of Health Sciences

This is to certify that the doctoral study by

Rosemary Martin

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Catherine Garner, Committee Chairperson, Nursing Faculty
Dr. Courtney Nyange, Committee Member, Nursing Faculty
Dr. Janice Long, University Reviewer, Nursing Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2017

Abstract

The Impact of Engagement Strategies on the Reduction of Patient Falls

by

Rosemary Butler Martin

MS, Valdosta State University, 2009

BS, Florida State University, 1996

Project Submitted in Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

November 2017

Abstract

Despite the availability of many fall prevention measures, many patients fall in U.S. hospitals each year. Experts view patient fall rates as the measure that can be most affected by a nurse-led, evidence-based intervention. The purpose of this quality improvement project was to implement and evaluate the impact of patient engagement strategies on patient compliance to fall prevention education and the reduction of falls. The quality improvement framework used for this project was the Iowa Model. Interventions for this project included patient engagement strategies including the teach-back (TB) method and video-based fall prevention education paired with the project site's existing fall prevention program. A prospective quantitative design was used to answer the practice-focused question of whether the implementation of a falls protocol incorporating patient engagement strategies improves patient compliance with the fall prevention plan of care and reduces patient falls. A total of 58 patients were included in this project, conducted from July to October 2017. The results showed a 75% reduction in the fall rate compared to the same three month period in 2016. This finding suggests that reinforcement of oral and written instruction through video education follow-up and the use of the TB method to assess patient understanding are effective measures to reduce patient falls and increase patient compliance to the fall prevention plan of care. These patient engagement strategies can be replicated by nurses in similar acute care settings. Adoption of such evidence-based changes in nursing practice may improve patient safety and decrease harm in hospital settings as implications for positive social change.

The Impact of Engagement Strategies on the Reduction of Patient Falls

by

Rosemary Butler Martin

MS, Valdosta State University, 2009

BS, Florida State University, 1996

Project Submitted in Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

November 2017

Dedication

I dedicate this work to the memory of my loving mother, Rosa Cobb Butler, who always inspired me with her strength and courage. Throughout this project, I have been reminded of her words of encouragement, which have motivated me to face this challenge with confidence “one day at a time.”

Acknowledgments

I wish to thank my wonderful husband, Larry Martin, for his never-ending support and encouragement. A huge “thank you” to my children and grandchildren for being patient and for always believing that I would complete this work. Special thanks to Dr. Catherine Garner, my committee chair, and Dr. Courtney Hines, my committee member, for their guidance throughout this project. Dr. Garner, thanks for always being there to help me to stay focused. Finally, I would like to thank the hospital staff and administration at my project site for their valuable support throughout this project.

.

Table of Contents

List of Tables

List of Figures

Section 1: Nature of the Project

Introduction

Patient falls, defined as any unplanned descent to the floor with or without injury to the patient, are the most prevalent reported adverse hospital event and are the second leading cause of patient injury (Agency for Healthcare Research Quality [AHRQ, 2013]; Hicks, 2015). While hospitals are expected to provide a safe environment while delivering high quality patient care, as many as 12% of patients in the United States fall at least once during their hospitalization (Graham, 2012; Kalisch, Tschannen, & Lee, 2012). In the United States, between 700,000 and 1,000,000 patients fall in the hospital each year, despite the availability of many fall preventive measures (AHRQ, 2013). On average, falls with injury increase length of stay in the hospital by 6.3 days and add approximately $13,000 to the total costs of the stay (Pearson & Coburn, 2011). By 2020, the estimated cost for hospitals to treat these injuries is expected to reach $54.9 billion (Tzeng & Yin, 2015).

Many strategies to reduce falls such as the patient using the call light rely on patient adherence (Hill et al., 2015). Guided by concepts of the health belief model (HBM; Cohen, 2009), I proposed in this Doctor or Nursing Practice (DNP) project that patient adherence can be increased when patients are aware of their risk of falls and have the knowledge needed to engage in strategies that could decrease their risk of falling. Increasing patients' participation and engagement in their care can be a major component of patient safety interventions. Researchers have identified engagement strategies as ways of promoting patient safety and reducing adverse events such as falls in hospitalized

patients (Berger et al., 2014; Clark et al., 2011; Friedman et al., 2011; Haines et al., 2013, 2011; Hill et al., 2009; 2015; Prey, 2014; Tzeng & Yin, 2014, 2015; Yamaguchi et al., 2016).

This quality improvement (QI) project incorporated the use of audiovisual DVD based education and the teach-back (TB) approach as patient engagement strategies to reinforce the current fall prevention education used at my project site. The desired outcomes were increasing patient adherence to the fall preventive plan of care and reducing the number of falls. Clarke et al. (2012) found that the TB method reduced falls in patients on the medical-surgical unit. Also, Hill et al. (2016) demonstrated that patient education using DVD presentation and written information paired with a hospital's existing fall prevention protocol reduced falls. Furthermore, Hill et al. (2009) found that older adult hospitalized patients who watched a fall prevention DVD showed significantly greater motivation to participate in the fall preventive plan of care. If these patient engagement strategies are successful in reducing the fall rate in the organization which served as my project site, they may be able to be replicated in similar acute care settings to provide evidence-based change.

Problem Statement

At the time of my study the project site had an existing policy and procedure protocol for fall prevention on medical surgical units. Yet, according to the hospital's annual fall occurrence report, the subject unit recorded an average of 1.9 falls each month during 2016. Patients identified as at risk for falls are given oral and written fall prevention education, and they sign a patient agreement form indicating that they

understand and will follow the fall prevention plan of care (see Appendix A). The DNP project practice setting was a 25-bed medical-surgical unit of a critical access hospital in the U.S. state of Georgia. This rural hospital also provides swing bed services, which offer post-skilled nursing care, and rehabilitative services. More than half of the 212 patients admitted to the unit in 2016 were over the age of 50 years old, and 90 % of these patients were identified as being at risk for falling based on the admission fall-risk assessment. During calendar year 2016, 23 patient falls were documented on the unit, three of which resulted in documented injuries, according to the fall occurrence report.

Documentation from occurrence and post fall huddle reports (see Appendix B), as well as fall analysis information from the annual occurrence report, were used to verify documentation of nursing staff compliance to the fall protocol. In my observations, the nursing staff was compliant in completing hourly rounds and documentation on the patient communication board. Additionally, my review of the fall occurrence, post fall huddle, and analysis reports indicated that the nursing staff was compliant in implementation of the current fall prevention protocol. Furthermore, these fall reports revealed that more than half of falls in the facility occurred when the patient attempted to ambulate unassisted instead of calling for assistance. According to the director of nursing at the project site, nursing staff asked, based on this review, to explore options to facilitate patient compliance with their fall preventive plan of care and decrease the incidence of unassisted ambulation among high risk patients.

In addition, I reviewed fall analysis and post huddle reports to identify the reason or cause of falls on the unit. Each report included a description of each fall and

documentation on what factors led to the fall. In over 50% of the falls, the patient was found on the floor by staff, and the call light was never activated, according to the fall occurrence report. Finally, documentation of the last hourly round prior to a fall was noted in the report and indicated compliance of the nursing staff in rounding with a purpose.

Hospitalized patients are at a much higher risk for falls than the general population (Huey-Ming, Chang, & Schneider, 2013). Accounting for 20-30% of all incident reports, patient falls are the most common adverse occurrence reported in hospitals in the U.S. (Hill et al., 2015). Despite organizational efforts to identify at risk patients and to prevent these events, patient falls remain a major safety concern (Cox et al., 2014). Patient falls are a nursing sensitive quality indicator, which is a performance measurement that reflects the care or the outcomes most influenced by nursing care, and are thus associated with poor quality nursing care (Heslop & Lu, 2014; Hicks 2015).

Purpose Statement

The purpose of this QI project was to add patient engagement strategies to the current nursing fall risk reduction protocol used at the project site with the desired outcomes of increasing patient compliance with the fall prevention plan of care and reducing patient falls on this medical surgical unit. Increasing patients' awareness of their risk and measures to decrease these risks are vital components in the project site's fall preventive plan of care. The guiding practice focus question for this project was, Among hospitalized medical-surgical patients, does the implementation of a falls prevention

protocol incorporating patient engagement strategies improve patient compliance with the existing fall prevention plan of care and reduce patient falls?

Description of the Gap-in-Practice

Reducing patient falls continues to be a major challenge for hospitals in the United States, and effective measures to prevent falls are needed, according to Tzeng and Yin)2015). Patient engagement in safety practices such as in fall prevention is appealing to nurses and can be used to inform current implementation in nursing practice (Berger, Flickinger, Pfoh, Martinez, & Dy, 2014). Increasing patient engagement can be a specific component of patient safety interventions (Berger et al., 2014). Patient safety and quality of care are enhanced when patients are engaged in their health care (AHRQ, 2013). Patient participation in TB after viewing DVD-based educational material reinforces instructions and enhance patients' knowledge concerning their risk, which leads to improved preventive outcomes, researchers have found (Clark et al., 2011; Haines et al., 2013, 2011; Hill et al., 2009; 2015; Friedman et al., 2011; Prey, 2014; Tzeng & Yin, 2014, 2015; Yamaguchi et al., 2016;).

Additionally, the TB method is an essential component to incorporate in fall prevention information. According to Butcher (2013) and Tzeng and Yin (2015), patients should be educated concerning their fall risk and the use of TB as an effective fall prevention strategy. When patients know and perceive their risk for fall and injury, they are more likely to adhere to preventive instructions (Tzeng and Yin, 2015).

Furthermore, Hill et al. (2009) found that older adult participants who viewed fall prevention education via DVD had a greater self-perceived risk of falling than those who

received written educational material. The researchers found that a greater self-perceived risk of a threat (here, a fall) predicts a change in future behavior (Hill et al., 2009). In addition, patient engagement in preventive behavior can lead to improved patient safety and can aid in containing health care expenses related to treatments of injury after falls (Tzeng & Yin, 2014).

In this project, I addressed the impact of patient engagement in preventing in-patient falls. Patient engagement is an increasingly important component of strategies to reform health care in the United States (Hibbard & Greene, 2013). The term patient engagement can be viewed as an umbrella term that can include various approaches (Berger et al., 2014), including TB and patient participation in a DVD-based educational session. Patient engagement approaches allow patients to actively participate in preventing safety issues (Berger et al., 2014). Technological approaches, such as multimedia, video, and interactive measures, can be used to provide additional information to patients (Graffigna, Barello, & Riva, 2013).

The Affordable Care Act recognizes that engaging patients in their own care is a cornerstone for successful health system reform and is crucial to the success of health care organizations (Hibbard & Greene, 2013, p. 207). There is a linkage between patient engagement and healthy behaviors and outcomes, according to researchers (Hibbard & Greene, 2013). When patients are engaged and actively participate in their health care, measurable improvements in health outcomes, safety, and quality of care can be seen (Esposito, Rhodes, Bestoff, & Bonuel, 2016). By increasing patient participation, experts

contend that patients will have higher satisfaction with their providers and better health outcomes (Prey et al., 2014).

For many patients, the hospital can be an unfamiliar and isolating environment causing anxiety and confusion for the patient. These factors place the hospitalized patient at increased risk for falls (Prey et al., 2014). However, increasing the patient's awareness and knowledge of their risk can help to eliminate many patient safety concerns. According to Graffigna et al. (2013), patient engagement strategies that involve a technological approach, such as multimedia, video, and interactive approaches can be used to provide additional preventive information to patients.

Implications for Nursing Practice

Nurses are responsible for the safety of their patients. Despite the availability of various safety measures, there are millions of in-patient falls each year in the United States that are considered preventable events. Patient falls are associated with poor quality of nursing care (Hicks, 2015). However, with the implementation of evidence-based strategies, such as patient engagement strategies, nurses can reduce the number of patient falls and minimize the number of falls with injury (Tzeng & Yin, 2015). When patients are engaged in their health care it can lead to measurable improvements in safety and quality of care (AHRQ, 2014).

In addition, falls are measured as a nursing sensitive quality indicator, which is a performance measurement that reflects the care or the outcomes most influenced by nursing care (Heslop & Lu, 2014). Furthermore, patient fall rates are viewed as the measure that can be most affected by nurse led safety interventions (AHRQ, 2014). The

purpose of this QI project was to incorporate two patient engagement strategies and to evaluate the impact of patient engagement on adherence to fall prevention education and a reduction in fall rates on a medical surgical unit. If they are successful in reducing falls, these engagement strategies can be replicated by nurses to provide evidence-based change in similar acute care settings.

Relevance to Practice Environment

According to the Center for Medicare and Medicaid Services (CMS), a hospital fall is classified as a Hospital Acquired Condition (HAC) ;(CMS, 2015). These conditions are defined as complications or comorbidities that occur as a consequence of hospitalization and can be prevented with the application of evidence-based interventions (CMS, 2015).According to CMS, the HAC Reduction Program determines payment to hospitals in the United States based on their number of falls, thus affecting their overall HAC scores. In addition, hospital performance under the HAC Reduction Program is determined based the hospital's total HAC score, which can range from one to 10. The higher a hospital's total HAC score, the less well a hospital is considered to have performed (CMS, 2015). A negative score equals a reduction in the hospital reimbursement percentage (CMS, 2015). Lastly, because hospitals in the United States no longer receive reimbursement for treating problems associated with patient injury from falls, it is even more critical to have a better understanding of what factors influence fall rates in hospitalized patients (Kalisch, Tschannen, & Lee, 2012).

Nature of the Doctoral Project

Sources of evidence to support this project included scholarly research journals and evidence-based practice literature obtained from several databases. Databases used in this search included PubMed, Medline, ProQuest, Nursing & Allied Health, and CINAHL. Twenty related articles were retrieved. Other sources included health organization websites such as CMS Hospital Falls Data, AHRQ and Fall Fracture, The Joint Commission (TJC), and Institute for Health Improvement (IHI), as well as the National Quality Forum (NQF) and Falls Data. Tracking of patient fall rate outcomes from the fall reports on the unit was a key source for determining the number of patient falls that fit the criteria for this project. In addition, fall prevention practices and documentation from the TB tool were monitored and tracked during collection of evidence and data for this QI project. Monitoring performance and tracking the fall rates assists researchers in identifying whether fall preventive care is improving, unchanged, or worsening (AHRQ, 2013).

The purpose of this QI project was to implement patient engagement strategies designed to increase patient adherence to a fall prevention plan of care and lead to a reduction in patient fall rates on the medical-surgical unit of the project site. Constructs of the HBM served as a guide in planning interventions to promote behavior change and adherence to fall prevention education. According to Hill and colleagues (2016), increasing a patient's awareness of risk or susceptibility to a condition (falls) and providing knowledge about the desired behavior can decrease his or her risk of falls. Greater awareness allows patients to consider the benefits of participating in the health

behavior (e.g., adherence to fall prevention education designed to reduce falls; (Hill et al., 2016).Patients are more likely to devote time and effort to meeting goals they regard as significant to them (Esposito et al., 2016).

A person's belief in personal risk and susceptibility must be present to influence adherence (Cohen, 2009). Change only occurs when the importance of risk reduction is appreciated on a personal level and when one is motivated to follow recommendations (Cohen, 2009). Education should increase the patient's awareness of the factors that make them susceptible to falls while in the hospital and the possible severity of an injury (Hill et al., 2016). In addition, the nurses on the subject unit will address any barriers that are identified that would prevent patients from adhering to the fall prevention plan of care.

Finally, understanding an individual's perceptions or beliefs about their risk (fall-risk) and risk reduction strategies offers insight into their motivation to engage or not to engage in healthy behaviors, such as fall preventive behaviors (Tovar, Rayens, Clark, & Nguyen, 2010). These factors should be considered when developing prevention interventions in nursing, which promote preventive behavior and ultimately improved patient outcomes (Tovar et al., 2010).

Project Implementation and Methods

The patient engagement protocol was developed utilizing evidence-based strategies identified in literature. Once approved by the nurse manager and nurse practice council at the hospital, the DNP student lead an education session on the need for fall reduction, a review of current statistics/data from risk management, how to best engage patients in their own self-care management, and how to effectively utilize the "teach

back" method. Over a three-month period, patients identified as a fall risk were provided the usual fall prevention education and plan of care paired with the following patient engagement strategies: the use of a fall prevention DVD based educational video and the nurses' use of the teach-back method to assess the patient's understanding. The subject unit had not previously used any educational audiovisuals for fall education.

Patient falls were monitored and followed by the nursing staff with post fall documentation. Fall data were entered in Targeted Solution Tool (TST) for analysis each month by risk management. TST is a web-based tool for data entry and analysis of patient falls. TJC developed this tool as a systematic reporting and analysis tool for falls incidence (Joint Commission Center for Transforming Healthcare, 2016). In addition, this analysis tool was helpful in identifying trends and patterns related to patient falls and will allow the researcher to create visual graphic presentation of falls data. At the end of the three-month period, results were evaluated, and trends and patterns were identified. Finally, a meeting was scheduled after the three month period to share the findings with the staff. Visual presentation of handouts, charts, graphs, as well as PowerPoint presentations allowed the dissemination of the fall rate results.

Significance

Stakeholder involvement is essential to this project's success. Stakeholder support is another important factor in the progression of the project moving forward. Stakeholders may be internal or external. Internal stakeholders at the project site include the nursing staff and other health professionals, hospital administration and the healthcare organization. The patients and their families are also important stakeholders in this

project. In addition, when nursing management and hospital administration are in support of a program, they can be influential in getting frontline staff involved in a quality improvement project. Increasing staff awareness is core to this project's planning phase. Since CMS no longer provides payment to hospitals for treatment of injuries due to a fall, hospital administration is concerned with reducing the number of patient falls.

External stakeholders involved in patient safety and evidence-based fall prevention include organizations that have a key interest in ensuring that safety and quality measures are met in health facilities. Many of these government agencies regulate, monitor and provide resources related to falls and fall prevention. Examples of such organizations include the Center for Medicare and Medicaid Services, TJC. and National Quality Forum (Quigley & White, 2013). Collaborative efforts among internal and external stakeholders are instrumental in the success of any quality improvement effort. In addition, input from hospital leaders, nurses and other interdisciplinary members involved in patient care was useful in the planning, implementation and evaluation of this project. With the implementation of evidence-based strategies, such as patient engagement strategies, nurses can reduce the number of patient falls and minimize the number of falls with injury (Tzeng & Yin, 2015).

When patients are engaged in their healthcare it can lead to measurable improvements in safety and quality of care (AHRQ, 2014). With success of these strategies in reducing the fall rate in this hospital, the proposed intervention can be replicated in similar acute care settings. The success of this project can lead to evidence-

based changes that can improve patient safety, patient satisfaction and relieve the financial burden of patient falls.

Summary

Patient falls in the hospital can result in injuries, including pain and suffering, additional hospitalization, and added cost (Wayland, Holt, Sewell, Bird, & Edelman, 2010). In fact, hospitals are financially responsible for the cost associated with patient falls with injury (Wayland et al., 2010). As a result, the costs related to patient falls adds a financial burden to hospitals (Wayland et al., 2010). Falls are identified as a preventable nurse sensitive indicator, which are viewed as measures that can be most impacted through nurse led evidenced-based safety interventions. This project evaluated the effectiveness of patient engagement interventions and the benefit of incorporating engagement strategies into a fall prevention program.

In Section 2, I will address the background and context of this project. The model and concepts used to guide this project will be discussed and the relevance of the project and its findings to nursing practice. Additionally, a literature review will be presented with a discussion of the literature that was used as evidence to support this project. Lastly, my role and that of the project team will be addressed.

Section 2: Background and Context

Introduction

Falls continue to be a major patient safety issue in hospital across the United Sates (Cox et al., 2014). Nearly one third of inpatient falls can be prevented through evidence-based interventions (AHRQ, 2013). The purpose of this QI project was to add evidenced-based interventions to the current fall risk reduction protocol at the project site. Understanding patient behavior is important in identifying those factors that promote or prevent a patient's adherence to fall prevention education (Tovar et al., 2016). The desired outcomes for this project were an increase in patient awareness and compliance with the fall prevention plan of care and a reduction in patient falls on the medical surgical unit which served as the project site.

The practice focus question was, among hospitalized medical-surgical patients, does the implementation of a falls prevention protocol incorporating patient engagement strategies improve patient compliance with the fall prevention plan of care and reduce patient falls? In this section I will discuss the model used to guide this project and the relevance of the project to nursing practice. Additionally, local background and context of the problem will be discussed. Lastly, my role in the project and that of the project team will be addressed.

Concepts, Models, and Theory

I incorporated constructs of the HBM as a guide to promote behavior change and adherence to fall prevention education. The HBM was originally developed by a group of social psychologists working for the United States Public Health Service who wanted to

improve the public's use of preventive services (McEwen & Wills, 2014, p. 322). The HBM includes five constructs: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, and cues to action (Cohen, 2009). One other concept, self-efficacy, has been added to this model since the original development of the model (Cohen, 2009). Self-efficacy is one's confidence in the ability to successfully perform an action or behavior (Cohen, 2009). According to Tzeng and Yin (2015), these concepts should be considered when providing fall preventive education. Patient education should promote self-efficacy and foster patients' belief that they can successfully participate in fall preventive behaviors that will reduce their risk for falling (Hill et al., 2009).

Making patients aware of the factors that make them susceptible to falls while in the hospital and the severity of an injurious fall should be included in the education as well as addressing any barriers that are identified that would prevent them from adhering to the fall prevention education. Furthermore, a patient's perceived susceptibility to a risk is an important factor to consider when planning fall prevention education. A person's belief in personal risk and susceptibility must be present to influence adherence (Cohen, 2009). Change only occurs when the importance of risk reduction is appreciated on a personal level and one is motivated to follow recommendations (Cohen, 2009). Understanding an individual's perceptions or beliefs about their risk (here, fall-risk) and risk reduction strategies will offer insight into what motivates an individual to engage in healthy behaviors, such as fall preventive behaviors (Tovar, Rayens, Clark, & Nguyen, 2010). These factors should be considered when developing prevention interventions in nursing, which promote preventive behavior and ultimately improved patient outcomes

(Tovar et al., 2010). In implementing my project, patient education played an important role in helping the patients to understand the factors that made them susceptible to falls and increased their fall risk while in the hospital. Fall prevention education was reinforced by written and DVD based education that summarized their risk and measures to decrease those risk. Also, the TB method was a valuable tool for evaluating the patient's understanding of their risk and their fall preventive plan of care.

The second framework that was used to guide the QI project progress was the Iowa Model (IM). According to Polit (2010), the model is a useful guide for understanding the evidence-based practice (EBP) process and for implementing EBP change in the practicum setting. Additionally, the IM is well-known as an effective change model and is often used as a problem-solving approach by various health care teams (Polit, 2010). Marita Titler and her colleagues developed the IM in 1994 and revised it in 2001 to promote quality care outcomes (Grove, Burns, & Gray, 2013). Concepts of the IM are based on triggers for EBP, which means that ideas for EBP must start with a stimulus or trigger (Polit, 2010). A trigger can be problem-focused or knowledge-focused. In the clinical setting, triggers initiate the need for change based on the best research evidence (Grove et al., 2013). Furthermore, problem-focused triggers may evolve from process improvement data or risk management data (Polit, 2010), such as the fall occurrence reports and the post fall huddle reports that were used in this project site. In this QI project, the trigger was problem-focused- prevention of patient falls.

After identifying the trigger or clinical problem, the researcher can search for best EBP to manage the problem. Thereby, EBP change can be implemented based on the best

research evidence. In summary, EBP change may be promoted by using the IM to identify the clinical problem for change, to implement patient care based on the best evidence, and to monitor the change in practice to make certain that it yields quality care outcomes (Grove et al., 2013). Lastly, the outcome results are analyzed, shared, and disseminated.

Relevance to Nursing Practice

Patient safety is at the core of nursing care delivery, and implementing evidence-based interventions to prevent falls is a major nursing responsibility. Prevention of patient falls and other adverse events have gained increased attention over the last few years with emphasis on quality and safety in health care (Tzeng & Yin, 2015). Additionally, hospitals in the United States have devoted quality improvement and research efforts to prevent falls. Finding effective interventions to reduce patient falls is a vital component of nursing care. Furthermore, patient engagement strategies which are incorporated in a hospital's fall prevention protocol can be used to reduce patient falls and fall-related injuries (Tzeng & Yin, 2015).

Research demonstrates that when patients are engaged in their health care, it can lead to quantifiable improvements in quality care and patient safety (AHRQ, 2014). In addition, patient engagement offers a favorable path toward improved-quality health care, more efficient care, and improved population health (Carman et al., 2013). Patient engagement is an important element and even a required condition for achieving care that is patient centered (Sofaer & Schumann, 2013). In this project, patient engagement strategies were implemented to identify the impact on the reduction of patient falls.

A literature review was conducted to find EBP that support patient engagement strategies related to fall prevention education. Key words used were patient falls, fall-risk assessment, fall prevention program, fall prevention education, patient safety, patient engagement, teach-back method, adherence and patient teaching. Databases utilized in this search included PubMed, Medline, ProQuest, Nursing & Allied Health, OVID and CINAHL. Government reports and research utilized in this review include: AHRQ, Center for Disease Control and Prevention (CDC), and CMS. Professional organizations include TJC and NQF. Twenty articles were retrieved during this review, however only twelve were included that provided scholarly evidence to support this project. The twelve peer-viewed articles included 5 randomized control trials, 3 systematic reviews, 2 retrospective descriptive studies and 2 qualitative studies.

In addition, inclusion criteria for this literature review included peer reviewed articles published between 2009 and 2017 and inpatient falls occurring in the hospital setting in patients age 50 and older. Other inclusion criteria included articles related to fall prevention protocol, fall prevention strategies, patient engagement strategies, and patient education. Lastly, articles excluded from this literature review were articles with falls occurring outside the hospital setting, and falls in patients less than 50 years of age. Tzeng and Yin (2015), addressed the use of the conceptual model Patient Engagement in fall prevention improvements to decrease patient falls. When patient-centered engagement interventions are included in the fall preventive plan of care, the number of patient falls can be reduced (Tzeng & Yin, 2015). The researchers identified that to effectively provide information on fall prevention, material for education should be well

designed and include patient teach-back related to fall preventive information (Tzeng & Yin, 2015). The researchers emphasized educating patient about their fall risk and utilizing teach-back as an effective fall prevention strategy (Tzeng & Yin, 2015). However, many fall prevention strategies focus on the role of the health provider. Hospital fall prevention programs usually focus on the health provider teaching the patient of their fall risk and what to do to prevent them, but for any preventive intervention to work the patient must be willing to adhere to it (Tzeng & Yin, 2015). In an effort to promote patient engagement, nurses must first understand the concept of patient centered care and incorporate it in the care and fall prevention educational strategies. This approach will allow the nurse to become an enabler in hospital fall prevention and not just the expert.

Hill et al. (2016) conducted a randomized control trial to determine how providing patient-centered, individualized fall prevention education delivered by digital video disc (DVD) and written format could facilitate behavior change in the older hospitalized patients. Participants in this study identified that education increased their awareness, understanding, and confidence to actively engage in falls prevention instructions and strategies (Hill et al., 2016). The use of video in presentation of fall prevention information allow the information to be tailored to patients' various learning styles. In addition, the study provides understanding of how falls prevention education can be provided for patients using the constructs of the HBM to promote change in health behavior (Hill et al., 2016).

Patients are more likely to participate in safer behaviors when they believe that their actions will result in a beneficial outcome. The results of this study demonstrated that individualized patient education using DVD presentation and written presentation paired with a hospital's existing fall preventive protocol reduced falls and injurious falls (Hill et al., 2016).

Research conducted by Tzeng (2014) indicates that patient engagement is a key factor in reducing falls. Hospital environments can be very complex, and the risk of patient falls can increase in such an environment. Reducing inpatient falls continues to be a challenge. According to Tzeng (2014) empowering patients to actively participate in their fall prevention care while in the hospital could be the answer to the problem. Communication measures should also be incorporated to promote patient engagement in self-management techniques such as fall prevention through integration of self-management and informatics (health-enabling technologies) such as with audiovisual technology (Tzeng, 2014). Lastly, fall preventive information should be tailored to the patient's fall risk status, their psychosocial, and physical character (Tzeng, 2014).

Trepanier & Hilsenbeck used a standard program of falls prevention by implementing multiple interventions focusing on patient-specific or patient-centric needs with the goal of decreasing patient falls (Trepanier & Hilsenbeck, 2014). In this standardized falls prevention program, nurses first identified patients who were at risk for falls, then the nursing team developed an individualized, patient centered plan of care with the objective of eliminating risk factors, barriers and decreasing fall risk (Trepanier & Hilsenbeck, 2014).The results of this study showed that the multifactorial falls

prevention program led to a reduction in the number of patient falls by 58.3% over a period of two years (Trepanier & Hilsenbeck, 2014).

Friedman, Crosby, Boyko, Hatten-bauer, and Turnbull (2011) conducted a systematic review addressing patient education teaching strategies that may increase patient understanding and adherence to education. In fact, results of this study showed that teaching strategies that increased patient understanding and knowledge, decreased anxiety, and increased satisfaction lead to better patient outcomes (Friedman et al., 2011). According to the researchers, effective teaching strategies include providing video and written materials, along with demonstrations (Friedman et al., 2011). Additionally, any written material should be presented at a reading level suitable for the general population.

With respect to specific teaching strategies, verbal teaching and discussions were found to be the least effective teaching strategies. Friedman et al. (2011) recommended that verbal teaching be used in combination with other teaching strategies and not as a stand-alone teaching method. Overall, they found that video presentation was better than the same information given verbally for knowledge transfer (Friedman et al., 2011).

Haines et al., 2011 conducted a randomized control trial that demonstrated that multimedia patient education decreased patient falls. The intervention was a video patient education program based on the HBM combined with follow-up with a health professional. In this study a patient education program was introduced that provided written and multimedia fall prevention information along with the usual multifactorial fall preventive plan of care. A control group only received the usual multifactorial fall prevention program measures. Results of the study showed that using multimedia patient

education and staff follow-up assessment, reduced falls in patients with intact cognitive functions.

Glick, Fernadez, Irby, Harleman, & Fernadez, (2010) identified health literacy as another important factor to consider when giving patient education to older adults in an effort to increase their understanding and adherence. In fact, in the United States, low health literacy is particularly common in older adult patients and in those with chronic disease, low socioeconomic status and low educational attainment (Glick et al., 2010). Furthermore, two-thirds of adults age 60 and older have inadequate or marginal health literacy (Glick et al., 2010).

Patients with low health literacy often fail to understand health teaching instructions and are at increased risk for negative outcomes and poor adherence (Glick et al., 2010). Many older adult patients may not understand health teaching information, but are reluctant to say they do not understand. This is why giving written instructions alone is not the best fall prevention strategy to consider in the older adult patient. Offering audiovisual and verbal education along with written instructions is a better combination approach (Glick et al., 2010). Furthermore, the addition of the TB method proves a useful strategy for assessing the learners understanding of the information, the need for further teaching and provide an opportunity for patient engagement (Glick, Fernadez, Irby, Harleman, & Fernadez, 2010).

Cox et al. (2015) conducted a descriptive, retrospective study to identify intrinsic and extrinsic factors that contribute to falls in hospitalized patients. The researcher concluded that many factors contribute to the occurrence of falls. However, the study did

show that the implementation of fall prevention strategies that are patient-centered decreased patient fall rates (Cox, 2015).

Clark et al. (2011) identified that numerous factors contribute to falls. In this retrospective study the researchers implemented a nurse led education program to reduce the number of patient falls after total knee arthroplasty (TKA) surgery. Seventy-two patients participated in this study, and received one on one patient education. Afterward they were asked to teach-back and recall the instruction. In fact, results of the study showed that patient education and teach-back methods helped to reduce falls in patients on the medical-surgical unit (Clarke, Timm, Goldberg, & Hattrup, 2011).

In another study the researchers proposed that the introduction of multimedia strategies such as video material (DVD) along with written educational material is more effective in fall prevention education (Yamaguchi et al., 2016). The researchers developed an animated DVD presentation on fall prevention, intended for patients and caregivers (Yamaguchi et al., 2016). Results of this study indicated that multimedia could be an effective educational tool for reducing patient falls in the hospital (Yamaguchi et al., 2016). Limitations of this study include the need to develop a method to assess for effective teaching feedback from the patient after watching the DVD and assessing if they understood the teaching.

Prey et al. (2014) conducted a systematic review regarding the use of technologies such as multimedia as an engagement strategy to provide patient information in the inpatient setting. Results of this study showed that a gap does exist concerning the willingness of nurses to use patient engagement strategies in the inpatient setting. The

limitations of this review included the potential of omitting relevant articles due to search terms that are incomplete and the possibility of publication bias (Prey et al., 2014).

Local Background and Context

Hospital patient falls result in injuries, including pain and suffering, additional hospitalization, and added cost (Wayland, Holt, Sewell, Bird, & Edelman, 2010). Inpatient falls are the most common adverse event occurring in the hospital setting (Morella et al., 2011). In fact, up to 30% of all inpatient falls result in an injury (Morella et al., 2011, p. 1). Furthermore, patient falls not only have physical consequences, but also psychological and social consequences. Injuries related to falls include lacerations, fractures, subdural hematomas, excessive bleeding, and may even lead to patient death (Anderson, Postler, & Dam, 2015). Additionally, falls are a burden to hospitals financially and reflect a negative representation of the quality of care.

According to CMS, hospitals are financially responsible for the cost associated with patient falls with injury (Wayland et al., 2010). As a result, the costs related to care of injuries after a patient fall threatens the solvency of hospitals (Wayland et al., 2010). Many fall prevention interventions such as bed alarms and hourly rounding have been used, yet their success is inconsistent (Tzeng & Yin, 2015). An innovative approach to reduce inpatient falls is needed (Tzeng & Yin, 2015). Butcher, 2013 stressed the need for patient engagement in educating the patient in their fall and injury risk while in the hospital. The researcher recommended the teach-back method as an effective engagement strategy. Patient engagement strategies can lead to improved health outcomes, facilitate

improvements in patient safety, and help control cost in healthcare (Maurer, Dardess, Carman, Frazier, & Smeeding, 2012).

Institutional Context

This DNP project practice setting was a 25-bed critical access hospital. The hospital provides inpatient and emergency services as well as swing-bed and post-hospital rehabilitative services. Many of the patients admitted are identified as at risk for falls. Discussions with nurse leaders and nursing staff identified patient falls as an important organizational QI issue. In particular, the nursing staff and occurrence report documentation identified patient non-compliance to falls prevention plan of care, more specifically, the use of the call light as the main reason for patient falls. Because the subject hospital is small, the financial burden of treating fall injuries is a concern. Additionally, CMS no longer reimburses hospitals for the additional cost of treating injuries from falls. Hospitals are financially responsible for inpatient falls.

The hospital's fall rates and their Hospital Consumer Assessment of Healthcare Provider Systems (HCAHPS) scores impact reimbursement. HCAHPS was developed by CMS and AHRQ (Studer, Robinson, & Cook, 2010). HCAHPS is a value-based purchasing program that connects reimbursement to quality outcomes. These outcomes are measured based on quality metrics, such as the number of falls and patient survey results related to their hospital experience Studer, Robinson, & Cok, 2010). Fall rates as well as the patient survey results reflect the hospital's performance and determines the total amount of reimbursement the hospital will receive (Studer, Robinson, & Cook, 2010).

Definition of Terms

For the purpose of this project, the following terms have been defined:

Fall: Any unplanned descent to the floor with or without injury to the patient (AHRQ, 2013, p. 2).

Fall-risk assessment tool: A scale used to identify factors that place the patient at risk for falls (AHRQ, 2013).

Health Belief Model: a framework used for predicting preventive health behaviors and developing interventions to facilitate behavior change (Hill et al., 2009)

Hospital Acquired Conditions (HAC): complications or comorbidities that occur as a consequence of hospitalization and can be prevented with the application of evidence-based interventions (CMS, 2015).

Hospital Consumer Assessment of Healthcare Providers and Systems Survey (HCAHPS): A patient survey, standardized instrument and data collection methodology for measuring patient's perspectives on hospital care (CMS, 2015).

Patient Engagement: Actions people take for their health and to benefit from health care (Sofaer & Schumann, 2013, p. 9).

Teach-back method: Method used to confirm the patient's understanding of care instructions by asking patients to repeat the instructions using their own words or return demonstrate (IHI. 2017).

Teach-back Assessment: Tool used to document education and ability of the patient to relate the plan of care and teach-back (IHI, 2017).

Role of the DNP Student

Professional Role and Responsibility

I am interested in identifying engagement strategies that will ultimately promote safe patient outcomes. Patients in the hospital depend on healthcare professionals to provide safe, quality care. In addition, healthcare professionals must continue to work to improve patient care and alleviate risk through internal quality improvement projects (Joshi et al., 2014). During my practicum experience as a DNP student I was able to discuss with the Director of Nursing some of the concerns they currently had and reducing falls was her first response. In particular, the nursing staff stated that their fall rates were not significantly high, but they would like to see the number reduced. As nurses, we help ensure that our patients are safe. Patients enter the hospital setting trusting that the staff will provide the best care.

Furthermore, my motivation to complete this project is grounded in my belief that all patients deserve safe, quality care. My personal experience and memories of a very special love one who suffered a serious injury from a fall also motivates me to complete this project. I believe that as professional leaders we are obligated to seek out effective evidence-based interventions to promote patient safety and prevent harm. Regardless of whether the nurse's role is that of a primary care provider at the bedside, a nurse leader or one involved in health care policy, all nurses are in a position to promote and implement safe nursing practices. In addition, this QI project aligns with the American Association of Colleges of Nursing (AACN) DNP Essential II: Clinical Scholarship and Analytical Methods for Evidence-Based Practice (AACN, 2006). The project allows this DNP

student to design, lead and evaluate a quality improvement method to facilitate safe and effective outcomes of practice (AACN, 2006).

Role of the Project Team

The nursing staff, nurse managers, and the risk manager played an important role in the implementation phase of this project. The DNP student led an education session on the need for fall reduction, activities involved, their role in the project, and how to document education in fall prevention and patient response. Teaching tools were utilized to increase the staff knowledge, awareness and support of the project. The SHARE Approach power point tool by the AHRQ was presented to the staff initially in an effort to increase their knowledge of the importance of patient engagement strategies, focusing on teach-back and audio-video strategies.

During the implementation phase, the staff nurses completed the current fall preventive plan of care along with presentation of the fall prevention DVD and the TB assessment tool within the first four hours of admission of any patient identified as a fall risk who meet the project criteria. In addition, the staff nurses used the falls education teach-back assessment sheet to document education given and the patient response and teach-back (see Appendix C). TB allows the patient to state in their own words or demonstrate what they have learned. In addition, teach-back enables the nurse to assess the effectiveness of their teaching and if further teaching is required. Finally, any falls occurring within three months of starting the new protocol were assessed by me for (a) patient's documented teach-back of the plan of care, (b) the reason for the fall, and (c) whether the reason was the patient not following the plan of care, or (d) whether the fall

occurred despite following the plan of care. Each month fall occurrence data was entered in the TST for analysis by the risk manager and the DNP student. Overall fall rates were compared to those in the same time period in 2016.

Summary

In Section 2, I discussed the background and context of this project, addressing the relevance of the project and its findings to nursing practice. The literature review was presented with discussion of the literature that was used as supporting evidence. Additionally, definitions of key terms relevant to this project were also addressed. Finally, the role of the DNP student and the project team was discussed. The next section, Section Three, I will address the processes that was used utilized in the collection and analysis of data to address the practice focused question.

Section 3: Collection and Analysis of Evidence

Introduction

The purpose of this QI project was to add patient engagement strategies to the current nursing fall risk reduction protocol used at my project site. Anticipated outcomes for this project are an increase in patient compliance with the plan of care and a reduction in the number of patient falls on this medical surgical unit. Patient falls continue to be a major concern for hospitals in the United States (Cox et al., 2014). Additionally, falls have physical, psychological, and social consequences. When patients are engaged in their health care, it can progress to measureable improvements in quality care and patient safety (AHRQ, 2014). The source of evidenced used in this project and the process of data analysis and synthesis that was used will be discussed in Section 3.

Practice Focused Question

The guiding practice focus question for this project was, among hospitalized medical-surgical patients, does the implementation of a falls prevention protocol incorporating patient engagement strategies improve patient compliance with the fall prevention plan of care and reduce patient falls?

Implementation

Phase 1: Staff Nurse Education and Training

I used several approaches and teaching tools to increase the knowledge, awareness, and support of the project by the nursing staff and administration at the project site. I presented the SHARE Approach PowerPoint tool by the AHRQ, focusing on the importance of patient engagement strategies of TB and DVD-based educational

strategies. My use of the Share Approach PowerPoint tool will further inform the staff of the correlation between lack of patient understanding and poor adherence to preventive education, which can lead to increased fall rates (AHRQ, 2016). Also, clarification of the staff's definition of a patient fall was obtained. Finally, the unit nurses practiced the teaching method with one another during the nurse education session.

Phase 2: Patient Engagement

In addition to the current fall risk prevention protocol, patients identified at high risk for falls were shown a fall prevention educational video within the first 4 hours after admission. The title of the video was, *Fall Prevention in the Hospital*. It is a 7 minute DVD video that stresses to patient the importance of asking for assistance when getting in and out of bed and using their call light; the video also encourages patients to take an active role in their safety and preventing a fall during their hospital stay (Milner-Fenwick, 2015).

Nursing staff continued using the unit's existing oral and written fall educational teaching. The television in each patient room was used to present the DVD video. For patients with cognitive impairment, the teaching was presented to the primary caregiver present. The TB method, which requires verbal and return demonstration by the patient Tamura-Lis (2013) assisted unit nurses in assessing patient understanding of the plan of care. Finally, the nurses completed a TB assessment tool that was used to document education and ability of the patient to relate the plan of care by TB (see Appendix C).

I found both terms, teach-back and feed-back, in the literature to represent the method used to assess a patient understanding of information given. For this project I

used the term teach-back (TB). TB has been found to be a useful strategy for assessing learners' understanding of the information and the need for further teaching; it also provides an opportunity for patient engagement (Glick, Fernadez, Irby, Harleman, & Fernadez, 2010).

Effective clinician-patient communication is assured through use of TB techniques, because patients are asked to repeat or return demonstrate what they have learned (AHRQ, 2016). Patients use their own words to explain what they have learned; this helps them to remember and understand more information (AHQR, 2016). Finally, use of TB helps in identifying those areas of fall prevention education in which the patient will need further instruction. According to Glick and colleagues (2010), the TB approach should be a regular and expected component of the patient education process.

Outcomes

Information on patient falls is reported to risk management. Overall fall rates were compared to those in the same time period in 2016. Any falls occurring within 3 months of starting the new protocol were assessed for (a) patient's documented TB of the plan of care, (b) the reason for the fall, (c) whether the reason was the patient not following the plan of care, or (d) whether the fall occurred despite the plan of care.

Sources of Evidence

A prospective quantitative design was used to compare data on patient fall rates after the interventions to fall rates from the same time period in 2016. Resources from the AHRQ fall prevention toolkit and IHI were used. The IHI teach-back assessment tool was used as a resource tool to document patient education and TB assessment. Occurrence

and post fall huddle reports of falls among patients age 50 and older on the medical surgical unit were used as data sources. These reports are completed by the nurses and nurse managers when an incident occurs. These data go to the risk manager for entry into TST for analysis. The data were de-identified when used for reporting back to each unit.

Participants

Patients admitted to the medical-surgical unit aged 50 and older who have been identified as a fall risk on the admission fall-risk assessment were included in this study. Based on the 2016 average, 40 to 45 patients were estimated to be identified as fall risk over the 3-month period in which the project was conducted.

Analysis and Synthesis

Incident data was analyzed by the Targeted Solution Tool (TST), a web-based tool for data entry and analysis of patient falls. The risk manager entered the fall occurrence data into TST at the end of each month. This DNP student agreed to help enter the fall occurrence data over the three-month implementation period as instructed by the risk manager. The TST was developed by TJC, as a systematic reporting and analysis of falls incidence (Joint Commission Center for Transforming Healthcare, 2016).This tool is useful to guides data collection, measurements and identifies factors that contribute to falls and has been validated in several hospital settings (Joint Commission Center for Transforming Healthcare, 2016).

In addition, TST is useful in identifying trends and contributing factors that will give direction on an ongoing basis during the three-month period (Joint Commission Center for Transforming Healthcare, 2016) related to patient falls. Furthermore, the TST

will allow the researcher to create visual graphic representation of falls data. A graphic presentation of the falls data will be an effective approach to summarizing and presenting results of the fall rates (Quigley, Neily, Watson, Wright, & Strobel, 2008). Finally, the teach-back assessment tool will also be evaluated by the DNP student to identify trends and patterns in nursing practice.

Summary

The purpose of this quality improvement project was to identify the impact of patient engagement on patient compliance to fall prevention education. Patient engagement strategies through DVD-based education and teach-back method paired with the current fall prevention program will be evaluated. Through analysis and synthesis of the data, I sought to answer the practice-focused question: Among hospitalized medical-surgical patients, does the implementation of a falls prevention protocol incorporating patient engagement strategies improve patient compliance with the fall prevention plan of care and reduce patient falls? In Section 4, the implementation process, findings and recommendations are examined.

Section 4: Findings and Recommendations

Introduction

The project practice setting was a 25-bed medical-surgical unit of a critical access hospital. The subject unit has a policy and procedure for fall prevention on the medical surgical units, yet had an average of 1.9 falls each month during 2016, according to its annual fall occurrence report. As noted in the report, more than half of the 212 patients admitted to the unit in 2016 were over the age of 50 years old, and 90 % of these patients were identified as at risk for falling based on the admission fall-risk assessment. During calendar year 2016, 23 patient falls were documented on the unit, and, of the 23 falls that occurred, three resulted in documented injuries, according to the report.

Reducing patient falls continues to be a major safety challenge for hospitals, and effective measures to prevent falls are needed (Tzeng & Yin, 2015). In this QI project, I incorporated the use of patient engagement strategies, which I paired with my study site's current fall prevention protocol for reducing fall rates and increasing patient compliance to fall prevention instructions. An audiovisual video along with nursing instructions using TB strategies to assess knowledge were added to the routine falls prevention procedures. Patient engagement in safety practices such as fall prevention strategies can be used to inform current nursing practice (Berger, Flickinger, Pfoh, Martinez, & Dy, 2014). Research suggests that patient participation in engagement strategies such as teach-back and viewing video-based fall prevention media reinforces verbal instructions, thereby enhancing patients' knowledge of their risk and leading to improved preventive outcomes

(Clark et al., 2011; Friedman et al., 2011; Haines et al., 2013, 2011; Hill et al., 2009, 2015; Prey, 2014; Tzeng & Yin, 2014, 2015; Yamaguchi et al., 2016).

The purpose of this QI project was to add patient engagement strategies to the current nursing fall risk reduction protocol at my project site with the desired outcomes of an increase in patient compliance with the fall prevention plan of care and a reduction in the number of patient falls in the medical surgical unit. Increasing patients' awareness of their risk and the specific actions they can take to decrease risk are key factors in the fall preventive plan of care. The guiding practice focus question was, among hospitalized medical-surgical patients, does the implementation of a falls prevention protocol incorporating patient engagement strategies improve patient compliance with the fall prevention plan of care and reduce patient falls?

Patients identified as at risk for falls were provided the projects site's current fall prevention education and plan of care paired with patient engagement interventions including a fall prevention video-based (DVD) education. Nurses on the unit also used the TB method to assess patients' understanding of the fall preventive instructions. Patient falls were monitored with post fall documentation and completion of occurrence reports as indicated. A prospective quantitative method was used to compare the data on patient fall rates after the project interventions to fall rates from the same time period in 2016. All fall data were entered in TST for analysis by risk management.

Findings and Implications

This QI project was implemented from July 2017 to October 2017, during which time data were gathered and compared. During the implementation period, 96 patients

were admitted to the subject unit, 74 (68.5%) of whom were identified as at risk for falls. In comparison, during the same time period in 2016, 108 patients were admitted to the unit, with more than half of this number identified as at risk for falls using the same fall-risk assessment scale.

The hospital at which I conducted my project continues to use an admission fall-risk assessment based on the Morse Fall-Risk scale (Matarese and Ivziku, 2016). The Morse Fall-Risk scale is a valid tool for fall risk screening or prediction, according to Matarese and Ivziku (2016), which is used to identify patients at high risk for falls. The screening tool consists of six risk factors; a numerical value is assigned by the scorer to indicate the presence or absence of each factor (Matarese & Ivziku, 2016). Some factors screened on the MFS are patient history of falls, use of an ambulatory aid, gait impairment, and mental status. On the subject unit, the fall risk screening was completed on admission and whenever there was a change in patient status.

Of the 74 patients identified as at risk for a fall during the implementation period, 58 met the inclusion criteria for this project. The inclusion criteria were that participants be medical surgical patients who were age 50 or older and who had been identified as at risk for falls. During implementation, the nursing staff continued to provide their current fall prevention protocol with oral and written instructions, paired with the project's patient engagement interventions. The project interventions for patient engagement included the use of a fall prevention video- based (DVD) education and the use of the TB method to assess patients' understanding of instructions. Implementation of this QI

project addressed the safety issue of patient falls in patients age 50 and older on the medical surgical unit of the subject hospital.

Data were collected from the occurrence reports and post-fall huddle reports and compared with the fall data from the same time period in 2016. The total number of falls during implementation of the project was one fall, which occurred in August 2017. During the same time period in 2016, the number of falls was, as follows: July (two falls), August (three falls), September (three falls), and October (two falls) for a total of 10 falls (see Appendix D). The results showed a more than 75% reduction in the fall rate after the implementation of the DNP project as compared to the same time period in 2016 (see Table 1).

Table 1

Fall Comparison for 2016 to 2017 (July–October Months)

Month	Falls in 2016	Falls in 2017
July	2	0
Aug	3	1
Sept	3	0
Oct	2	0

While the low numbers do not allow for a test of statistical significance, these numbers suggest to me that a reduction in patient falls is possible with implementation of the interventions used in this project. However, other factors such as the Hawthorne effect can influence behavior and should also be considered by researchers (Benedetti,

2016). When research participants are aware that they are being observed, they may change their expectations and, possibly, their behaviors and attitudes, which may lead to uncertainty in the measurement of these behaviors and attitudes (Benedetti, 2016).

In the first 6 months of 2017 (i.e., prior to project implementation), the hospital had a total of 17 falls. Falls recorded during the 6 months prior to implementation of the project in 2017 were as follows: January (two falls), February (four falls), March (four falls), April (three falls), May (three falls), and June (one fall). A visual comparison of the data is shown in the bar graph in Figure 1.

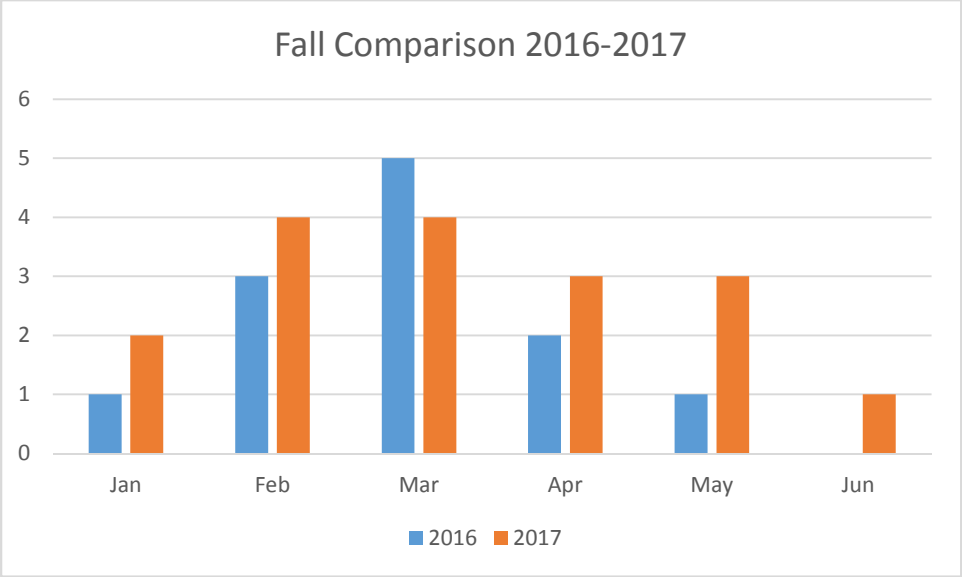

Figure 1. Comparison of falls in 2016 and 2017 prior to project implementation.

The nurses at the project site used the TB assessment tool to assess patient understanding and their response to the teaching strategies. Use of the TB tool also allowed nurses at my project site to document patient understanding of fall prevention education. On the TB tool, the nurses documented when a fall occurred and whether the fall resulted from a patient not following the plan of care or whether the fall occurred

despite the patient following the plan of care. Data from the TB tool and post fall huddle report showed that, in the one instance where a patient fall occurred, the patient had attempted to get up from his chair but did not use the call light for assistance.

Overall, noncompliance to use of the call light leading to fall was less than 2% based on the fall occurrence reports and post-fall huddle reports. In review of the TB documents for the 58 participants, all nurses complied with the teaching protocol. Review showed that the one fall occurrence was due to patient non-compliance despite the education. The reports noted that the patient attempted to get out of bed unassisted and was found on the floor and the call light was not activated by the patient.

Before discharge the participants were asked if the patient engagement strategies: educational video (DVD) and their participation in the teach-back method was beneficial in increasing their understanding and compliance to the fall prevention instructions, specifically the use of the call light for assistance getting up. Of the 58 participants interviewed at discharge, 100% agreed that the video and teach-back helped to increase their understanding and compliance to the fall prevention plan of care. These final results show that the two patient engagement strategies paired with the hospitals current plan of care did have a significant impact on patient compliance to fall prevention instructions and significantly reduced the fall rate in this small facility.

Recommendations

The findings from this project provide strong support that the use of the patient engagement strategies, TB method and video-based educational tools have a significant impact on patient understanding and compliance to fall prevention instructions. This

project has shown that reinforcement of verbal and written instruction through video education follow-up and the use of the TB method to assess patient understanding are effective measures to reduce patient falls and increase patient compliance to the fall prevention plan of care. Patient safety, quality of care and patient satisfaction have become unspoken rules of health care and using TB can lead to increased patient satisfaction, safety and quality of care (Tamura-Lis, 2013). Multimedia tools are an effective method for patient education, even among patients with lower literacy levels (Frentsos, 2015).

Contribution of the Doctoral Project Team

The doctoral project team consisted of the medical-surgical unit nursing staff, unit manager, director of nursing and the risk management director. The nursing staff was responsible for the usual admission fall assessment and implementation of the fall prevention plan of care. They continued the usual plan of care as well as presenting the educational video to reinforce the verbal presentation of the fall prevention instructions. The nursing staff completed the teach-back tool with each participant to assess their understanding of the instructions given verbally and by video presentation.

The nurses also completed occurrence reports, and post huddle reports after the one fall that occurred. The unit nurse manager ensured that the nursing team continued in participating with the implementation strategies throughout the project. She was very instrumental in providing feedback on how the nurses were responding to the project. Overall, the project team was very supportive in their work with me on the project. The motivation of the staff grew as the fall rate continued to decrease each month.

The risk manager is also the director of nursing and my preceptor at the project site. The risk manager and I worked together to review the past and current occurrence reports for this year. I also evaluated each teach-back tool and the one post fall huddle documentation. In addition, I educated the staff in how the project would proceed, monitoring the progress of the project with support and recognition to the staff for their efforts in implementing the project.

Strength and Limitations of the Project

The strength of this project lies in the ease of implementation without major change to staff nurses' usual routine. There were several limitations to the project. One such limitation is the possible influence of the Hawthorne or observer effect in which individuals change or alter their behavior when they know they are being observed. Because the nurses were aware of the study, they could have modified their behaviors which may have contributed to decreased falls. Another area of limitation was the lack of prompts in the discharge plan to remind the nurses to ask each participant if they believed that the engagement strategies had an impact on their compliance to fall prevention instruction before they were discharged home. In future studies the use of an electronic version of the TB tool instead of the paper format would allow for easier access and reminders to the nurses. Another limitation of the project was because the subject hospital is a small they do not have system wide multimedia access at any given time. The process of starting the fall prevention video on the television in the patient's room was not as convenient as having system wide access to all the rooms at any time.

Section 5: Dissemination Plan

Presentation of research findings is an important step in the promotion of evidenced-based practice. There are three main methods of dissemination: poster, oral presentation, and manuscript paper (White, Dubley-Brown, & Terhaar, 2016). To disseminate my DNP project, I used oral presentation and the visual aids Microsoft PowerPoint and graphs in handouts to present findings to the stakeholders at the hospital which served as my project site. I believe oral presentation of my project results was best for dissemination of this quality improvement project. Over the past several months of completing my practicum hours, I have collaborated and interacted well with the nursing staff and other stakeholders at the hospital. I think that presenting my findings in person to them will continue this positive communication and collaboration.

Oral presentation has several advantages, including the ability to disseminate findings more quickly and the ability to gain direct feedback from the audience (Fain, 2017). Stakeholder feedback and response to the findings are important and will be a strong determinant of organizational leaders' decision to continue implementing the new evidence into health care practices at my project site. Based on my communication with nursing administration, they plan to continue the interventions that I proposed.

Analysis of Self

Through my work with this project, I have gained a greater appreciation for scholarly research. This QI project aligns with the AACN DNP Essential II: Clinical Scholarship and Analytical Methods for Evidence-Based Practice (AACN, 2006). This work has allowed me to become a stronger organizational leader, change agent, and

DNP-prepared nurse scholar. Organizational leadership is critical in order for DNP-prepared nurses to affect patient care and improve patient health care outcomes (AACN, 2006). My goals are to continue to seek and translate evidence-based intervention that will improve the quality of care for patients and their families and improve overall health care delivery.

Undertaking this project has not been an easy task. However, the challenges along the way have shown me that, with perseverance and determination, I could find alternative ways of conducting my project work. My role as an educator included instructing the staff on how the project would proceed, monitoring the progress of the project, and providing continued recognition to the staff showing my appreciation. All of these things were important and required factors for promoting collaboration, teamwork, and continuation of the project in the practice setting.

I have taken on many roles throughout this project including researcher, team leader, educator, patient advocate, and change agent. Along the way, I have made new contacts with so many different nurse educators, nurse leaders, managers, and administrators who have had a positive impact on my development into a DNP nurse scholar. Advocacy for the use of new evidence-based knowledge is a responsibility of all nurses (Stokowski, et al., 2010). I have learned to appreciate that, while one nurse can plan and initiate a change, being joined by others can lead to more accomplishments and the possibility of change (Stokowski et al., 2010).

Summary

The findings from this project provide strong evidence that the use of patient engagement strategies, the TB method, and video-based fall prevention educational tools can have a significant impact on patient understanding and compliance with fall prevention instructions. The project findings showed a reduction of patient falls among patients who are aged 50 and older in the medical surgical unit. This project has shown that reinforcement of oral and written instructions through video education follow-up and the use of the TB method to assess patient understanding are effective measures for reducing patient falls and increasing patient compliance with fall prevention care plans. Additionally, these patient engagement strategies can be replicated in similar acute care settings. Insights from this project may compel nursing leaders to make evidence-based changes that may improve patient safety and satisfaction and relieve the financial burden of patient falls. Lastly, engagement by patients in their health care can lead to measurable improvements in safety and quality of care (AHRQ, 2014). The use of these EBP changes shows positive implication for social change.

References

Agency for Healthcare Research and Quality. (2013a). How do you measure fall rates and fall prevention practices? Retrieved from http://www.ahrq.gov/professionals/systems/hospital/fallpxtoolkit/fallpxtk5.html

Agency for Healthcare Research and Quality. (2013b). Preventing falls in hospitals. Retrieved from http://www.ahrq.gov/professionals/systems/hospital/fallpxtoolkit/fallpxtk3.html

Agency for Healthcare Research and Quality. (2014). Guide to patient and family engagement in hospital quality and safety. Retrieved from http://www.ahrq.gov/professionals/systems/hospital/engagingfamilies/strategy2/index.html

Agency for Healthcare Research and Quality. (2016). The share approach-using the teach-back technique: A reference guide for healthcare providers. Retrieved from http://www.nchealthliteracy.org/toolkit/tool5A.ppt

American Association of Colleges of Nursing. (2006). *The essentials of doctorial education for advanced nursing practice*. Washington, DC: Author. Retrieved from http://www.aacnnursing.org/Portals/42/Publications/DNPEssentials.pdf

Anderson, D. C., Postler, T. S., & Dam, T. (2015). Epidemiology of hospital system patient falls: A retrospective analysis. *American Journal of Medical Quality*, *31*(5), 423-428. http://dx.doi.org/10.1177/1062860615581199

Barker, A. L., Cameron, P. A., Hill, K. D., Flicker, L., Haines, T. P., Lowthian, J. A., ... Smit, D. (2015). Respond: A patient-centered programme to prevent secondary

falls in older people presenting to the emergency department with a fall: Protocol for multicentre randomised controlled trial. *Injury Prevention*, *21*(1), 1-7. http://dx.doi.org/10.1136/injuryprev-2014-041271

Benedetti, F., Carlino, E., & Piedimonte, A. (2016). Increasing uncertainty in CNS clinical trials: The role of placebo, nocebo, and Hawthorne effects. *Lancet Neurology,* 15(7), 736-737. https://doi.org/10.1016/S1474-4422(16)00066-1

Berger, Z., Flickinger, T. E., Pfoh, E., Martinez, K. A., & Dy, S. M. (2014). Promoting engagement by patients and families to reduce adverse events in acute care settings: a systematic review. *BMJ Quality & Safety*, 1(23), 548-555. http://dx.doi.org/10.1136/bmjqs-2012-001769

Burson, R., Moran, K. J., & Conrad, D. (2016). Why hire a doctor of nursing practice-prepared nurse: The value added impact of the practice doctorate. *Journal of Doctoral Nursing Practice,* 9(1), 152-158. http://dx.doi.org/10.1891/2380-9418.9.1.152.

Butcher, L. (2013). The no-fall zone. *Hospitals & Health Networks*, *86*(6), 26-30.www.hhnmag.com/articles/6404-Hospitals-work-to-prevent-patient-falls.

Carman, K. L., Dardess, P., Maurer, M., Sofaer, S., Adams, K., Bechtel, C., & Sweeney, J. (2013). Patient and family engagement: A framework for understanding the elements and developing interventions and policies. *Health Affairs*, *32*(2), 223-231. http://dx.doi.org/10.1377/hlthaff.2012.1133

Center for Medicare and Medicaid Services. (2015). Hospital acquired conditions. Retrieved from https://www.cms.gov/medicare/medicare-fee-for-service-

payment/hospitalacqcond/hospital-acquired_conditions.html

Clarke, H. D., Timm, V. L., Goldberg, B. R., & Hattrup, S. J. (2011). Preoperative patient education reduces in-hospital falls after total knee arthroplasty. *Clinical Orthopedics*, 244-249. http://dx.doi.org/10.1007/s11999-011-1951-6

Cohen, S. M. (2009). Concept analysis of adherence in the context of cardiovascular risk reduction. *Nursing Forum*, *44*, 25-36. https://doi.org/10.1111/j.1744-6198.2009.00124.x

Cox, J., Thomas-Hawkins, C. T., Pajarillo, E., DeGennaro, S., Cadmus, E., & Martinez, M. (2014). Factors associated with falls in hospitalized adult patients. *Applied Nursing Research*, *28*(issue), 78-82. http://dx.doi.org/10.1016/j.apnr.2014.12.003

Esposito, E. M., Rhodes, C. A., Bestoff, C. M., & Bonuel, N. (2016). Ambulatory care nurse-sensitive indicators series: Patient engagement as a nurse-sensitive indicator in ambulatory care. *Nursing Economics*, *34*(6), 303-306.

Frentsos, J. M. (2015). Use of video as supplemental education tools across the cancer trajectory. *Clinical Journal of Oncology Nursing*, 19(6), 126-130. https://doi.org/10.1188/15.cjon.e126-e130

Friedman, A. J., Crosby, R., Boyko, S., Hatten-bauer, J., & Turnbull, G. (2011). Effective teaching strategies and methods of delivery for patient education: A systematic review and practice guideline recommendation. *Journal of Cancer Education*, *26*(1), 12-21. http://dx.doi.org/10.1007/s13187-010-0183-x

Glick, S. B., Fernadez, L., Irby, D. M., Harleman, E., & Fernadez, A. (2010). Teaching about health care disparities in the clinical setting. *Journal of General Internal*

Medicine, *25*, 95-101. http://dx.doi.org/10.1007/s11606-009-1203-6

Graffigna, G., Barello, S., & Riva, G. (2013). Technologies for patient engagement. *Health Affairs*, *32*(6), 69-77. http://dx.doi.org/10.1377/hlthaff.2013.0279

Graham, B. C. (2012). Examining evidence-based interventions to prevent inpatient falls. *Medsurg Nursing*, *21*(5), 267-270.

Grove, S. K., Burns, N., & Gray, J. R. (2013). *The practice of nursing research: Appraisal, synthesis, and generation of evidence* (7th ed.). St. Louis, MO: Saunders Elsevier.

Hagan, J., & Jones, A. (2015). Lower nurse staffing levels are associated with occurrence of inpatient falls at a large pediatric hospital. *The Health Care Manager*, *34*(4), 359-366. http://dx.doi.org/10.2097/HCM.0000000000000083

Haines, T. P., Hill, A. M., Hill, K. D., McPhil, S., Oliver, D., Brauer, S., ... Beer, C. (2011). Patient education to prevent falls among older hospital inpatients. *Archive Internal Medicine*, *171*(6), 516-524.http://dx.doi.org/10.1001/archinternmed.2010.444

Heslop, L., & Lu, S. (2014). Nursing-sensitive indicators: a concept analysis. *Journal of Advanced Nursing*, *70*(11), 2469-2482. http://dx.doi.org/10.1111/jan.12503

Hibbard, J. H., & Greene, J. (2013). What evidence shows about patient activation: Better health outcomes and care experiences; fewer data on costs. *Health Affairs*, *32*(2), 207-214. http://dx.doi.org/10.1377/hlthaff.2012.1061

Hill, A., Coad, J. F., Haines, T. P., Waldron, N., Beer, C. E., Flicker, L., ... McPhail, S. M. (2016). My independent streak may get in the way: How older adults respond

to fall prevention education in hospital. *BMJ Open*, *6*. http://dx.doi.org/10.1136/bmjopen-2016-012363

Hill, A. M., Hill, K., Brauer, S., Oliver, D., Hoffmann, T., Beer, C., ... Haines, T. P. (200*9*). Evaluation of the effect of patient education on rate of falls in older hospital patients: Description of a randomised controlled trial. *BMC Geriatrics*, 9(14), 1-9. http://dx.doi.org/10.1186/1471-2318-9-14

Hill, A. M., McPhil, S. M., Waldron, N., Etheton-Beer, C., Ingram, K., Flicker, L., ... Haines, T. P. (2015). Fall rates in hospital rehabilitation units after individualized patient and staff education programmmes: a pragmatic, stepped-wedge, cluster-randomised controlled trial. *The Lancet*, *385*, 2592-2599. http://dx.doi.org/10.1016/s0140-6736(14)61945-0

Huey-Ming, T., Chang, Y., & Schneider, T. E. (2013). Medication error-related issues in nursing practice. *Medsurg Nursing*, vol(issue), 6-13.

Institute for Health Improvement. (2017). Always use teach-back. Retrieved from www.teachbacktraining.com

Joint Commission Center for Transforming Healthcare. (2016). Title of the cited area. Retrieved from http://www.centerfortransforminghealthcare.org/tst_pfi.aspx

Joshi, M. S., Ransom, E. R., Nash, D. B., & Ransom, S. B. (2014). *The healthcare quality book: vision, strategy, and tools* (3rd ed.). Chicago, Illinois: Health Administration Press.

Kalisch, B. J., Tschannen, D., & Lee, K. H. (2012). Missed nursing care, staffing and patient falls. *Journal Nursing Care Quality*, *27*(1), 6-12.

http://dx.doi.org/10.1097/NCQ.0b013e318225aa23

Koh, S. S., Manias, E., Hutchinson, A. M., Donath, S., & Johnston, L. (200*8*). Nurses' perceived barriers to the implementation of a fall prevention clinical practice guideline in Singapore hospitals. *BMC Health Services Research*, 8, 1-10. http://dx.doi.org/10.1186/1472-6963-8-105

Matarese, M., & Ivziku, D. (2016). Falls risk assessment in older patients in hospital. *Nursing Standard,* 30(48), 53. https://doi.org/10.7748/ns.2016.e10345

Maurer, M., Dardess, P., Carman, K. L., Frazier, K., & Smeeding, L. (2012). Guide to patient and family engagement: Environmental scan report. *Publication No. 12-0042-EF*. Retrieved from Rockville. MD: Author

Milner-Fenwick (Producer). (2015). *Fall prevention in the hospital* [DVD]. Available from http://www.milner-fenwick.com/health-education-videos/collections/patient-safety-and-risk-management.

Morella, R., Barker, A., Zavarsek, S., Watts, J. J., Haines, T., Hill, K., ... Stoelwinder, J. (2011). The 6-PACK programme to decrease falls and fall-related injuries in acute hospital: protocol for an economic evaluation alongside a cluster randomised controlled trail. *Injury Prevention*, *18*(2), 1-9. http://dx.doi.org/10.1136/injuryprev-2011-040302

Murphy, L. M., Murphy, S. O., Hasting, M. A., & Olberding, A. (2015). Are interprofessional roundtable debriefings useful in decreasing ED fall rate? Findings from a quality improvement project. *Journal of Emergency Nursing*, *41*(5), 375-388. http://dx.doi.org/10.1016/j.jen.2015.02.005

Pearson, K. B., & Coburn, A. F. (2011). Evidence-based falls prevention in critical access hospitals. Retrieved from http://www.flexmonitoring.org/publications/pb24/

Prey, J. E., Woollen, J., Wilcox, L., Sackeim, A. D., Hripcsak, G., Bakken, S., ... Vawdrey, D. K. (2014). Patient engagement in the inpatient setting: a systematic review. *Journal of American Medicine*, *21*(1), 742-750. http://dx.doi.org/10.1136/amiajnl-2013-002141

Polit, D. F. (2010). *Statistics and data analysis for nursing research* (2nd ed.). Upper Saddle River, NJ: Pearson Education Inc.

Quigley, P. A., & White, S. V. (2013). Hospital-based fall program measurement and improvement in high reliability organizations. *The Online Journal of Issues in Nursing*, *18*(2). http://dx.doi.org.ezp.waldenulibrary.org/10.3912/OJIN.Vol18No02Man05

Quigley, P., Neily, J., Watson, M., Wright, M., & Strobel, K. (2008). Measuring fall program outcomes. *Online Journal of Issues in Nursing*, *12*(2). http://dx.doi.org/10.3912/OJIN.Vol12No02PPT01

Sofaer, S., & Schumann, M. J. (2013). Fostering successful patient and family engagement: Nursing's critical role. *Nursing Alliance for Quality Care*, 1-20.

Sofaer, S., & Schumann, M. J. (2013). Fostering successful patient and family engagement: Nursing's critical role. Retrieved from www.naqc.org/whitepaper-ptengagement

Spink, M. J., Fotoohabadi, M. R., Wee, E., Landorf, K. B., Hill, K. D., Lord, S. R., & Menz, H. B. (2011). Predictors of adherence to a multifaceted podiatry

intervention for the prevention of falls in older people. *BMC Geriatrics*, *11*(51). http://dx.doi.org/http://dx.doi.org/10.1186/1471-2318-11-51

Stokowski, L. A., Sansoucie, D. A., McDonald, K. Q., Stein, J. (2010). Advocacy: It is what we do. Advances in Neonatal Care, 10(2), 75-82.

Studer, Q., Robinson, B. C., & Cook, K. (2010). *The hcahps handbook: Hardwire your hospital for pay-for-performance success.* Gulf Breeze, FL: Fire Starter Publishing.

Tamura-Lis W. (2013). Teach-back for quality education and patient safety. *Urologic Nursing,* 33(6), 267-271.http://dx.doi.org10.725711053-816x.2013.33.6.267

Tovar, E. G., Rayens, M. K., Clark, M., & Nguyen, H. (2010). Development and psychometric testing of the health beliefs related to cardiovascular disease scale: Preliminary findings. *Journal of Advanced Nursing*, 66(12), 2772-2784. http://dx.doi.org/10.1111/j.1365-2648.2010.05443.x

Trepanier, S., & Hilsenbeck, J. (2014). A hospital system approach at decreasing falls with injuries and cost. *Nursing Economics*, *32*(3), 135-141.

Tzeng, H. M. (2014). Patient engagement and self-management across the care continuum. *MedSurg Nursing*, *23*(6), 425-432.

Tzeng, H. M., & Yin, C. Y. (2015). Patient engagement in hospital fall prevention. *Nursing Economics*, *33*(6), 326-334.

Wayland, L., Holt, L., Sewell, S., Bird, J., & Edelman, L. (2010). Reducing the patient fall rate in a rural health system. *Journal of Healthcare Quality*, *32*(2), 9-15. https://doi.org/10.1111/j.1945-1474.2009.00068.x

White, K. M., Dubley-Brown, S., & Terhaar, M. F. (2016). *Translation of evidence into nursing and health care* (2 ed.). New York, NY: Springer Publishing Company.

Yamaguchi, E. N., Fujinaga, K., Batard, A., Baba, N., Nakamura, K., Miyazaki, K., ... Nakatani, T. (2016). The effect of an animation movie for inpatient fall prevention: a pilot study in an acute hospital. *Safety in Health*, *2*(3), 1-10. http://dx.doi.org/10.1186/s40886-016-0014-9

Appendix A: Patient Agreement Form

Dear patient and/or family member:

It has been determined that you (or your family member) are at an increased risk for falling. Your risk may be increased due to many factors such as unfamiliar environment, medications, history of falls, and physical or mental conditions. The following are ways we can work together to prevent a fall during your hospital stay:

- ✓ You will wear a special arm band that identifies you as being at risk for falling.
- ✓ A yellow nametag will be placed on the name plate outside your door to remind all staff members to follow fall prevention protocols.
- ✓ Please use your call light for help each time you get out of bed.
- ✓ Non-skid footwear that has a closed heel and fits securely will be provided. We ask that the socks be worn during the length of your stay for your safety.
- ✓ Use only 2-3 side rails as 4 rails may increase your risk for falls or injury.
- ✓ We will encourage everyone to help us by maintaining a clear pathway in your room.
- ✓ We will encourage your family members to stay with you as much as possible.
- ✓ We will periodically check on you to provide assistance to meet your needs.

During your stay, if you have any questions or concerns about fall prevention, please ask your nurse or another staff member. We want you to know that your safety is our priority!

I understand that I (or my family member) have/has been identified as a fall risk, and a nurse or other staff member has discussed my plan of care with me and/or my family member. I accept responsibility and will follow these guidelines in order to maintain my safety or the safety of my family member.

Patient or family representative	Date	Time
Witness	Date	Time

White - Chart *Canary - Patient*

NS 607 *02/17*

CONSENTS

Appendix B: Post Fall Huddle Report

Post Fall Huddle

Implement a post fall huddle with staff available at time of fall to complete the assessment
(i.e. **patient**/witness, charge nurse, primary nurse, nursing assistant, PT, pharmacy, etc)

Date_____ **Time**_____ **Physician**_____ **Time notified**_____
Patient Statement _____
_____

Fall witnessed? Y or N **Injury?** Y or N Describe injury_____

Pre-fall risk **score**_____ Post fall risk **score**_____
Last time of Hourly Rounds?_____

Was the call light on when staff entered the room: Y or N

Location of fall:
- □ Bed
- □ Chair
- □ Commode
- □ Bathroom
- □ Hallway
- □ Found on floor
- □ Other_____

Contributing factors:
- □ Floor Wet
- □ Lighting poor
- □ Clutter/cords on floor
- □ Improper bed height
- □ W/C or bed unlocked
- □ W/C footrests in the way
- □ Agitation
- □ Altered gait/balance
- □ Improper use of assist device
- □ Clothing interfered/too long
- □ Reaching for items
- □ Call light not working
- □ Call light/tray out of reach
- □ Grab bars unavailable
- □ Faint/dizzy/weak/fatigue
- □ Rec'd hypnotic within last 4 hrs
- □ New/change in BP meds within past 4 hrs
- □ New/change in pain meds within past 4 hrs
- □ New/change in psychotropic meds within past 4 hrs
- □ Side rails up x___
- □ BSC improper height
- □ Bed alarm not on
- □ Incontinent
- □ Needed to void
- □ LOC impaired
- □ Change in BP
- □ Change in mobility
- □ Change in diagnosis
- □ Change in mental status

Check all that apply for pre-precautions taken and post-precautions taken:

Pre	Post		Pre	Post	
		High Fall risk signage			Night light or bathroom light on
		Appropriate Care plan			Non-skid booties on
		Instructed to call for help after med/epidural use			Fall risk present on communication board
		Room close to nursing station/staff close to pt			Sitter in use
		All items within reach (water, phone, call light)			Hourly rounding done/toileting offered every hr
		Bed rails up x			ID band on
		Restraints/in ICU			Was staff made aware of fall risk during report
		Bed/Chair alarm on			Family education done
		Bed in low position			Care plan up to date with fall risk information

Task list post fall:
- □ Assess patient
- □ Physician notified
- □ Family notified
- □ Nursing Supervisor Notified
- □ Orders written if received
- □ Implement fall precaution if not already done
- □ Revise plan of care if needed
- □ Implement fall protocol if not already in place
- □ Complete Occurrence report
- □ Post Fall Documentation in Soarian

PATIENT LABEL

Signature_____

RETURN To NURSE MANAGER

Appendix C: Teach-Back Assessment and Documentation Tool

The TB tool used in this project was based on the Institute for Health Improvement's (2017) teach-back observation tool developed by Dr. Mary Abram.

Teach-Back Assessment Tool: Fall Prevention

Patient: _____ Room: _____ Date: __

The nurse will:	**Yes**	**No**	**N/A**	**Comments**
Use a caring tone of voice and attitude.				
Use plain language				
Use reader-friendly printed material to support patient understanding.				
Use audiovisual (DVD) to support patient understanding				
Ask the patient to explain in their own words /demonstrate what they were told about: • Fall prevention instructions • How to use the call light				
Use open-ended questions when assessing for patient understanding.				
Avoid asking questions that can be answered with a yes or no.				
If the patient is unable to demonstrate understanding, explain instructions again and recheck understanding by the teach-back method.				
Note that patient demonstrated understanding of fall prevention instruction by the teach-back.				
Document Fall Occurrence				
Fall occurred: patient **noncompliant** to fall prevention instructions.				
Fall occurred: Patient **compliant** to fall prevention instructions.				
Ask patient at discharge:				
Did the teaching strategies increase your understanding and compliance to fall prevention instructions?				

Appendix D: Fall Rate Comparison of 2017 to 2016