

2018

Patient Self-Assessment for Older Adult Fall Prevention

Deborah Brennan
Walden University

Follow this and additional works at: <https://scholarworks.waldenu.edu/dissertations>

 Part of the [Nursing Commons](#)

This Dissertation is brought to you for free and open access by the Walden Dissertations and Doctoral Studies Collection at ScholarWorks. It has been accepted for inclusion in Walden Dissertations and Doctoral Studies by an authorized administrator of ScholarWorks. For more information, please contact ScholarWorks@waldenu.edu.

Walden University

College of Health Sciences

This is to certify that the doctoral study by

Deborah Brennan

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. Janice Long, Committee Chairperson, Nursing Faculty
Dr. Diane Whitehead, Committee Member, Nursing Faculty
Dr. Deborah Lewis, University Reviewer, Nursing Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2018

Abstract

Patient Self-Assessment for Older Adult Fall Prevention

by

Deborah Brennan

MSN, Walden University, 2011

BS, Eastern Michigan University, 2006

Project Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Nursing Practice

Walden University

May 2018

Abstract

Falls and falls with injury are a leading contributor to decreased quality of life for adults aged 65 and older. Complications associated with fall occurrences include death, long term disability, decreased mobility, decreased quality of life, and psychological effects. The practice focused question addressed in the project asked if the use of a standardized publicly available assessment for falls risk will assist registered nurses in learning more about the patient's fall risk. To address the question, the *Stay Independent Check Your Risk for Falling Questionnaire* (SICRFQ), obtained from the CDC website, was used as the basis for an education program for nurses to evaluate patient risks for falls. The theory of planned behavior guided the project which resulted in nurses gaining increased knowledge of falls risk assessment using the SICRFQ instrument. Findings from this staff education project indicated that 85% ($n=29$) of from a general practice unit registered nurses participating in the project reported that the education and the SICRFQ instrument would assist them in engaging and educating patients and families on fall risk avoidance; and 97% ($n=33$) indicated they would use the instrument for assessing patients. Use of the SICRFQ instrument will assist registered nurses in improving patient safety through accurate assessment of falls risk and potentially decrease falls in their unit thus promoting positive social change.

Patient Self-Assessment for Older Adult Fall Prevention

by

Deborah Brennan

MSN, Walden University

BS, Eastern Michigan University

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

May 2018

May 2018 Dedication

The research project is dedicated to my family and the community of registered nurses who supported this project and provided ongoing mentoring, coaching, and support. A special note of dedication is given to my father, Roger Van Omen, who remained my role model throughout his lifetime. To my husband, Steve Brennan, I dedicate my ability to pursue my professional and educational endeavors and I would not have been able to complete my program if it were not for his steadfast support and encouragement.

Acknowledgements

Throughout this process, I have been supported by the faculty at Walden University, especially Dr. Janice Long and Dr. Diane Whitehead, and nursing leaders who supported and mentored me along the way while I worked on the project and completed my DNP program. The Walden University professors included Dr. Dorothy Hawthorne-Burdine, Dr. Anna Valdez, Dr. Ronan, Dr. Susan Hayden, Dr. Oscar Lee, and Dr. Toni Grant. Dr. Hawthorne-Burdine provided immeasurable support and encouragement throughout the process and successful completion of the program would not have been possible without her mentoring and support. My ability to complete the DNP program would not be possible without the support, encouragement, and mentoring by fellow nursing leaders, Kathleen Goll and Karen Harris.

Table of Contents

List of Tables	iii
List of Figures	iv
Section 1: Nature of the Project	1
Introduction.....	1
Problem Statement.....	2
Purpose.....	3
Project Question.....	4
Nature of Doctoral Project	4
Significance.....	7
Summary	8
Section 2: Background and Context	9
Introduction.....	9
Concepts, Models, and Theories	9
Terms..	13
Relevance to Nursing Practice	14
Local Background and Context	17
Role of the DNP student	18
Summary	19
Section 3: Collection and Analysis	21
Introduction.....	21
Practiced Focused Question.....	22

Sources of Evidence.....	22
Evidence Generated for the Doctoral Project	23
Participants.....	23
Procedure	24
Protections.....	26
Analysis and Synthesis	27
Summary.....	28
Section 4: Findings and Recommendations.....	29
Introduction.....	29
Summary of Findings.....	29
Implications and Findings.....	33
Recommendations.....	35
Strengths and Limitations	35
Section 5: Dissemination Plan	38
Analysis of Self.....	39
Summary.....	39
References.....	41
Appendix A: Post Education for Fall Prevention Practices and Integration of the SICRFQ Instrument in the Fall Prevention Program.....	48
Appendix B: Modified Stay Independent and Check Your Risk for Falling Instrument	49
Appendix C: GPU Fall Prevention Plan	50

List of Tables

Table 1. Demographics and Staff Data.....	30
Table 2. Project Instrument Questionnaire Results.....	31
Table 3. Raw Questionnaire Instrument Score Data.....	31
Table 4. Barriers to Implementation	32

List of Figures

Figure 1. Swanson's theory of caring	6
Figure 2. Theory of planned behavior.....	10
Figure 3. Number of patient falls on 1GPU.....	32

Section 1: Nature of the Project

Introduction

Falls are the most common adverse event in the hospital setting for the older adult patient population age 65 or greater (Twibells, Siela, Sprout, & Coers, 2015). More than one third of older adults will fall each year (Sherrington, Tiedeman, Fairhill, Close, & Lord, 2011). Because of the risk to patients in the over 65 year age group, and the increasing population of the group, the problem is recognized as one that must be addressed in the local healthcare setting. Due to the increasing number of fall and falls with injury in the older adult patient population, a fall prevention staff education project was provided to registered nurses. The hospital for the planned project had a high volume of inpatient older adults due to the facility's proximity to several senior living and extended care facilities.

The practice focused question addressed in the project asked, "Will the use of a standardized publicly available assessment for falls risk assist registered nurses in learning more about the patient's fall risk?" A modified version of the public domain Stopping Elderly Accidents, Deaths & Injuries (STEADI) *Stay Independent Check Your Risk for Falling Questionnaire* (SICRFQ) obtained from the Center for Disease Control and Prevention (CDC) patient fall risk self-assessment instrument was used to assist registered nurses in learning more about the patient's risk for falls.

The CDC STEADI SICRFQ instrument is part of the CDC coordination of efforts with the American and British Geriatrics Societies' clinical practice guidelines goals of screening, assessing, and intervening to decrease falls in the older adult population (CDC,

2017). Older adults are often not fully aware of their risk, may deny their risk, or lack fall risk awareness. Providing a focused assessment with the use of the SICRFQ instrument as a part of a fall prevention educational program can improve the quality of life for the older adult through tailored fall prevention and individualized interventions.

Problem Statement

The risk for increased injury and loss of permanent and short-term functioning resulting in falls can lead to an increased burden on the health care system and families (Twibells et al., 2015). The psychological impact of a fall and the associated possible negative effects upon the patient, caregivers, and families is an additional aspect for consideration. Once a fall occurs, a patient can incur post fall anxiety, or the fall may lead to a decrease in activity resulting in deconditioning (Sherrington, Tiedemann, Fairhill, Close, & Lord, 2011). The impact on the families, spouse, and care providers is realized as they assist and provide care while support for reducing the incidence of falls.

Registered nurses are uniquely positioned to appraise the patient's risk by utilizing the SICRFQ instrument. The use of a patient fall risk self-assessment instrument may significantly decrease the number of older adult falls (Tzeng & Yin, 2015). Preventing older adult falls with a multidimensional risk-assessment instrument, such as the SICRFQ instrument, may increase staff awareness of patients' fall risk and provide an opportunity to assess the patient's knowledge regarding their risk for a fall. Identifying risk factors and the placement of fall risk interventions for older adults is not uncommon, yet the ability to further identify and enhance the engagement of the patient and family into prevention practices is often poor (Ambrose, Paul, & Hausdorff, 2013). The use of

the SICRFQ instrument provided the opportunity for registered nurses to engage the patient and the patient's family in a relationship-based, patient-centered approach to fall prevention. The registered nurse reviewed the responses on the SICRFQ instrument to assist in providing an enhanced fall prevention plan of care. The fall prevention plan included information about the current hospital requirements for prevention, electronic health record (EHR) documentation, the relevance and importance for fall prevention, the use of the SICRFQ instrument, and the role of the staff education project to prevent fall in the older adult patient population.

Purpose

The staff education doctoral project regarding fall prevention for older adults, which included reviewing the response on the SICRFQ, was presented to the registered nurses to assist in evaluating patient fall risk factors. The application of fall prevention interventions are often based upon the outcomes of a fall risk score and the nursing assessment (Tzeng & Yin, 2015). The fall prevention interventions in place at the site for the project did not include patient engagement to the fullest potential based upon factors identified during post fall analysis data. The ability to individualize care and interventions based upon the response from the SICRFQ instrument added an additional layer to the assessment and screening process (Haines, Lee, O'Connell, McDermott & Hoffmann, 2015). The use of the SICRFQ instrument as part of a multidimensional fall prevention educational plan further engaged the patient, families and registered nurse within the collaborative safety plan and the nursing plan of care. In this project, registered nurses worked with the patient and their families to enhance the education and

interventions already in place by reviewing the patient responses on the SICRFQ instrument and augmenting the current fall prevention practices in place.

Project Question

The practice focused question addressed in the project asked “Will the use of a standardized publicly available assessment for falls risk assist registered nurses in learning more about the patient’s fall risk?” In order to answer this question, a post fall prevention education questionnaire was provided to registered nurses.

Nature of Doctoral Project

In this project, nursing staff provided the SICRFQ instrument to all older adult patients who were able to participate in their plan of care and were admitted to a first-floor general practice unit (GPU). Prior to the start of the data collection process, registered nurses (N = 37) who participated at the project site received training and education regarding fall prevention, the SICRFQ instrument, why a patient may not be able to complete the screening, education about fall prevention plan of care, and prevention strategies based upon the patient responses within the SICRFQ instrument. The 16-page learning module consisted of education regarding the use and application of the SICRFQ instrument as part of the comprehensive fall prevention plan of care. The education was completed through in-service trainings and a learning module. An additional unit resource binder on the SICRFQ Instrument was provided and available on the unit as a resource.

Following the education program, registered nurses began using the SICRFQ instrument; the SICRFQ instrument was reviewed with the patient and collected upon

completion. Five weeks after use of the SICRFQ instrument, registered nurses received a Post Education for Fall Prevention Practices and Integration of the SICRFQ questionnaire and provided nursing feedback and information about the use of the SICRFQ instrument as part of a patient fall prevention plan. Demographic data was collected from the nursing staff completing the Post Education for Fall Prevention Practices and Integration of the SICRFQ questionnaire. In addition, an evaluation of the educational content was completed by an expert educator to evaluate the impact on quality care improvement.

Based upon the results of the SICRFQ instrument, registered nurses developed an individualized patient plan of care for fall prevention. The review of the assessment instrument with the older adult patient and care providers provided further tailored and individualized fall prevention interventions and contributed to increasing the knowledge of the registered nurse of the patient's specific risk and needs. Registered nurses evaluated and provided additional education, fall prevention practices, and increased patient and family engagement with a patient centered approach.

The project site nursing care delivery model is based upon Swanson's theory of caring. Swanson's theory of caring is defined as a relationship-based interaction which includes valuing others and having a sense of responsibility and commitment to nurture and care for others (Andersen & Spiers, 2016). The use of the SICRFQ instrument served to support the model's operational framework (see Figure 1).

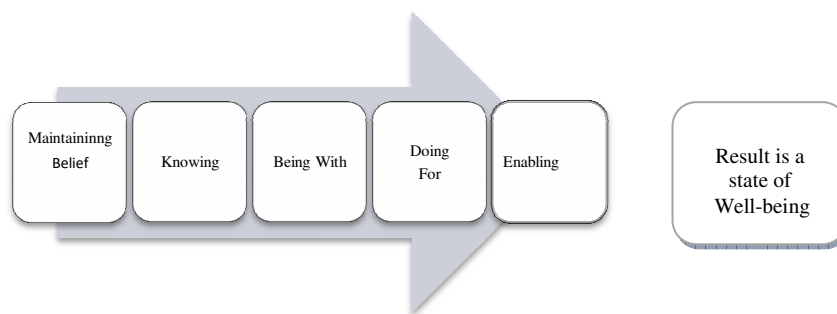


Figure 1. Swanson's theory of caring. Swanson, K. M. (1993). Nursing as informed caring for the well-being of others. *Journal of Nursing Scholarship*, 25(4), 352-357.

During this staff education project, training was centered on providing improved fall prevention and included reviewing the SICFRQ tool. Training included reinforcement of fall prevention and education, the use and application of the instrument with the patient and family, information about the instrument for application within the patient care area, and documentation of the fall prevention into the plan of care and fall prevention interventions. As Oberist, Rogan and Hilfiker (2016) suggested, the work of development, interventions, and evaluation of fall rate outcomes using an assessment instrument, such as the SICRFQ, could be applied in other settings with applicable patient populations. The SICRFQ instrument responses could be shared with the physical therapist, the primary care physician, or other providers as needed to further support interventions to decrease falls in the older adult patient population. The delivery of effective fall prevention is dependent upon the registered nurses' awareness of the patient risk for a fall and the patient's self-awareness of the risk for a fall and high-risk behaviors which can lead to a fall. The increased engagement of the older adult supports a more active versus passive role in fall prevention.

Significance

The stakeholders in this project included registered nurses on the GPU at the project practicum site. The application/use of the SICRFQ instrument provided the opportunity for registered nurses to learn more about the patient's current behaviors and physiologic factors, which placed the patient at risk for a fall. Behaviors and physiologic factors included balance and coordination, depression, age related changes, and other factors. Older adults often deny or are not fully aware of actions or behaviors which place them at risk for a fall (deBruin et al., 2012). Patients who are determined by nursing assessment to have cognitive deficits and/or unable to fully participate in their plan of care were excluded from completing the SICRFQ instrument.

The use of the SICRFQ instrument alerts registered nurses to the patient's current behaviors, level of functioning, and practices which may place the patient at risk for a fall. The patient's ability to self-identify current fall risk practices and behaviors facilitated greater engagement and awareness. In addition, the SICRFQ instrument provided education about the reason for the risk in regard to the identified risk behaviors and self-management while supporting the plan of care, current fall prevention interventions plans, and reinforcement of the nursing care and patient specific education. An example question in the instrument asked, "I push with two hands to stand from a chair" and the associated rationale provided on the form related to the risk states "This is a sign of weaker leg muscles and a major risk for falls" (Rubenstein, 2006). The delivery of effective fall prevention is dependent upon registered nurses and the patient's self-awareness of the risk for a fall and high-risk behaviors while improving quality of life.

Patient falls and falls with injury continues to be a global and national concern. Reducing the incidence of falls experienced by older adult patients provided positive social change across the care-continuum and could be applied to various settings and scenarios. The potential for social change significance for this project is the outcome of enhanced fall prevention education and provision of quality care. Providing meaningful education and a more robust engagement of patients for fall prevention can lead to increased awareness and behavioral changes on the behalf of the patient.

Summary

The use of the SICRFQ instrument, in combination with other fall and safety prevention measures, may lead to improved nursing knowledge regarding the patient's risk factors for a fall and patient specific fall prevention strategies which could be applied. Positive fall risk responses within the self-assessment assisted in providing an individualized learning plan for the patient. A personalized self-management plan tailored to the patient specific needs, combined with input based upon registered nurse assessment, facilitates positive change when applying health promotion, goal setting, and social cognition theories (Bandura, 2004). The SICRFQ instrument, combined with a comprehensive fall prevention program, provided for enhanced insight into the patient's perspective, current level of functioning, and an opportunity for registered nurses to engage the patient in self-management skill development.

Section 2: Background and Context

Introduction

The SICRFQ instrument was implemented in the clinical setting to assist registered nurses in learning more about the patient's fall risk. Data from the SICRFQ instrument assisted the registered nurse in further engaging the patient and families in a fall prevention program by helping the patient understand more about fall risk behaviors including education concerning positive behaviors for fall prevention. The ability for registered nurses to assess and learn about the patient's self-identified behaviors, which may lead to a fall, was an interactive, collaborative, and mutually beneficial process. Further engagement of registered nurses, the patient, and the family with the objective of a higher level of engagement and awareness of fall risk and safety awareness supported increasing knowledge of fall risk factors.

Concepts, Models, and Theories

The normal aging process and associated changes predispose older adults to an increased risk for falls (Ambrose, Paul, & Hausdorff, 2013). The social cognition model of the theory on planned behavior (TPB) by Icek Ajzen, examined the link between beliefs and behaviors (see Figure 2). The TPB theory examines three main determinants of attitude, subjective norm, and beliefs of the patient's subjective norm (Gretebeck, Black, Blue, & Glickman, 2007). The ability to assess behaviors and other fall risk factors combined with comprehensive fall prevention program assisted registered nurses in achieving quality care outcomes.

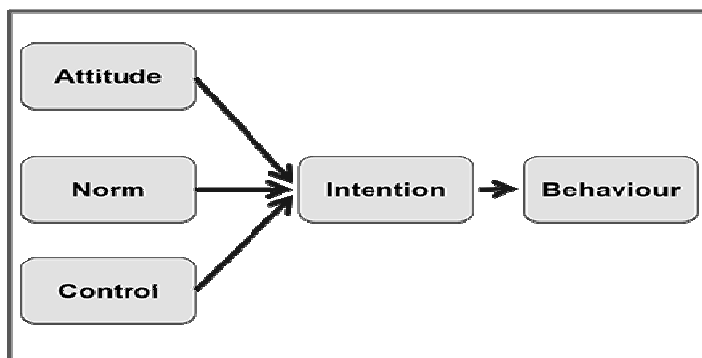


Figure 2. Theory of planned behavior. Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211

Fall prevention practices and programs are often centered on assessing the patient, adapting the environment, and providing communication techniques centered on decreasing falls (Tzeng & Yin, 2015). The use of the SICRFQ instrument may further increase the opportunity for enhanced patient and family engagement into a more interactive role while providing individualized information for registered nurses about behaviors and actions that may place the patient at greater risk for a fall. The role of the social cognition model and the patient self-monitoring behaviors combined with goal setting and an interactive fall prevention plan may lead to decreased falls. Older adults who have not adapted or changed behaviors or actions place themselves at a greater risk for a fall (Butler, Lord, Taylor, & Fitzpatrick, 2015). Many older adults do not acknowledge their risk for falling and resist acceptance of their fall risk due to the negative perceptions associated with aging (Horne, Skelton, Speed, & Todd, 2014). In addition, the older adult assumes fall prevention measures will require activity

restrictions, the use of assistive devices, or older adults may deny or defer any assistance to support decreasing the risk for a fall (Yardley et al., 2007).

The SICRFQ instrument may assist the registered nurse and the patient in identifying strength, balance, physiologic, and other risk areas which could be included in the fall prevention plan of care. An admission to a new environment or health care facility increases the risk for a fall or a fall with injury for the older adult patient population (Tzeng & Yin, 2015). Older adults are often aware of their risk for a fall but underestimate the risk for injury associated with a fall and are known to take risks, even while hospitalized (Haines et al., 2012). Older adults may have perceived attitudes or psychosocial difficulties related to fall prevention or with a fear of falling (Horne et al., 2014). The resultant outcome can be a denial of risk, avoiding activities, and loss of self-confidence (Horne et al., 2014). The SICRFQ instrument may assist the registered nurse and the patient in identifying strength, balance, physiologic, and other risk areas which could be included in the fall prevention plan of care.

The TPB can be applied to assist registered nurses in understanding patient's behaviors and the failure outcome when the behaviors are not effective or providing the desired response (Butler et al., 2015). According to Butler et al., (2015), the role of behavioral risk can be strongly correlated to the incidence of physiological falls. Research has identified 60-70% of older adults do not acknowledge their risk for a fall and were not motivated to engage in programs to decrease their risk for a fall due to their attitude, which is reflected in their lack of intention to engage in fall prevention behaviors (Rubenstein, 2006). Attitudes related to fall prevention can greatly affect the

interventions and the outcomes, especially when older adults do not realize or acknowledge their risk. Defining the desired behavior, along with setting goals, assessing current attitudes with the patient related to fall prevention strategies is highly beneficial and could be accomplished with engagement of the patient, the registered nurse, nursing interventions, and with the SICRFQ instrument.

The patient's subjective norm is greatly influenced by the role impact of positive behavior leading to intention to desired behaviors (Gielen & Sleet, 2003). The patient's selective norm does not deflect from the need to support and evaluate the patient's current behaviors, but provides registered nurses with feedback in relation to the patient's ability to follow through with the intended behaviors. Supporting the intended behaviors through goal setting and specific interventions to reach the goals may increase the level of fall prevention compliance (Gielen & Sleet, 2003).

Additional factors impacting outcomes include personality factors, attitudes towards others, age, cultural aspects, traditions, and other demographics, which impact the patient's perceived sense of control (Gretebeck et al., 2007). The use of the TPB has been found to be beneficial and a reliable predictor of the participant's intention to change their behavior (McEachen, Conner, Taylor, & Lawton, 2011). The role of health risks related to negative influence or behaviors and gaining knowledge regarding decreasing fall risks creates a sense of empowerment and may support fall prevention behaviors (Bandura, 2004). While the patient is hospitalized additional resources, education, and reinforcements to support sustainable change can be provided by the registered nurse. Reinforcement of the education and positive behaviors can be provided

within the plan of care and reviewed during beside report or patient hand-off. Goal setting and focused education with the patient can increase the opportunity for success. Continued motivation to engage in the positive behaviors related to fall prevention can be influenced and supported within the TPB tenets of subjective norms, attitudes, and beliefs (Horne et al., 2014).

Terms

Behavior: The way in which one acts or conducts oneself, especially towards others.

Fall prevention: An effort and set of actions to raise awareness of the need to prevent falls resulting in injury.

General Practice Unit (GPU): Medical-Surgical unit patient population that provides telemetry monitoring and care for the acutely ill or post-operative adult patients.

Older adult: Chronological age of 65 or greater.

Patient Fall Risk Self-Assessment Instrument: A fall risk assessment instrument completed by the older adult patient to self-identify behaviors and actions which place the patient at risk for a fall and provides educational information.

Relationship based care: The application of 7 key principles in a care delivery model which transforms a culture and provides an operational framework that improves safety, quality, patient satisfaction and staff satisfaction by improving every other relationship within the organization.

Self-assessment: An evaluation of one's actions, attitudes, and one's performance at a job or learning task considered in relation to an objective standard.

Relevance to Nursing Practice

Older adults who sustain a hip fracture during a fall have a 20% chance of death and only one third will return to prefall functional status (Stubbs, Denkinger, Brefka, & Dallmeier, 2015). The healthcare associated cost of falls within the United States in 2020 is expected to exceed 40 billion dollars (Twibellsetal., 2015). Patients falls, especially those with injury, remains a prevalent safety issue. The size and location of the hospital or facility are not as pertinent as the fall prevention interventions put into place to keep the patient safe (Stubbssetal., 2015). By further engaging the patient and the family with the interventions to decrease the fall occurrences supports decreasing fall occurrence (Tzeng & Yin, 2015).

Fall events and the associated negative outcomes for the older adult may result in a decreased quality of life and be associated with increased morbidity and mortality rates (Stubbs et al., 2015). In 2010, the Center for Disease Control and Prevention reported 31.7% of older adults have experienced a fall with injury. Given the higher than average older adult patient population and detrimental effects of a fall or fall with injury, the ability to further assess and develop a more specific and individualized fall prevention plan of care can be of benefit. The ability to provide an educational program for the registered nursing staff related to falls and the use of the SICRFQ instrument supported increasing nursing knowledge and engagement within fall prevention practices. Registered nurses can support practices such as patient mobilization and other fall prevention interventions. Prolonged inactivity due to hospitalization can lead to the loss

of muscle strength, muscle mass, contribute to an increased risk for a fall and a fall with injury, and other negative physiologic conditions.

The chosen site for the project had a higher than average fall with injury rate when compared to other similar hospitals within the National Database for Nursing Quality Indicators. According to a study conducted by Rubenstein (2006), the three most common attributions for falls in the older adult patient are related environmental factors, gait or balance disturbances related to weakness, and physiologic factors such as syncope, dizziness, hypotension, confusion, and additional identified physiologic causes. Providing meaningful education about these factors can lead to increased awareness and behavioral changes on the behalf of the patient. The older adults admitted to the GPU where the project took place included patients with congestive heart failure, chronic obstructive pulmonary disease, and other chronic diseases and diagnoses combined with multiple comorbidities which placed them at a greater risk for a fall. A patient with an increased number of comorbid conditions is at greater risk for falling (Ambrose et al., 2013).

The effects of patient falls upon the care facility include an increased length of stay, effects of the fall on the staff, legal aspects, litigation awards, and decreased quality outcomes (Tricco et al., 2013). The Joint Commission reported patient falls are among the top 10 reported sentinel events and the leading contributing factors included inadequate assessment, communication failure, issues related to staffing, identified gaps within the physical environment, and lack of leadership support (Joint Commission, 2015). A sentinel event is defined as a patient safety event, which results in death, permanent harm or severe temporary harm with an intervention required to sustain life

(Joint Commission, 2017). The existence of substantial data and research revealed the topic of falls and falls with injury continues to be at the forefront of concern for healthcare providers, communities, and organizations. The hospital setting where the project occurred sought to decrease falls and fall with injury with an innovative approach. The use of the SICRFQ instrument project could be evaluated to determine future policy change and adoption into practice.

Inpatient falls contribute to an increased length of stay, increased negative financial impact, increased burden on healthcare costs, and increased need for care management resources utilized after discharge (Callis, 2016). Additional study is needed related to fall prevention attitudes and specific older adult behaviors which may predispose the older adult to an increased risk for a fall (Tzeng & Yin, 2015). The delivery of effective fall prevention is dependent upon the patient's self-awareness of the risk for a fall and high-risk behaviors which leads to a fall and registered nurses providing effective and individualized education and care. The ability of registered nurses to work with the patient to apply self-identified and learned positive behaviors supports fall prevention and has improved transition of care across the continuum of care (Enderlin et al., 2015).

Falls and falls with injuries continue to be a national safety problem despite numerous fall prevention interventions, changes in the patient's environment, alerts or alarms for staff regarding changes in the patient's ambulation status, education, and other fall prevention strategies (Tzeng & Yin, 2015). The use of the SICRFQ instrument, in combination with comprehensive fall prevention practices, nursing assessment, plan of

care development, and patient engagement can promote a safer patient environment and prevent injuries. The SICRFQ instrument can alert the registered nurse, patient, family and care providers to behaviors or factors that place the patient at risk for a fall. The use of the SICRFQ instrument provided increased engagement of the patient and the family regarding the risk for a fall, utilized written and verbal education and feedback, allowed for patient centered care provision, and increased the patient's awareness of risk while hospitalized.

Local Background and Context

The project occurred on a GPU at a 191-bed tertiary community hospital within the metro Detroit suburban area. The hospital is a Joint Commission accredited facility and was awarded the Malcolm Baldrige National Quality Award, is pursuing American Nurses Credentialing Center Magnet designation, and has received numerous additional quality awards and designations. Despite the many awards, the hospital continued to struggle with fall and falls with injury patient occurrences. The patient population was ethnically and racially diverse. The experience level of the nursing staff ranged from novice to expert on the GPU unit. Staffing on the units was 1:4 and 1:5 for the nursing staff and 1:6 to 1:8 for the nursing assistant staff and 1 unit clerk was present for 12 hours during the day shift. Each unit had a charge registered nurse with a patient assignment of 1:2. Each unit also had a clinical coordinator available from 11p.m.to7 p.m. or 3 p.m.to 11p.m. The clinical coordinator had a patient assignment of 1:2. During the day, the unit manager was present. The hospital is a full-service facility offering a wide range of services. The admission rate of older adults is higher than the national average due to the

geographic proximity to several senior living communities and extended care facilities, with an average admission rate of 52% for adults, age 65 or greater, as compared to the national average of 40% (Mattison et al., 2015).

Role of the DNP student

The role of the DNP student within this project included improving the health outcomes through fall prevention education for registered nurses related to fall prevention within the older adult patient population, applying interdisciplinary collaboration, providing education, leadership, and impacting social change. The innovative change can be precipitated by interventions, knowledge, beliefs, or activity (Wilterdink & Form, 2016). The impact of fall prevention with the use of the SICRFQ instrument can be referenced as a model of one directional social change and the project introduced a new facet and level of engagement of the patient, families, staff (Wilterdink & Form, 2016). The use of the instrument may influence and result in the positive directional change leading to improved health outcomes by increasing fall risk awareness and engagement in behaviors leading to decreased falls while increasing registered nurses' education related to fall prevention.

The use of education instruments, such as the SICRFQ instrument, can be used to identify behaviors and physiologic risk factors to aid in creating an individualized plan of care. The ability for registered nurses to provide meaningful education about these factors may lead to increased awareness and behavioral change on the behalf of the patient. The awareness of the fall and fall with injury occurrences and associated effects, including immediate, short term, and long term, can support the positive behavioral change.

My personal motivation was related to personal experience as a care provider responding to a patient fall occurrence or following up during a review of a patient fall occurrence. Many times, the outcomes are devastating and could have been prevented. The physiological impact is immediate, and the patient often shows evidence of the negative impact through verbal and non-verbal communication. The impact on registered nurses and others associated with the fall event is also highly detrimental for the practice environment.

The use of a patient specific instrument with a collaborative relationship based care delivery model may assist in decreasing falls and falls with injury (Tzeng & Yin, 2015). The role of registered nurses was focused on improving the care and application of beneficial fall prevention practices, which supported improved quality of life and outcomes for older adults. The ability to engage the patient in examining behaviors and norms, along with the nursing assessment and education, can affect and guide the patient to make changes which positively affect the attitudes, beliefs, and current norms. Many fall prevention programs do not include patient engagement specific interventions and are limited in length. The ability to provide education, which can be useful after discharge, promotes a sustainable impact on patient safety.

Summary

The ability to provide a meaningful impact in the role as a DNP and provide education about fall prevention to registered nurses to facilitate and provide safer care for older adults leads to improved patient care outcomes. The current fall practices within many clinical settings are limited to facility based interventions and limit the full

engagement of the patient, family, and patient care staff. Enhancing knowledge of registered nurses within the fall prevention practices and the use of the SICRFQ instrument may lead improved quality of care and increased nursing knowledge. The SICRFQ instrument may provide registered nurses with additional assessment and contextual factors related the patient. Based upon the responses within the SICRFQ instrument registered nurses can create an educational plan, patient care plan and coordinate additional care and services, as needed, for the patient.

Section 3: Collection and Analysis

Introduction

In this project, I examined whether the use of a SICRFQ instrument may lead to improved fall prevention staff education for the registered nurses while providing care for older adult patients and increased nursing knowledge of fall prevention practices. The project included maintaining or improving current mobility functioning, which leads to improved neuromuscular functioning, decreased muscle loss, and improved overall physical and mental functioning (Needham, 2008). The role of registered nurses and use of nursing theories to improve practice, as it relates to self-satisfaction for the patient and registered nurses, is a central factor of importance (McCurry, Revell, & Roy, 2009). Personal bias during the project was maintained by remaining neutral while providing and receiving feedback throughout the staff education project.

The TPB examines attitudes, norms, and beliefs (McEachen, 2011). The SICRFQ instrument provided insight into the current behaviors and allowed for registered nurses to decipher the current motivation of the patient to engage in behavioral change. Based upon the assessment, registered nurses worked with the patient to support improved fall prevention. The use of goal setting at the start of change can be beneficial (Bandura, 2004). Registered nurses provided a plan of care with patient engagement that included goal setting and supported the patient in achieving the desired outcome. The ability to increase monitoring, care provision, and further engage the patient aided in improving patient outcomes. The fall prevention program promoted the active

engagement of the patient, family, and registered nurse in fall prevention measures and the application of the SICRFQ instrument.

Practiced Focused Question

The practice focused question addressed in the project asked “Will the use of a standardized publicly assessment for falls risk assist registered nurses in learning more about the patient’s fall risk?” The ability for registered nurses to learn about the project, the assessment instrument, and evaluate and develop a plan to facilitate a change in the fall prevention behaviors correlates to the predictive effectiveness of a fall prevention program (McEachen, Conner, Taylor, & Lawton, 2011). Changes in health behaviors include social, emotional, and cognitive behaviors such as thought processes; including awareness of risk, decreasing worries about falls, and promoting optimal facilitation of health behavior change (Schwarz, 2008). The measurable change can be demonstrated through increased patient engagement in the fall prevention plan of care and increased nursing knowledge related to the use of the SICRFQ instrument for fall prevention, and decreased falls.

Sources of Evidence

Sources of evidence reviewed to support the project included relevant studies, scholarly literature, and behavioral theories. The use of a variety of search engines and databases, including Google Scholar, Pub Med, CINAHL, Medline, Cochrane Library, and Medscape from the internet were completed. Walden library resources were accessed to gain supporting evidence specific to the issues addressing the project’s question and objectives. In addition, the review of the sources included a search into details and

definitions from organizations and web based applications. Key search terms included *fall in older adult, fall risk factors, patient engagement in fall prevention, behavioral theories for fall preventions, and fall prevention best practices*. The scope of the review included data from the last 10 years. Articles accessed greater than 10 years ago were included due to relevance and/or applicability. Applicable behavioral theory research beyond the 10 years was included due the nature of applicability to the research and the aspect of remaining applicable despite the gap in time.

Evidence Generated for the Doctoral Project

Participants

The project occurred at a 191 bed Midwestern tertiary community hospital. Approval from the Walden University IRB was obtained (IRB approval #:07-31-17-0195192). All registered nurses assigned to the project unit received fall prevention training and education prior to the start of the project, including introducing the SICRFQ instrument into the fall prevention plan of care. A total of 37 registered nurses were provided the education for fall prevention and use of the SICRFQ instrument.

The education included instructions on the use of the SICRFQ instrument, education about inclusion and exclusion criteria, and fall prevention strategies based upon the patient responses within the SICRFQ instrument. The education was completed via in-services and a learning module. Five weeks after use of the SICRFQ instrument registered nurses received the Post Education for Fall Prevention Practices and Integration of the SICRFQ questionnaire (See Appendix A) and provided feedback and information about the use of the SICRFQ instrument as part of a patient fall prevention

plan. The educational program was reviewed by a content expert for evaluation of the educational project.

Procedure

The SICRFQ instrument was based upon a Fall Risk Questionnaire (FRQ) instrument developed by Rubenstein et al. (Vivrette, et al., 2011). The use of the SICRFQ instrument was validated during a study by Vivrette et al. (2011) and was obtained from the public domain on the CDC website. Using Microsoft Word's Flesch-Kincaid Scale function for reading-level assessment, the SICRFQ instrument was adapted to a grade reading level of 4.1. The sample SICRFQ instrument is in Appendix B. The instrument was then reviewed by two additional doctoral level faculty to determine that the instrument was valid to use in its modified form. The FRQ instrument testing parameters included correlation, area under ROC curve, Cohen's kappa and were found to be statistically acceptable (Rubenstein et al., 2011). The authors of the study were contacted and use of the instrument was granted. The initial FRQ instrument provided by Rubenstein was developed for use in the community/home setting. The FRQ was found to have a strong agreement between the FRQ and clinical evaluation with the kappa = 0.875, $p < .0001$. Individual item kappa values ranged from 0.305- 0.832 and the final FRQ had good concurrent validity (Rubenstein et al., 2011). The FRQ instrument was further validated during a study by 201 study by the CDC and Vivrette et al. (2011).

Registered nurses on the GPU were introduced to the modified SICRFQ instrument and the fall prevention education via an email invitation, during multidisciplinary rounds, and during daily huddles which occurred at 7 a.m. and 7 p.m.

(See Appendix C). I provided the fall prevention education and instruction on the use of the SICRFQ instrument to all the staff in attendance during 10 in-services. A question and answer time occurred after each session. The education was provided was 15-20 minutes in length depending on the learning needs and number of registered nurses attending the educational session. Multifaceted fall intervention education included fall risk identification, purposeful hourly rounding, use of bed alarms, decreasing clutter, bed in the low position, toileting interventions, assisting the patient with ambulation, and other applicable interventions (Williams, Szekendi, & Thomas, 2014). The presentation of the information provided during the education was available on the unit in a resource binder. Availability of the DNP student on the unit to review the instrument, fall prevention practices, and provide support occurred at minimum three times a week on varying shifts. Five weeks after implementation of the SICRFQ instrument, registered nurses received the Post Education for Fall Prevention Practices and Integration of the SICRFQ Instrument in the Fall Prevention Program questionnaire. The questionnaire inquired about registered nurses' knowledge related to the use of the SICRFQ instrument and if the SICRFQ instrument assisted in engaging and educating the patient and/or the patient's family into the fall prevention plan of care. The post-educational questionnaire collected demographic data regarding registered nurses experience, age, and educational level.

Prior to the start of the project, I conducted training with all registered nurses on the GPU and they received education regarding the use of the SICRFQ instrument and associated risk factors with each of the 12 questions listed within the SICRFQ instrument.

Registered nurses utilized the SICRFQ instrument during patient assessment and reviewed the results of the completed SICRFQ instrument with the patient. Registered nurses were educated to include the SICRFQ instrument related interventions within the patient's plan of care and patient education. Plan of care variables to be assessed included the patient's ability to make informed decisions on their own behalf, read English, or under the influence of medications which may impair their cognitive ability.

The SICRFQ instrument is a simple self-report 12question assessment. With each question, there is correlated explanation of why the patient is at risk for a fall. The explanation provided basic written education as a foundation for the patient and the registered nurse to work from, along with verbal instructions. Once the SICRFQ instrument was completed with the patient the registered nurses and the patient reviewed the responses and identified risk behaviors or physiologic factors that placed the patient at risk in greater detail. Registered nurses assessed the patient's understanding and utilized the teach-back method to assess comprehension and understanding of the patient's learning. The SICRFQ instrument provided additional insight and assessment of the patient's current functioning, behaviors, and other influencing factors which may lead to a fall. Adaptations to fall prevention plan of care could then be implemented. Unit specific fall occurrence data was provided with permission from the nursing leadership team and provided by the quality department.

Protections

IRB approval was sought from Walden University and the DNP's project site. The appropriate steps were taken to minimize risks to registered nurses and to provide

optimal education for registered nurses. Informed consent was obtained prior to the start of the educational program. The questionnaires completed by registered nurses were anonymous. All questionnaires were secured behind a locked door and in a locked cabinet.

Analysis and Synthesis

The purpose of the project was to increase the knowledge of registered nurses regarding risk of falls and falls with injury in older adults aged 65 or greater. For this project, an education design plan was created to improve the quality of care provided to the older adult patient population. An expert consultant reviewed the educational design and process to determine and evaluate effectiveness prior to the presentation of the educational content. The educational plan was used to explain, describe, and predict a fall problem, issue or circumstance leading to fall as part of the DNP project. According to Polit & Beck (2013), a strong educational plan integrating clinical expertise and knowledge supports application and dissemination of an evidenced based practice. Leadership, including providing the project information and education, education related to use of the SICRFQ instrument, an overview of fall prevention instruments, application of instruments, and support for the ongoing process at the unit level was provided throughout the project. Long term sustainability could be supported through the creation of education for new employees during the orientation phase and providing current staff with education related to fall prevention.

The process and application of the SICRFQ instrument could be integrated into the yearly fall prevention education for registered nurses. The project included the

educational process of the integration of the SICRFQ instrument into the clinical practice setting. Eventual long-term engagement of the staff could occur during orientation, and yearly review. An evaluation of the participants' perceptions of their ability to integrate the instrument into their clinical practice was completed post program.

Summary

It is estimated up to 40% of older adults will fall each year (Ambrose et al., 2013). Among older adults, fall related injuries are the leading cause of injury deaths and non-fatal injuries which require admission to the hospital (Butler et al., 2015). The ability to enhance or improve care to patients through enhanced fall prevention education with registered nurses supports quality care delivery and outcomes. The impact to improve patient safety while providing education to registered nurses, patients, and their families is highly beneficial. The role of registered nurse involvement with the project supported advancing the level of nursing professionalism while promoting the image and impact of nursing practice through the provision of enhanced education, improved care, safer outcomes, and support of patient and family centered care. The impact of nursing research and staff education projects can be applied locally, regionally, and nationally. The social, health, and wellness impact of the doctoral project supports the mission of the Walden University, the nursing profession, and provides for positive social change. More importantly, the provision increased nursing knowledge leads to improved care and outcomes for the older adult patient population.

Section 4: Findings and Recommendations

Introduction

In this project, I provided fall prevention education and reviewed the registered nurses' responses regarding the SICRFQ instrument standardized fall risk assessment to learn more about patient fall risk factors. The project provided an opportunity to further enhance fall prevention knowledge and practices for the registered nurse and evaluate the use of a SICRFQ instrument to assist registered nurses in learning more about specific behaviors, which may place the older adult patient at risk. Analysis of the data collected was provided with support for the data analysis instrument pack within the Excel Data Instrument Pack and SPSS software. Additional questions reviewed included an analysis of RN demographics and barriers related to the use of the SICRFQ instrument.

Summary of Findings

The results from the Post Education Fall Prevention Practices and Integration of the SICRFQ Instrument Questionnaire revealed that 33 (97%) of the 34 registered nurses participating in the education sessions and post assessment *agreed* or *strongly agreed* the education provided about the use of the SICRFQ instrument in the clinical setting was effective. The Questionnaire also revealed 29 (85%) of registered nurses who participated in the education program and post Questionnaire *strongly agreed* or *agreed* that the SICRFQ instrument assisted them in educating the patient or patient's family members in the fall prevention plan of care. The number of older adult patients provided the SICRFQ instrument during the staff education project totaled 108 adults age 65 or older. The ability to engage the patient and registered nurses with the use of a patient

specific instrument within a collaborative relationship-based interaction assisted in decreasing fall (Tzeng & Yin, 2015).

The Post Education Fall Prevention Practices and Integration of the SICRFQ Instrument Questionnaire included two main questions related to the education and use of the instrument and was evaluated using a 5-point Likert scale. The legend for the Likert scale included 1-*Strongly Disagree*, 2-*Disagree*, 3-*Neutral*, 4-*Agree*, 5-*Strongly Agree*. One question evaluated barriers related to the use of the instrument, and the additional questions were demographic in nature.

Table 1

Demographic and Staffing Data

<i>Variables</i>	<i>Number</i>	<i>Percentage</i>
Educational Background:		
ADN	13	38.24%
BSN	19	55.88%
MSN	1	2.94%
DNP	1	2.94%
Years of Experience:		
Less than 1 year	2	5.88%
1-5 years	14	41.18%
6-10 years	8	23.53%
11-15 years	2	5.88%
16-20 years	5	14.71%
Greater than 20	3	8.82%
Staffing Ratio		
1:4	2	5.88%
1:5	31	91.18%
1:6	1	2.94%

Table 2

Project Questionnaire Instrument Results

<i>Question</i>	<i>Total (N=34)</i>	<i>Mean</i>	<i>Percentage(Strongly Agree and Agree)</i>
Based upon the education I know how to use the SICRFQ instrument to improve fall prevention and the plan of care.	33	4.47	97.06%
The SICRFQ instrument assisted me in engaging and educating the patient and the patient's family into the fall prevention plan of care.	29	4.21	85.29%

Note: Questions are equally weighted on a 5-point Likert scale.

Table 3

RN Questionnaire Instrument Raw Score Data

<i>Question</i>	<i>Frequency of Responses</i>
Based upon the education I know how to use the SICRFQ instrument to improve fall prevention and the plan of care:	
<i>Strongly Agree (5)</i>	17
<i>Agree (4)</i>	16
<i>Neutral (3)</i>	1
<i>Disagree (2)</i>	0
<i>Strongly Disagree (1)</i>	0
The SICRFQ instrument assisted me in engaging and educating the patient and the patient's family into the fall prevention plan of care:	
<i>Strongly Agree (5)</i>	13
<i>Agree (4)</i>	16
<i>Neutral (3)</i>	4
<i>Disagree (2)</i>	1
<i>Strongly Disagree (1)</i>	0

Table 4

Barriers to Implementation

<i>Questions</i>	<i>Number of Responses</i>
Time Consuming	4
Staffing	7
Patient Refusal	4
None	19

Note: N= 34.

During this same time frame, the fall rate on the GPU decreased dramatically. The fall data for three months prior to the start of the staff education project was as follows: May-3 falls, June-2 falls, and July-5 falls. Post intervention the reported patient falls for older adults included 1 fall in September with a patient not included in the project due to exclusion criteria. There were no reported falls with injury post intervention based upon data provided the quality department with nursing leadership permission. While this is only a short period of evaluation and the findings are not statistically significant, they are clinically significant.

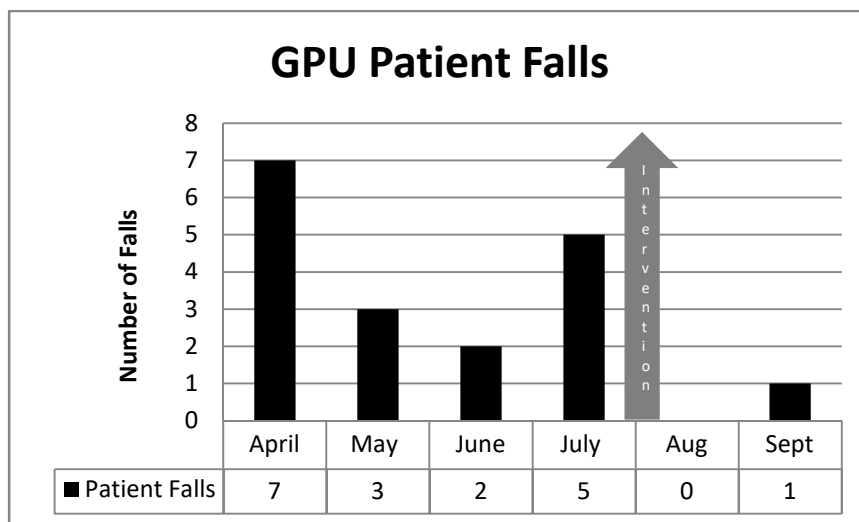


Figure 3. Number of patient falls for the GPU.

Implications and Findings

The implications for clinical practice include fall prevention education and the use of the SICRFQ instrument to support increased engagement of the patient within the fall prevention process. Based upon the Post Education for Fall Prevention Practices and Integration of the SICRFQ questionnaire responses and an evaluation of the patient fall data, the instrument was found to be useful for registered nurses and supported the fall prevention education with the patient as evidenced by a decreased fall rate and questionnaire responses. A large majority of registered nurses strongly agreed or agreed they felt adequately prepared to integrate the SICRFQ instrument into the clinical practice setting.

The responses from registered nurses revealed a 1:5 patient ratio was provided 91.18% of the time. The variations in nurse to patient ratio could be attributed to acuity adaptations and/or staffing variations. Current national guidelines support the 1:5 medical-surgical patient ratios (Tevington, 2011). Additionally, the Academy of Medical-Surgical Nurses reports to clearly define one nurse to patient ratio for all medical-surgical units is not supported due to variability in staffing and acuity but propose a nurse to patient ratio of 1:4-6 during the day shift and 1:6 during the night shift (Academy of Medical-Surgical Nurses, 2013). The variations in reported staffing ratios can be attributed to acuity of the patient, critical staffing needs, skill mix, and changes in assignments based upon the shift admissions, staffing for acuity or census changes, and discharges.

The review of the demographic data was useful in the evaluation of the participants nursing experience and educational level. Less than 40% of registered nurses were BSN prepared. The level of registered nurse education is linked to the ability of the registered nurse to provide patient education, demonstrate critical thinking skills, and the ability to transition during changes in the practice environment (Leroy, Laplante, & Patterson, 2014). Greater than 45% of registered nurses on the GPU were found to have 5 years or less experience, followed by 23.5% of registered nurses with between 6-10 years of experience. Critical thinking, the ability of the novice nurse to feel empowered to make decisions and judgments related to the patient's plan of care, remain mindful to the need to seek help and guidance, and engage within the practice and unit environment can be barriers in providing optimal care intervention leading to improved outcomes (Vogus, Rothman, Sutcliffe, & Weick, 2014). By providing ongoing support, engaging the staff in the fall prevention process and practices, and being available for mentoring support and education contributed to the success of the staff education project.

The ability to affect the short and long-term quality of life for older adults can be realized through ongoing staff education related to fall prevention practices and tools. The ability to provide effective fall prevention education results in increased nursing knowledge leading to enhanced safety. Long term effects for older adult patients who sustain a fall can be debilitating, decrease quality of life, and cause increased fear of a repeat fall (Stubbs et al., 2015). The ability provided meaningful fall prevention education and tools to further engage the patient in the fall prevention process provides support of decreasing patient falls (Tzeng & Yin, 2015).

Recommendations

The fall prevention staff education project and SICRFQ instrument was found to support registered nurses and the patient in decreasing patient falls and supported increasing nursing knowledge related to fall prevention practices. Registered nurses Post Education for Fall Prevention Practices and Integration of the SICRFQ questionnaire responses overwhelmingly agreed the use of the SICRFQ instrument assisted them with further engaging the patient in the fall prevention plan of care. Further work could be completed to examine interventions to decrease barriers in providing fall prevention interventions and the SICRFQ instrument and integrating the SICRFQ instrument to the greatest benefit. The process would include engagement of the nurses in the process and could be improved through the ongoing PDCA action planning process.

Recommendations include adding the SICRFQ instrument into clinical practice for all older adult patients to aid in improving the fall prevention practices, interventions, and education after the instrument is pilot tested for reliability and validity with patients. Upon further evaluation of effectiveness, the use of the SICRFQ instrument could be expanded to all adult patients. A thorough education plan, on-site coaching and mentoring, and leadership support is required.

Strengths and Limitations

Barriers cited to using the SICRFQ instrument included staffing, and ability to provide the SICRFQ instrument related to a lack of time to review and educate the patient with the SICRFQ instrument. The barriers may be decreased as the staff becomes familiar with the instrument and ease of use within the integration of a comprehensive

fall prevention program is improved. An additional realized barrier was the initial change in process in integrating the new practice. The process of education included explaining the importance of each step in the process. An understanding of the processes from start to finish increases effectiveness and supports successful integration into practice (Carayon, Wetterneck, Rivera-Rodriguez, Hundt, Hoonakker, Holden, & Gurses, 2014). Registered nurses were able to gain knowledge regarding the use of the SICRFQ instrument and more readily integrate the SICRFQ instrument as part of an enhanced fall prevention plan within the staff education project.

The strengths of the project included the engagement of all registered nurses and their use of the SICRFQ instrument with over 100 older adult patients. Over 90% of registered nurses who participated in the educational and staff education project provided responses and 100% of the staff were engaged in using the SICRFQ instrument. The unit manager and hospital leadership team fully supported the project and the staff engagement within the process.

An identified limitation of the project was the lack of longer term evaluation due to the limited five-week project time frame and occurrence on a single unit and site. Further investigation for a longer period of time is needed to fully assess the impact of the SICRFQ instrument on patient falls. An additional limitation is the limited validity for the SICRFQ instrument after the language was modified to the lower grade level. Further evaluation within a variety of medical-surgical units or other inpatient settings is needed after the instrument has been formally tested for reliability and validity with the modification of the language for the instrument. Prior to its use in other sites the

SICRFQ instrument would need to be tested for reliability and validity in view of the changes in language. The SICRFQ instrument is limited to use with the older adult patient who can participate in their plan of care and could be expanded for other applicable patient populations.

Section 5: Dissemination Plan

The project was designed to support an educational fall prevention program with the use of the SICRFQ instrument for the older adult hospitalized patient population. The fall prevention education and the instrument were integrated into multidisciplinary fall prevention and educational plan, which further engaged the patients and families in the fall prevention plan. The SICRFQ instrument assisted the nurse in engaging and educating the patient and the patient's family in the fall prevention plan. Based upon the results of this project, further dissemination of the data and process will be shared with the nursing leadership team and with content experts within the hospital. An evaluation of a larger scale plan, and the associated organizational support, needs, and effects could be completed to support long term sustainability and promote successful integration (Klingner, Boardman, & McMaster, 2013).

Based on the findings of this project, I recommend further development of the SICRFQ instrument integration as part of comprehensive fall prevention plan and an expansion of the use of the SICRFQ instrument to include all admitted older adult patients who meet the inclusion criteria. Education could be provided to all registered nurses and during the nursing orientation process for newly employed registered nurses. An evaluation of adoption of the instrument into the EHR could be included. If a facility wide adoption into practice using the SICRFQ instrument occurs and measurable success is attained, further dissemination could occur within nursing organizations and conferences via poster and podium presentations.

Upon completion of the project, further analysis and evaluation for future refinement of the practice change and education occurred. The Post Education for Fall Prevention Practices and Integration of the SICRFQ questionnaire provided further information regarding the impact and integration into clinical practice and information about the staff engaged in the plan. The questionnaire included demographic data and information about registered nurses experience using the SICRFQ instrument. Data from registered nurses regarding the use of the instrument and staffing was reviewed.

Analysis of Self

The DNP program and the project supported my learning and development as educator, leader, and management of a program. The process facilitated my growth and allowed me the opportunity to build relationships, grow in my role as a practitioner, and supported impacting social change with the fall prevention program. The process supported my own professional growth as I gained knowledge in engaging the staff in the change process, listening and responding to the concerns, and addressing barriers voiced by registered nurses. The ability to further engage registered nurses, patients, and families within the fall prevention program provided and demonstrated a positive meaningful impact.

Summary

The staff education project supported increasing registered nurses' ability to engage and improve the fall prevention plan of care with the patient and the families. The increased fall prevention education and the use of the SICRFQ instrument supported the staff education project. The ability of registered nurses receive and apply the fall

prevention practices and the patient to use the SICRFQ instrument resulted in positive fall prevention behaviors and supported fall prevention and improved transition of care (Enderlin et al., 2015). The SICRFQ instrument can be analyzed for future use within other inpatient units and for providing a more comprehensive fall prevention plan focused on the patient, and not just the process. A more meaningful and robust fall prevention can lead to improved safety.

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-21. <https://doi.org/10.1093/geronb/62.2.P119>
- Ambrose, A. F., Paul, G., & Hausdorff, J. M. (2013). Risk factors for falls among older adults: a review of the literature. *Maturitas*, 75(1), 51-61. <https://doi.org/10.1016/j.maturitas.2013.02.009>
- Andersen, E. A., & Spiers, J. (2016). Care aides' relational practices and caring contributions. *Journal of Gerontological Nursing*, 42(11), 24-30. <https://doi.org/10.3928/00989134-20160901-03>
- Academy of Medical-Surgical Nurses. (2013). The AMSN Hub. Question: What is the suggested nurse/patient ratio and the suggested CAN ratio for a medical-surgical floor? Retrieved from <https://www.amsn.org/practice-resources/care-term-reference/staffing/question-what-suggested-nursepatient-ration-and>
- Bandura, A. (2004). Health promotion by social cognitive means. *Health Education & Behavior*, 31(2), 143-164. <https://doi.org/10.1177/1090198104263660>
- Butler, A, Lord, S., Taylor, J. L., & Fitzpatrick, R. (2015). Ability versus hazard: risk-taking and falls in older people. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, 70(5), 628-634. <https://doi.org/10.1093/gerona/glu201>
- Callis, N. (2016). Falls prevention: Identification of predictive fall risk factors. *Applied Nursing Research*, 29, 53-58. <https://doi.org/10.1016/j.apnr.2015.05.007>

- Carayon, P., Wetterneck, T. B., Rivera-Rodriguez, A. J., Hundt, A. S., Hoonakker, P., Holden, R., & Gurses, A. P. (2014). Human factors systems approach to healthcare quality and patient safety. *Applied Ergonomics*, *45*(1), 14-25.
<https://doi.org/10.1016/j.apergo.2013.04.023>
- Center for Disease Control and Prevention. (2017). STEADI Materials for Healthcare Providers: Stay Independent Brochure. Retrieved from
<https://www.cdc.gov/steady/materials.html>
- de Bruin, M., Sheeran, P., Hospers, H., Kok, G., Hiemstra, A., Prins, J., & van Breukelen, M. (2014). Self-regulatory process to mediate the intention behavior relation for adherence and exercise behaviors. *Health Psychology*. *31*(6), 605-703.
doi:10.1037/a0027425. <http://dx.doi.org/10.1037/a0027425>
- Enderlin, C., Rooker, J., Ball, S., Hippensteel, D., Alderman, J., Fisher, S. J.... Jordan, K. (2015). Summary of factors contributing to falls in older adults and nursing implications. *Geriatric Nursing*, *36*(5), 397-406.
<https://doi.org/10.1016/j.gerinurse.2015.08.006>
- Gielen, A., & Sleet, D. (2003). Application of behavior-change theories and methods in injury prevention. *John Hopkins Bloomberg School of Public Health*. *25*, 65-76.
doi: 1093/epiev/mxg/004
- Gretebeck, K., Black, D., Blue, C. & Glickman, L. (2007). Physical activity and function in older adults: Theory of planned behavior. *American Journal of Health Behavior*. *31*(2), 2013-212. <https://doi.org/10.5993/AJHB.31.2.9>

- Haines, T. P., Lee, D. C. A., O'Connell, B., McDermott, F., & Hoffmann, T. (2015). Why do hospitalized older adults take risks that may lead to falls? *Health Expectations*, 18(2), 233-249. doi:10.1111/hex.12026
- Horne, M., Skelton, D., Speed, S., & Todd, C. (2014). Fall prevention and the value of exercise: Salient beliefs among south Asian and white British older adults. *Clinical Nursing Research*, 23(1), 94-110. doi 10.1177/105477381388938
- Joint Commission (2017). Sentinel Event Policy and Procedures. Retrieved online from https://www.jointcommission.org/sentinel_event_policy_and_procedures/
- Joint Commission. (2015). Preventing falls and fall-related injuries in healthcare facilities. *Sentinel Event Alert*. Issue 55. Retrieved online from http://www.jointcommission.org/assets/1/18/SEA_55.pdf
- Klingner, J. K., Boardman, A. G., & McMaster, K. L. (2013). What does it take to scale up and sustain evidence-based practices? *Exceptional Children*, 79(2), 195-21. <https://doi.org/10.1177/001440291307900205>
- Leroy, M., Laplante, N., & Patterson, B. (2014). Perceptions of clinical performance differences: Bachelor of science in nursing and associate degree in nursing graduates. *Teaching and Learning in Nursing*, 9(4), 171-174. <https://doi.org/10.1016/j.teln.2014.06.003>
- Mattison, M., Marcantonio, E. R., Schmader, K. E., Gandhi, T. K., & Lin, F. H. (2013). Hospital management of older adults. UpToDate, Waltham, MA. Retrieved from <https://www.uptodate.com/contents/hospital-management-of-older-adults>

- McCurry, M. K., Revell, S. M. H., & Roy Sr, C. (2010). Knowledge for the good of the individual and society: linking philosophy, disciplinary goals, theory, and practice. *Nursing Philosophy*, *11*(1), 42-48. doi:10.1111/j.1466-769X.2009.00423.x
- McEachen, R., Conner, M., Taylor, N., & Lawton, R. (2009). Prospective prediction of health related behaviors with the theory of planned behavior: meta-analysis. *Health Psychology Review*. *15*(2), 97-144. doi:10.1080/17437199.2010.521684.
- Needham, D. M. (2008). Mobilizing patients in the intensive care unit: improving neuromuscular weakness and physical function. *Journal of the American Medical Association*, *300*(14), 1685-1690. doi:10.1001/jama.300.14.1685
- Obrist, S., Rogan, S., & Hilfiker, R. (2016). Development and evaluation of an online fall-risk questionnaire for nonfrail community-dwelling elderly persons: a pilot study. *Current gerontology and geriatrics research*, *2016*.
<http://dx.doi.org/10.1155/2016/1520932>
- Polit, D. F., & Beck, C. T. (2013). *Essentials of nursing research: Appraising evidence for nursing practice*. Lippincott Williams & Wilkins.
- Rubenstein, L. (2006). Falls in older adults: epidemiology, risk factors and strategies for prevention. *Age and Ageing*. Supplement 2, ii37-ii4. doi 10.1093/ageing/afl084 .
- Rubenstein, L. Z., Vibrante R., Harked, J. O., Stevens, J. A., & Kramer, B. J. (2011). *Journal of safety research*, *42*(6), 493-499. doi: 10.1016/j.jsr.2011.08.006.

- F, R. (2008). Modeling health behavior change: Predicting and modify the adoption of maintenance of health behaviors. *Applied Psychology: An Internal Review*, 57(1), 1-29. doi10.4103/2008-7802.181333
- Sherrington, C., Tiedemann, A., Fairhall, N., Close, J. C., & Lord, S. R. (2011). Exercise to prevent falls in older adults: an updated meta-analysis and best practice recommendations. *New South Wales public health bulletin*, 22(4), 78-83. doi:10.1071/NB10056
- Stubbs, B., Denkinger, M. D., Brefka, S., & Dallmeier, D. (2015). What works to prevent falls in older adults dwelling in long term care facilities and hospitals? An umbrella review of meta-analyses of randomised controlled trials. *Maturitas*, 81(3), 335-342. doi: 10.1016/j.maturitas.2015.03.026
- Swanson, K. M. (1993). Nursing as informed caring for the well-being of others. *Journal of Nursing Scholarship*, 25(4), 352-357. doi:10.1111/j.1547-5069.1993.tb00271.x
- Tevington, P. (2011). Mandatory nurse-patient ratios. *Medsurg nursing*, 20(5), 265. Retrieved from https://www.amsn.org/sites/default/files/documents/practice-resources/healthy-work-environment/resources/MSNJ_Tevington_20_05.pdf
- Tricco, A. C., Cogo, E., Holroyd-Leduc, J., Sibley, K. M., Feldman, F., Kerr, G., ...& Straus, S. E. (2013). Efficacy of falls prevention interventions: protocol for a systematic review and network meta-analysis. *Systematic Reviews*, 2(1), 1. doi: 10.1186/2046-4053-2-38.

- Twibell, R., Seila, D., Sproat, T., & Coers, G. (2015). Fall and fall prevention among hospitalized adults. *American Association of Critical Care Registered nurses*, 24(5), e78-e85. doi: 10.4037/ajcc2015375
- Tzeng, H. M., & Yin, C. Y. (2015). Patient engagement in hospital fall prevention. *Nursing Economics*, 33(6), 326. Retrieved from <https://web-b-ebSCOhost-com.ezp.waldenulibrary.org/ehost/pdfviewer/pdfviewer?vid=1&sid=f16dd59e-a25f-482c-91e1-075c66299225%40sessionmgr120>
- Vivrette, R. L., Rubenstein, L. Z., Martin, J. L., Josephson, K. R., & Kramer, B. J. (2011). Development of a fall-risk self-assessment for community-dwelling seniors. *Journal of aging and physical activity*, 19(1), 16-29. <https://doi.org/10.1123/japa.19.1.16>
- Vogus, T. J., Rothman, N. B., Sutcliffe, K. M., & Weick, K. E. (2014). The affective foundations of high-reliability organizing. *Journal of Organizational Behavior*, 35(4), 592-596. doi:10.1002/job.1922
- Weiss, A., & Elixhauser, A. (2012). Overview of Hospital Stays in the United States, 2012. *Agency for Healthcare and Quality Research*. Retrieved from: <https://www.hcup-us.ahrq.gov/reports/statbriefs/sb180-Hospitalizations-United-States-2012.pdf>
- Wilmerding, N., & Form, W. (2016). Social change sociology. *Encyclopedia Britannica*. Retrieved from <https://www.britannica.com/topic/social-change>

Williams, T., Szekendi, M., & Thomas, S. (2014). An analysis of patient falls and fall prevention programs across academic medical centers. *Journal of nursing care quality*, 29(1), 19-29. doi: 10.1097/NCQ.0b013e3182a0cd1

Yardley, I., Bishop, F., Berger, N., Hauler, K., Kempton, G., Picot-Ziegler, C., Cattalo, T., Horne, M., & Lane, K. (2006). Older people's view of fall-prevention interventions in six European countries. *The Gerontologist*. 40(5), 650-660. <https://doi.org/10.1093/geront/46.5.650>

Appendix A: Post Education for Fall Prevention Practices and Integration of the
SICRFQ Questionnaire in the Fall Prevention Program

1. Education Background

ADN BSN MSN DNP NP

Other _____

2. Years of healthcare experience

Less than 1 year 1-5 6-10 11-15 16-20 Greater than 20

3. Average staffing ratio within the last week for my assignment

1:4 1:5 1:6 1:7 Greater than 1:7

4. Based upon the education I know how to use SICRFQ instrument to improve the fall preventions and plan of care.

Strongly Agree Agree Neutral Disagree Strongly Disagree

5. The SICRFQ instrument assisted me in engaging and educating the patient and/or the patient's family into the fall prevention plan of care.

Strongly Agree Agree Neutral Disagree Strongly Disagree

6. I encountered the following barriers to integrating the SICRFQ.

Time consuming Staffing Patient Refusal Other _____

Appendix B: Modified Stay Independent and Check Your Risk for Falling Instrument

Yes	No	Question	Rationale
		I have fallen in the last year.	People who have fallen are more likely to fall again.
		I have been told to use a cane or walker to safely get around.	People who use a cane or walker may be more likely to fall.
		Sometimes I feel wobbly when I am walking.	Needing support while walking is a sign of poor balance.
		I steady myself by holding on to furniture or other items when I walk.	Holding on to items when walking is a sign of poor balance or problems with walking.
		I am worried about falling.	People who worry about falling are more likely to fall.
		I push with two hands to stand up from a chair.	This is a sign of weaker leg muscles and a major risk for falling.
		I have trouble stepping up to curbs or steps.	This is a sign of weaker leg muscles and a major risk for falls.
		I often have to rush to the bathroom.	Rushing to the bathroom adds to your risk for a fall.
		I have lost some feeling in my feet and have numbness in my feet.	Numbness or a loss of feeling in the feet or legs can cause you to trip and to a fall.
		I take a medicine that sometimes makes me feel tired or dizzy.	Side effects from medicines can add to your risk for a fall.
		I take medicines to help me sleep at night or to improve my mood.	Medicines to help you sleep or improve your mood put you at risk for a fall due to side effects of the medicine.
		I am often sad or depressed.	Depression or sadness, not feeling well, or feeling slowed down can add to your risk for a fall.

Obtained from the public domain CDC STEADI website: <https://www.cdc.gov/steady/patient.html>

Appendix C: GPU Fall Prevention Plan

1 GPU Quality Improvement Project

FALL PREVENTION FOR OLDER ADULTS AGE 65 OR OLDER

DEB BRENNAN
DNP PROJECT

Objectives

- Understand the importance of fall risk and safety for hospitalized patients .
- Describe current fall prevention practices and policies for the RN.
- Describe and demonstrate how to use the Stay Independent Check Your Risk for Falling Questionnaire (SICRFQ) instrument for fall prevention (CDC, 2017).

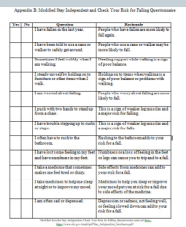
Fall in Older Adults

- Falls and falls with injury are a leading contributor to decreased quality of life for adults aged 65 and older (Twibells, Sela, Sprout, & Coers, 2015).
- The psychological and physiological impact of a fall effects the patient, caregivers, and families (Rubenstein, 2006)
- Only one third of older adults will regain full functioning present prior to the fall. (Stubbs, Denlinger, Brefka, & Dallmeier, 2015).

Current Policy

- Complete the CPM Fall Risk within 24 hours, each shift, upon discharge, or any change in the patient condition.
- Apply any high risk fall patient identifiers for CPM score of 4 or greater.

Addition: Modified SICRFQ Instrument

SICRFQ Instrument	Benefits
	<ul style="list-style-type: none"> • Alerts the RN to behaviors which may place the patient at risk • Provides education for the patient and families • Further engages the RN, patient, and families into the fall prevention plan

Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
<ul style="list-style-type: none"> • Patient's ability to make informed decisions on their own behalf. • Patient's ability to participate in their plan of care. • Patient is age 65 or older 	<ul style="list-style-type: none"> • Patients with documented cognitive impairment • The inability of the patient to participate in their plan of care • Inability to make informed choice on their own behalf • Unable to hear and read English • Under the influence of medications, which may impair their cognitive ability.

RN Benefit of the SICRFQ Instrument Use

- Review the SICRFQ instrument with the patient and any 'Yes' answers.
- Any 'Yes' answers indicate a risk for a fall and has an associated educational component for the patient.
- Update the Plan of Care, Patient Education, and fall risk interventions as required
- Provide further assessment as needed and further individualize care based upon the SICRFQ instrument and RN assessment.

Use of the SICRFQ Instrument

1. • The registered nurse will review the SICRFQ instrument responses.
3. • The registered nurse complete the hospital required documentation and assessments.
4. • Based upon the assessments and SICRFQ instrument the nurse will develop of plan of care for fall prevention and individualized fall prevention education plan.
5. • The registered nurse will continue to engage the patient and family in the patient centered and individualized fall prevention plan.
6. • The registered nurse will be provided with a post project questionnaire to complete regarding the use of the SICRFQ instrument for fall prevention.

EPIC Documentation

- CPM Fall Risk Assessment
- Plan of Care for Fall Prevention
- Patient Education for Fall Prevention
- Mobility Assessment
- Review Polypharmacy Factor
- Engage Patient and Family in Plan of Care and Education

Current Fall Prevention Practices

- Signage
- Yellow Slippers
- Fall Alert Wristband
- CPM Fall Risk Assessment
- Hourly or more frequent rounding
- Placement close to the nursing station
- Patient Safety Attendant
- Bedside Report
- Hand-off Communication
- Targeted Toileting
- Plan of Care
- Review of Medications
- Call light within reach
- Personal Items within Reach
- White Board Updated
- Clutter Free Environment
- Bed in lowest position
- Fall Prevention Education
- Engagement of Patient and Family in the Plan of Care and Education
- Referrals as Required
- Mobility Level Documented
- Mobilize and able
- Bed Alarm and Chair Alarms
- Visual Monitoring
- Patient Safety Trumps Privacy

EPIC Documentation

- CPM Fall Risk Assessment
- Plan of Care for Fall Prevention
- Patient Education for Fall Prevention
- Mobility Assessment
- Review Polypharmacy Factor
- Engage Patient and Family in Plan of Care and Education

Sample Scripting: SICRFQ Instrument

- Our goal is to keep you safe while you are hospitalized. We are reviewing the SICRFQ with you as part of the our fall prevention plan.
- We are partnering with you to keep you safe while you are in the hospital. As part of our plan, we will review the SICRFQ you completed and complete your fall prevention plan while you are in the hospital.

Case Scenario #2

- A.B.'s assessment is unremarkable considering medical history and is admitted for cardiac monitoring on 1 GPU. Upon admission, the RN completes the admission assessment and reviews with A.B. with the SICRFQ instrument for completion. While completing the CPM Fall Risk tool during the admission the RN learns A.B. had stated he had 2 falls at home in the last 6 months and has noticed he had become weaker the last few months.
- What fall prevention interventions should be placed?

Case Scenario #3

- A.B. has completed the SICRFQ instrument and positive yes responses for fall risk were as follows:
 - I steady myself by holding on to furniture or other items when I walk.
 - I am worried about falling.
 - I have lost some feeling in my feet and have numbness in my feet.
 - I push with two hands to stand up from a chair.
 - I have fallen in the last year.
 - I take a medicine that sometimes makes me feel tired or dizzy.
 - What fall prevention interventions should be placed?

What fall prevention interventions should be placed?

Group Interactive Discussion

- Can anyone share a past patient fall or near fall experience? What concerns you?
- What did you gain or learn for the experience?
- What advice regarding fall prevention would you share with a new RN?
- What are your thoughts about our current fall prevention program and the SICRFQ instrument?

References

- Center for Disease Control and Prevention. (2017). STEADI Materials for Healthcare Providers: Stay Independent Brochure. Retrieved from <https://www.cdc.gov/steady/materials.html>
- Rubenstein, L. (2006). Falls in older adults: epidemiology, risk factors and strategies for prevention. *Age and Ageing*, Supplement 2, ii37-ii4. doi 10.1093/ageing/aflo84.
- Stubbs, B., Denlinger, M. D., Brefka, S., & Dallmeier, D. (2015). What works to prevent falls in older adults dwelling in long term care facilities and hospitals? An umbrella review of meta-analyses of randomised controlled trials. *Maturitas*, 81(3), 335-342.
- Twibell, R., Seila, D., Sproat, T., & Coers, G. (2015). Fall and fall prevention among hospitalized adults. *American Association of Critical Care Registered nurses*. 24(5), e78-e85.