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Preventing Falls in Long-Term Care Facilities

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Walden University

College of Health Sciences

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Kay Keise

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the review committee have been made.

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Walden University

2019

Abstract

Preventing Falls in Long-Term Care Facilities

by

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MSN, Mount Saint Mary College, 2010

BSN, Mount Saint Mary College, 2003

Doctoral Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

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Abstract

Falls and related injuries have affected residents in long-term care facilities for many years. It has been well-established that patient fall prevention includes staff education and hourly rounding in addition to adequate risk assessment. These steps, taken together, have the potential to decrease a 52.7% fall rate on the long-term care pilot unit. The purpose of this quality improvement project was to: (a) educate staff on the process of properly performing hourly rounding and (b) and achieve a decreased incidence of falls from the current fall rate. Thus, the practice-focused question for the project addressed whether rounding hourly on patients in a long-term care facility would decrease the numbers of falls and related injuries. The conceptual framework used for this evidence-based project was the Institute for Healthcare Improvement's rapid cycle improvement. A sample size of 40 residents' fall rates were compared for a 6-week period before the intervention of hourly rounding to the fall rates after 6 weeks of full implementation of the rounding process. A Wilcoxon Signed Ranks test ($z = -4.169, p < .001$) showed that there was a statistically significant improvement in staff knowledge when mean pretest scores (75.9%) were compared to posttest scores (94.5%). Nursing staff were also evaluated on competencies, and 100% of the staff successfully completed the competency checklist on the first attempt. Post project fall rates revealed a decreased fall rate by 22% over a 6-week period post implementation. Nursing leadership should ensure that staff are continually educated on policies being implemented to ensure an effective outcome. Having hourly rounding as a permanent policy can decrease the patient's fall rate and improve patient safety, a positive social change.

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Dedication

This doctoral project is dedicated to my beloved granddad, Arthenel Mitchell, who transitioned to his eternal life while I was typing the last paragraph of this project. His unyielding love, support, and constant encouragement enriched my soul and inspired me to pursue and continue more research.

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Section 1: Nature of the Project

Introduction

The problem of preventing falls in long-term care (LTC) facilities has been a universal concern to health care professionals (Centers for Disease Control and Prevention [CDC], 2017). Nursing staff have a tremendous responsibility for keeping their patients safe from falls and injuries in the LTC setting. Residents living in LTC facilities typically: (a) are of advanced age, (b) have various comorbidities, (c) are often taking multiple medications, and (d) experience mobility limitations compounded by environmental risk factors that also place residents at higher risk of fall and injuries (Nitz et al., 2012). With intrinsic, cognitive, and environmental risk factors that can cause falls, the development and implementation of fall prevention strategies are needed to promote patient safety for the LTC resident.

In the United States, the fall mortality rate has increased steadily over the past 10 years by 30% (CDC, 2017). According to the CDC Injury Center (2016), falls and related injuries are the third most common cause of unintended death for all age groups and are the first leading cause of death among people 65 years and older. Falls and injuries in older adults have caused an increase in healthcare costs and a decline in quality of life. Hospitalized patients who sustain injuries due to falls can experience increased morbidity, mortality, and length of stay, and hospitalized cost (Johnson & Topham, 2007). To reduce falls, injuries, cost, and promote safety health care, most organizations have complied with the national mandate to implement evidence-based fall reduction strategies

The core of nursing practice is to identify a practice problem and develop evidence-based outcomes. Identifying fall quality indicators as a priority encourages nurse leaders, and the Doctor of Nursing Practice (DNP) practitioner, to join together to improve these quality measures and positively impact patient outcomes (Moran, Burson, & Conrad, 2017).

Problem Statement

Falls in the aging population is a common occurrence. One out of four older adults 65 years or older, experience falls leading to fatal and nonfatal injuries each year (CDC, 2016). In 2014, 7 million older adult falls were related to injuries, and an estimated 27,000 falls resulted in death (CDC, 2016). In the United States, older adult fall-related injuries increased by 30% over the previous 10 years (CDC, 2016). Approximately 30% of these falls occurred in private home settings and 50% occurred in long-term care facilities annually (Hill & Fauerbach, 2014). According to the CDC (2018) falls among older patients 65 years and older are the third leading cause of injuries and the first cause of death. Falls and fall-related injuries have become a significant concern for health care professionals. Healthcare organizations have implemented several quality improvement approaches supported by evidence-based research to improve patient safety by preventing falls. However, falls continue to be a problem for older patients and their caregivers.

Due to these increased rates of falls, The Institute of Medicine and the National Patient Safety Goal in 2005 recognized that fall prevention is a high safety priority and acknowledge that institutions should reduce the risk of falls and injuries. Later in 2007,

the National Patient Safety Goal outlined requirements for the implementation of fall prevention strategies. The Centers for Medicare and Medicaid Services (CMS, 2018) also acknowledged that falls and related injuries such as fractures, brain trauma, and hospital-acquired conditions could reasonably be preventable through the application of evidence-based guidelines.

The problem within the local clinical setting is that residents experienced an increased number of falls. The AS Living Seniors (ASLS) is a 134-bed skilled nursing service, rehabilitation care, and long-term care facility that provides comprehensive health care. The facility consists of three units: (a) short term rehabilitation, (b) long-term geriatric care, and (c) dementia care. ASLS provides 24-hour care which employs six licensed practical nurses (LPNs), three registered nurses (RNs), 10 certified nursing assistants (CNAs), and a nursing supervisor. According to the Minimum Data Set (MDS) 3.0, section J for Resident Assessment Instrument Manual (RAI) facility quality measure report, for a six-week period of time, there were 36 residents on the unit and 19 of the 36 residents fell (52.78%). In addition, three of the 19 residents who fell (8.33%) sustained major injuries that required hospitalization.

At ASLS, the basic fall safety prevention strategies have been in place for several years. That is, residents are assessed using a recognized tool at admission to the facility, every three months, and if patient's mental or physical conditions change. Patients at risk for falling are identified by markers at their bedside, bed alarms, chair alarms are used, also yellow skid-free socks are placed on residents who are assessed of having a high risk of falling. However, these strategies have achieved minimal results. Recently,

researchers have indicated that additional strategy is needed. Presently, ASLS does not have rounding in place, and my approach strategy was to educate staff on how to properly perform hourly rounding. The implementation of hourly rounding was used as an additional fall risk prevention plan that reduced the number of falls at the LTC facility

Purpose Statement

The purpose of this project was to reduce the number of falls in the LTC facility. The gaps in nursing practice are associated with several contributing factors such as (a) nursing deficits in identifying polypharmacy as a factor in preventing falls, (b) lack of reassessment after administration of pain medication, and (c) deficits in the facility's intake assessment. The overall outcomes upon the completion of this doctoral project included (a) successful staff education process where staff properly performed hourly rounding, and (b) achieved a decrease in incidence of falls from current fall rate. The focus of this doctoral project was to assess and evaluate the impact of hourly rounding implementation in a LTC setting on the fall rate. Data collection in the DNP project determined that the hourly rounding protocol improved the gap in the nursing practice. Thus, the practice-focused questions that this project addressed included: Will hourly rounding by staff members in a long-term care setting reduce the numbers of falls experienced by residents? Will the hourly rounding protocol resolve the gap in the nursing practice?

This doctoral project addressed the gap in practice by applying an evidence-based practice intervention that has enhanced the safety of residents in an LTC facility. Patient safety is always at the forefront of patient care worldwide. Efforts to improve patient

safety, reliability, and effectiveness of health care within organizations should be the goal of every healthcare worker (Frankel, Haraden, Federico, & Lenoci-Edwards, 2017).

Hourly rounding has enhanced clinical practice and reinforced patient safety awareness.

During hourly rounding nursing staff were able to assess and reassess for pain and evaluate for adverse effects, (b), assess for personal needs such as having the call light nearby, and (c) evaluate for toileting and positional needs.

Nature of the Doctoral Project

Falls and fall-related injuries continue to be a general concern for the aging population affecting 20-30% of older adults in the United States (World Health Organization [WHO], 2018). The fall mortality rate has increased over the past 10 years by 30% (CDC, 2017). Falls and injuries in older adults have caused an increase in healthcare cost and an individual's quality of life. In an attempt to reduce falls, injury, and cost, health care organizations have yielded to the national mandate to implement evidence-based fall reduction program. Fall reduction programs require a multidisciplinary approach (Dyck, Thiele, Kebicz, Klassen, & Erenberg, 2013). Collaboration with members of the healthcare team across the organization can help assist an in a successful fall prevention program.

Health care organizations have an ethical and moral obligation to deliver safe care to their patients. While attempting to meet these obligations, many organizations have implemented improvement projects that will promote quality of care and patient safety (Frankel et al., 2017). According to Nitz et al. (2012) older adults living in LTC facilities are at greater risk of experiencing falls and injuries. An estimated one in two residents in

LTC facilities falls within a 6-month period (Nitz et al., 2012). Clinical settings that experience such high proportion of falls with residents can benefit from performing hourly rounding to help reduce the numbers of falls and injuries.

Hourly rounding is not a new clinical practice in healthcare; it was developed in 2006 in an effort to increase patient satisfaction scores with hospitalized patients (Fabry, 2014). Since its implementation, hourly rounding has also demonstrated improvement in patient safety, quality of care, and significantly reduced the patient fall rate (Fabry, 2014). Because the patient fall rate is recognized as a quality indicator, it can be used as a nurse-led safety strategy in clinical settings that can be associated with improved quality care (Hicks, 2015).

The use of hourly rounding as a fall risk intervention is more than just a brief check on the patient. Rounding is a proactive process of purposefully evaluating patients regularly to meet their needs (Hicks, 2015). Hourly rounding is used to promote patient satisfaction, reduce call light use, and improve patient safety (Meade, Bursell, & Ketelsen, 2006). During rounding, the nurses should assess for patient needs and also re-assess for adverse effects after medication administration. Frequent checks on the patient promote an environment that is inclusive of fall prevention strategy to help reduce patient falls, improve safety, health, and comfort (Dyck et al., 2013). Hourly rounding was implemented in a 431-bed long-term care facility in Winnipeg, Canada over a five-year period which resulted in a consistent downward trend in falls and injuries (Dyck et al., 2013).

The evaluation approach that was used in this quality improvement DNP project was to organize and analyze quantitative data collected for this doctor project. After obtaining approval from Walden University Institution Review Board (IRB) and the organization's administrator, detailed, deidentified data were collected on falls and related injuries, and used to help inform the educational process. Prior to the implementation of the DNP project, ASLS did not have a rounding process in place, and my approach was to educate staff on how to perform hourly rounding properly. The educational process was started by gaining insight into staff's baseline knowledge on their perspective of hourly rounding with a pretest. There were six mandatory nursing staff meetings that were held over two days. The mandatory meeting was held for full-time, part-time, and per diem staff for all three nursing shifts. Literature was provided to staff members on how to perform rounding, what to do during rounding, and how to appropriately document rounding information in the patient's Electronic Health Record (EHR).

The pretest questionnaire was given to staff to assess their knowledge of hourly rounding, need for rounding, and readiness for change in the implementation of hourly rounding. Evaluating the staff's understanding of hourly rounding gave unit leadership an opportunity to discuss the benefits of rounding and gain information about factors that might hinder acceptance (Fabry, 2014). To evaluate the nursing staff's understanding, support, readiness, and feedback after the presentation of hourly rounding, a posttest questionnaire was given to staff members to assess their knowledge acquisition after teaching educational strategy of hourly rounding. After the postquestionnaire was

completed, the nurse manager for the long-term care unit assessed nursing staff competency in properly performing hourly rounding by demonstration and proper documentation in EHR. The nurse manager evaluated staff during the day, evening, and night. During evaluation of hourly rounding competency, the nurse manager evaluated staff as they assessed patients for the “4Ps”: pain, potty, positioning, and possessions and document in EHR to guarantee hourly rounding was completed properly. The patient’s pain was assessed and reassessed after administration of medication and evaluated for effectiveness. Potty was evaluated by asking patients if they needed to be toileted during hourly rounding. Positioning was assessed by asking the patient if they are comfortable in bed, or repositioning an immobile patient in bed. Ensure patient’s possessions are in reach and area is free of clutter are also assessed during hourly rounding as well as the call light button within easy reach. Having the patient’s call button in easy reach promoted a sense of security and safety for the patient.

The QI project for hourly rounding measures included data collection of the percentage of fall rate over a six-week period on the long-term care unit. Then, data were collected of posthourly rounding education strategy in-service and the demonstration of staff performing hourly rounding for six weeks. Next, data were collected to evaluate if the hourly rounding performed by staff reduced the numbers of falls during the six weeks for rounding. Data was compared, and assessment resulted that the implementation of hourly rounding intervention decreases the incidence of falls at the LTC setting site.

A structured QI approach includes staff’s perception on the impact of improving patient’s outcome of hourly rounding (Fabry, 2014). During rounding, nursing staff

assessed patient for “4Ps”: pain, potty, positioning, and possessions (Hill & Fauerbach, 2014). No additional staff were needed to carry out hourly rounding and did not interfere with current staff practice. It only enhanced clinical practice and reinforced the awareness of patient safety. No new nursing skill was needed to carry out hourly rounding. After hourly rounding was completed, the registered nurse, licensed practical nurse, or certified nursing assistant can document completion of hourly rounding flow sheet in the patient’s EHR.

Significance

Assessing and implementing measures to improve fall rates in LTC facilities is a crucial nurse-sensitive indicator for the advancement of quality care and patient safety (Hicks, 2015). According to Meade, Kennedy, and Kaplan (2008), the rounding process resulted in (a) increased patient safety, (b) increased patient’s satisfaction, and (c) reduction in patient falls and injuries. By reducing falls in the LTC setting, nurses contributed to their patients’ quality of life by preventing injury, pain and reduction in independence in performing activities of daily living. Through education and active involvement, nurses and nurses’ assistants who performed hourly rounding as a fall prevention strategy were able to reduce patient fall rate and promote safety (Dyck et al., 2013). Presently, the practice setting did not have rounding in place as an intervention to help reduce the number of falls which is why this doctoral project was an appropriate and timely project to improve patient outcome. Nursing staff who rounded on their patient had the opportunity to engage in patient care and safety which are critical in bridging the

gap between practice problem and expected outcome to reduce patient falls in LTC facilities

Summary

This section outlined the practice problem in the LTC facilities and stated the importance of implementing hourly rounding intervention to help reduce the number of falls rates. The benefits of having hourly rounding in an LTC facility promoted patient satisfaction and reinforce the awareness of patient safety. The project demonstrate that hourly rounding intervention yielded positive patient care outcomes and improve quality of care. The next section outlines the literature review and the clinical framework that shaped the strategy for implementing hourly rounding.

Section 2: Background and Context

Introduction

Falls and related injuries are a recurrent problem with older adults in LTC facilities. Falls with patients in LTC facilities are also common and costly health conditions in older adults. The medical expenditure to treat falls and related injuries in patients 65 years and older was estimated at 50 billion in 2015 (CDC, 2016). This immense cost of treating falls and related injuries could be directly related to the 30% increase of falls in older adults over the past 10 years (CDC, 2016). The geriatric population living in LTC facilities experience significantly higher incidences of falls than those older adults living in their private homes, which places LTC residents at a higher propensity of morbidity and mortality (Baixnho, Dixe, & Herriques, 2017). An estimated 30% of these falls occurred in private homes, and 50% occurred in LTC facilities annually (Hill & Fauerbach, 2014).

Due to these significant rates of falls, many accrediting agencies have recognized the importance of fall prevention strategies, and also placed a national mandate for institutions to implement fall reduction interventions. The purpose of this project was to reduce the number of falls in the LTC facility. Prior to the implementation of the DNP project, ASLS did not use hourly rounding intervention to help reduce the number of falls and related injuries. Hence, the practice-focused questions addressed that hourly rounding by staff members in a the LTC setting reduced the numbers of falls experienced by residents.

Concepts, Models and Theories

Falls in the Elderly

Among the many health problems of patients 65 years and older, falls and related injuries are a common problem. Falls among older patients 65 years and older are the third leading cause injuries and the first leading cause of death (CDC, 2018). An elderly patient who experiences a fall can lead to serious consequences and can be extremely devastating for the patient. The results of the fall can lead to a decrease in physical function and can subsequently affect the quality of life of the older person (Bartoszek, Sagan, Korga, & Szalast, 2018). One in four adults 65 years and older fall each year in the United States (CDC, 2016). The CDC (2018) estimated that every 20 minutes an older adult dies from fall and related injuries in the United States. In 2014, 28.7% of older adults experienced at least one fall in a 12 months' period, resulting in 29 million falls (CDC, 2016). Falls were also reported by women more than men, and the percentage of falls with older adults increases with patient age (CDC, 2016).

Risk factors can place elderly patients at a higher propensity of falling. Factors that contribute to falls include; (a) impaired gait, (b) impaired vision, (c) diminished cognition, (d) chronic pain, (e) polypharmacy, and (f) unfamiliar soundings (Hill & Fauerbach, 2014). Intrinsic health problems such as stroke, Parkinson's disease, Dementia, and hypotension are compounding environmental risk factors (Nitz et al., 2012). With these environmental risk factors, it is important for the healthcare professional to carefully screen and assesses patients at risk for falling.

Falls Risk Assessment

Fall risk screening assists healthcare providers in identifying patients at risk of falling, and determine if the patient's chances are mild, moderate, or high. The fall risk assessment also provides multifactorial information of what might place the patient at risk of falling. The systematic approach is used to ascertain the cause of falls and what intervention needs to be put in place to reduce their risk of falling. Fall risk assessments should include patient's (a) medical health, (b) psychological health, (c) cognitive impairment, (d) physiological limitations, (e) environmental risk, and (f) polypharmacy (Jin, 2018). Screening and assessment for the patient should be completed upon admission, transfer, and whenever there is a change in the patient's condition. After the fall risk assessment is completed, a customized care plan should be formulated for each individual patient. Fall assessment tools are used in different clinical settings to recognize the best approach to evaluate their patients clinically. Each facility establishes a standardized method to assess a patient who they predict might falls.

Currently, ASLS uses the Faber's fall risk assessment to evaluate every resident during admission, transfer, and after change in condition (Faber, Bosscher & van Wieringen, 2006). Faber's fall risk assessment is a Performance-Oriented Mobility Assessment (POMA) that is used to clinically evaluate an older person's balance and gait to determine patient's mobility status (Faber et al., 2006). The POMA scale was initially developed in 1989 as an assessment tool to evaluate mobility and fall risk in older adults (Faber et al., 2006). The POMA scale of balance (POMA-B) assessment tool is used to assess fall risk even when changing position, and also evaluated stability in performing

tasks, activities of daily living task and includes gait evaluation (POMA-G). These evaluations are assessed through motion patterns (Faber et al., 2006). The POMA scale is used to measure mobility impairment and evaluate the effectiveness of the implemented intervention (Faber et al., 2006). The fall risk assessment includes evaluating patient's disease or condition, continence status, physical function, sensory ability, safety precaution, and medication intake. For each category, a numeric number is used to indicate risk level. After the assessment is completed, a numeric is total which categorize patient's level risk of falling. A low rating between 0 and 15 indicates minimal risk for falls, a score between 16 and 35 indicates moderate risk for falls, and a tally of 36 or higher indicates a significant risk for falls. Residents who score between 0-15 on the fall risk scale have basic interventions in place such as: (a) ensuring patients have adequate foot wear, (b) ensuring room environment is free from clutter, (c) making sure call bell is in reach and encouraged to use, (d) make sure wheelchair is locked when not in motion, and (e) have physical therapy (PT) evaluate patient and adhere to any these and any additional recommendations. Residents who score between 16 and 35 on the fall risk scale have interventions including non-skid socks, bed alarm, chair alarm and floor mats. At the DNP project site, no additional interventions are implemented for fall precautions for patients with scores higher than 36 on the fall risk assessment scale. The Faber's assessment tool with the POMA scale has established reliability and vitality (Faber et al., 2006).

The Morse Fall Scale is another example of a fall risk assessment is used for patients in hospital or nursing home settings (Hill & Fauerbach, 2014). This standardized

approach was established in 1989 as an assessment tool to identify patient at risk of falling (Hill & Fauerbach, 2014). The Morse Fall Scales requires nursing staff assess patient using a measuring scoring variable. After scoring assessment is completed, patients' corresponding fall interventions are determined according to the level of risk. Morse Fall Scale risk scores are calculated by using six criteria: (a) history of falling Yes=25, No=0, (b) secondary diagnosis Yes=15, No=0, (c) Intravenous therapy Yes=20, No=0, (d) gait (normal, weak, bed rest, wheelchair=0, weak=10, impaired=20, (e) walking aids Yes=15, No=0 and (f) mental status (self-awareness =0, forgets limitation=15) (Schwendimann, Milisen, Bühler, & Geest, 2006). Scores from the Morse Fall Scale (MSF) can range from 0-125 points, and high scores indicate a greater risk of falling (Schwendimann et al., 2006). Also, the specificity and sensitivity of the MFS is used to determine the occurrence of fall data as a gold standard for assess high risks falls (Schwendimann et al., 2006). Using a valid fall risk assessment tool is foundational for the implementation of intervention to mitigate older patients at risk of falling (Hill & Fauerbach, 2014).

Additional Strategies that Prevent Falls in the Elderly

The two cornerstones that can be used for a successful fall prevention program are standardized risk assessment tools and targeted individualized, specific plans for the patient at risk (Hill & Fauerbach, 2014). Additional strategies that can be used to prevent falls in the elderly include using a multifaceted and interdisciplinary approach to ensure the highest quality of patient care outcomes. Collaboration with physical and occupation therapy is needed for the patient during their initial admission assessment and

periodically for activities of daily living (ADLs). It has been documented that patients fall attempting to perform purposeful action. Collaboration with nursing and physical therapy is needed to assess and evaluate gait and strength ability. Therapist's goals are to promote gradual independence and ADLs, balance safety, and the use of the appropriate assistive device (Hill & Fauerbach, 2014). According to Jin (2018), there is a direct link between the benefit of physical therapy exercise because it is an intervention that helps prevent falls and death related falls and injuries. Haley and Darowski (2012) conducted a systematic review to evaluate the effectiveness of a collaborative approach to help reduce the numbers of falls. Findings indicated that when a multifactorial approach and intervention strategies were used, it led to a reduction on falls by 20-30% (Haley & Darowski, 2012). Patients who were actively involved in a tailored rehabilitation program for strength and balance training had a reduction in falls (Haley & Darowski, 2012).

Another interventional strategy that can be used to help prevent falls in the elderly is non-slip socks. Nonslip socks are a common fall prevention intervention that is used as temporary footwear. According to Hartung and Lalonde (2017), nonslip socks intervention for fall preventions was done as a quality improvement strategy which resulted in a nine percent decrease in fall after implementation on a 24-bed nursing unit in a hospital setting. Ang, Mordiffi, and Wong (2011) conducted a randomized controlled trial which examined the effectiveness of using multiple intervention strategies to reduce the number of falls and injuries in an acute care hospital setting. Intervention strategies included Hendrich II Falls Risk Model (HFRM), keeping call bell in reach, keeping bed in low position, and using a universal precaution approach. Universal fall precaution

included color coded yellow wrist band, yellow star outside patient room, and yellow colored non-skid socks for patient at risk of falling. The study concluded that using a targeted using multiple interventions in an approach were effective in the reduction of falls in an acute care setting (Ang et al., 2011).

Rounding as a Key Strategy to Prevent Falls in LTC Settings

The Agency for Healthcare Research and Quality (AHRQ) collaborated with the Centers for Medicaid and Medicare Services (CMS) in 2003 to develop a standardized tool to evaluate patient satisfaction (Fabry, 2015). In 2005, the Joint Commission's Board of Commissioners established a National Patient Safety Goals (NPSGs) to promote patient safety in all clinical settings. NPSG number nine acknowledging fall as a significant portion of injuries in the hospitalized patient, which lead to the implementation of fall prevention programs (NPSG, 2018). The NPSG number nine encourages organizations to: (a) assess patients at risk of falling, (b) implement an intervention to reduce falls, (c) educate staff and residents on fall reduction program, and (d) evaluate the effectiveness of the fall reduction program (NPSG, 2018).

Meade et al. (2006) conducted a quasiexperimental study with nonequivalent groups that included non-random assignment of 27 units in 14 hospitals to experimental and control groups. Three study groups were used: the control group, the one-hour rounding, and the two-hour rounding group. Results concluded that nursing units that performed hourly rounding had a reduction in call bell usage, patient fall rate decreased by 50%, and patient satisfaction increased (Meade et al., 2006).

Rondinelli, Ecker, Crawford, Seeling, and Omery (2012) used an action research design study to evaluate the rounding process, the implementation process, and outcomes of hourly rounding with 11 Southern California hospitals. Results indicated that customization of hourly rounding in each unit, to meet staff and patient population's needs is essential for successful reduction in fall rate (Rondinelli et al., 2012). Nursing staff assessed and addressed necessary needs for the patient during hourly rounding. In this study, the 4 Ps: pain, potty, position, and possessions were personal acronym used to address patient needs during hourly rounding (Rondinelli et al., 2012). This study focuses on the importance of implementing hourly rounding in a clinical setting that is customized for staff and patient need

Olrich, Kalman, and Nigolian (2015) conducted a quasiexperimental study at a 506-bed hospital to evaluate the effectiveness of hourly rounding over the period of one year. Two medical units within the hospital were used as study sites for performing hourly rounding. During hourly rounding, patient was assessed for pain, positioning, potting and environment check (Olrich et al., 2015). The results indicated a significant decrease of 23% in the rate of falls (Olrich et al., 2015).

Patient Safety as a Framework

Conceptual frameworks are used to guide the scientific underpinnings or provide the focus for the interpretation and integration of concepts that affect the project structure (Moran et al., 2017). Patient safety has been on the frontline of patient care worldwide. For many years, organizations have been working diligently towards improving the safety, reliability, and effectiveness for patient health (Frankel et al., 2017). The Institute

for Healthcare Improvement (IHI) proposed the Safe and Reliable Healthcare (SRH) initiative and have worked in partnership for over 15 years to develop the Framework for Safe, Reliable, and Effective care (Frankel et al., 2017). The Safety Framework succinctly brings together strategic, clinical, and operational concepts that are critical to achieving safe, reliable, and effective patient care (Frankel et al., 2017). The Safety Framework consist of two foundational systems; culture and learning. Also, the Safety Framework consists of leadership, psychological safety, accountability, reliability, communication, accountability, negotiation, transparency, and quality improvement (Frankel et al., 2017).

Assessing and implementing measures to improve falls and injuries in clinical settings is a crucial nurse-sensitive indicator for the advancement of patient safety and patient care. Healthcare organizations have a responsibility to deliver safe patient care to their patients. While consistently meeting this obligation, many organizations are mandated to design quality improvement projects that will enable them to meet system-level quality and safety goals (Frankel et al., 2017).

IHI Quality Improvement Model

The Institute for Healthcare Improvement (IHI) was established in 1991 as a non-governmental organization that is a part of the National Demonstration Project on Quality Improvement Healthcare (IHI, 2019). The IHI quality improvement model is used by healthcare organizations worldwide to improve patient quality, safety and value with the health care systems (Barker et al., 2018). The IHI model has three steps including: (a) define an aim, i.e., identify the desired change; (b) the brainstorming of the change; and,

(c) the Plan-Do-Study-Act (PDSA) cycle which is used as an effort to solve problems that can be used to improve practice problem settings (IHI, 2019). The IHI's quality improvement (QI) model asks three important questions: (a) *What are we trying to accomplish*, (b) *How will we know that a change is an improvement*, and (c) *What changes can we make that will result in improvement* (IHI, 2019). The PSDA uses scientific methodologies that focus on measurable goal to improve clinical practice settings.

The focus of the IHI improvement model is to use improved science to yield better clinical outcomes in patient health and the health care system that combine safety and quality worldwide that incorporate safety and quality (IHI, 2019). The IHI improvement model strives to be an inclusive model that link health care professional to lead improved clinical settings (Kilo, 1998). IHI quality improvement model was used at ASLS to implement hourly rounding and help reduce the numbers of falls and injuries with the elderly patient. The quality improvement project aimed for change, desirable outcomes, and answered the clinical practice questions by implementing hourly rounding intervention.

The PDSA cycle model for improvement tests change by planning, implementation, observing outcomes and acting upon learned results (IHI, 2019). The PDSA cycle model for improvement was used in this hourly rounding project by: Plan (observing practice problem: implementing hourly rounding to reduce the number of falls, Do (Performing hourly rounding), Study (collect and compare data on falls for six weeks) and Act (implement modifications needed). The PDSA cycle model for

improvement was used on the LTC unit for a period of six weeks in iterative small tests of change to evaluate attempts at rounding and determine its effectiveness, refining the implementation process as needed before expanding the rounding process on other units and throughout the entire facility.

Relevance to Nursing Practice

Assessing and implementing measures to improve fall rates in LTC facilities is a crucial process to improve this nurse-sensitive indicator for the advancement of quality care and patient safety (Hicks, 2015). According to Meade et al. (2008), the rounding process resulted in (a) increased patient safety, (b) increased patient's satisfaction, and (c) reduction in patient falls and injuries. By reducing or even eliminating falls in the LTC setting, nurses can contribute to their patients' quality of life by preventing injury, pain and reduction in independence in performing activities of daily living. Through education and active involvement, nurses and nurses' assistants who perform hourly rounding as a fall prevention strategy are able to reduce patient fall rate and promote safety (Dyck et al., 2013). Currently, the ASLS did not have a fall prevention intervention in place other than risk assessment, and their fall rates are higher than national average, this DNP project was a timely fit to improve the gap in the nursing practice. The impact on the process to improve fall rate was also used as a facility patient safety competency.

Local Background and Context

ASLS is a 134-bed skilled nursing service, rehabilitation care, and long-term care facility that provides comprehensive health care. The facility consists of three units: (a) short term rehabilitation, (b) long-term geriatric care, and (c) dementia care. The ASLS

provides 24-hour care which includes six Licensed Practical Nurses (LPNs), three registered nurses (RNs), ten Certified Nursing Assistants (CNSs), a nursing manager on each unit during the day, and a nursing supervisor during the evening and night shift for a total of 23 people. At ASLS, the basic fall safety assessment and prevention strategies have been in place for several years. The Faber's fall risk assessment evaluations are done on admission, every three months, and if there is a change in patient status to assess patients who at risk for a fall. Residents are also assessed and recognized using tools such as, bed alarm, chair alarm, and yellow skid free socks. However, these strategies were limited. The recent data from the CMS required MDS 3.0 falls and injuries report over a six-weeks period of time, there were 36 residents on the unit and 19 of the 36 residents fell (52.78%). These data indicate that additional strategies were needed. Presently, ASLS did not have hourly rounding in place, and my approach strategy was to educate staff on how to properly perform hourly rounding. The strategic vision was to implement hourly rounding that was used in addition to current the fall risk assessment that helped reduce the numbers of falls and injuries in the LTC facility.

Definitions of terms used that a relevant to understanding the doctoral project:

Fall: An unintentional event in which a person comes to rest on the ground or floor or lower level (WHO, 2018).

Fall-related injuries: A fall that results in fatal or non-fatal injuries (WHO, 2018).

Hourly rounding: Intentional rounding every hour for assess patient care needs (Hicks, 2014).

Long-Term Care Facility (LTC): Residential facility for rehabilitation, and long-term nursing home (Nitz et al., 2012).

The quality improvement DNP project aimed to educate staff on the importance of promoting patient safety by performing hourly rounding, and reduce the fall rate for a six-week period of time, as a small test of change. Currently, the ASLS is a CMS-rated two-star facility. The CMS rating on LTC facilities are based on three domains; (a) health inspection domain, (b) staffing domain, and (c) quality measures domain (CMS, 2017). The cut-point quality indicator for falls and injuries in LTC facilities are above state and national standards. The New York average fall quality measure is 2.9% and the national average is 3.4% (CMS, 2017).

Role of the DNP Student

The advanced practice nurse uses knowledge and clinical expertise to refine clinical skill and improve practice settings (Sperhac & Clinton, 2008). Sperhac and Clinton (2008) explain that a DNP expands knowledge to influence the healthcare system through: (a) promotion of awareness, (b) research, (c) community health outreach, (d) policymaking, and (e) evidence-based patient care delivery. The DNP student uses advance practice skills and leadership role to navigate project development of implementing an evidence-based quality improvement project an organization (Zaccagnini & White, 2014).

As the project leader for the DNP project, I maintained the role of an educator, clinical expert, collaborator, leader and facilitator directly involved in the project. The focus of the project was to apply evidence-based research and implement findings in LTC

setting to improve patient care outcome. The scholarly literature that was used to ascertain information of the importance implement hourly rounding in an LTC setting to help reduce the number of falls and injuries. The significance of the DNP project was to bring quality improvement of patient care in the practice setting. The DNP project focused on reducing the numbers of falls by implementing hourly rounding fall precaution.

Role of the Project Team

The role of the project team was primarily to help facilitate information transfer to the staff about the QI project. The team members included the geriatric care unit nurse manager, three LPNs four CNAs, one nursing supervisor, and the nurse educator. There was a mandatory meeting with team members to share the project idea, provide information from the literature to substantiate the importance of promoting patient safety in LTC facilities and to reduce the fall rate. During the mandatory meeting, each team member was able to share their clinical expertise and technique of how this project was successfully implemented.

Summary

This section outlined scholarly literature that focused on falls with the elderly, fall prevention strategies and the hourly rounding fall prevention intervention that was used to help reduce the number of falls and related injuries in an LTC setting. The DNP role involvement was crucial towards a successful implementation of hourly rounding to help reduce the number of falls in the long-term care setting. Also, using evidence-based patient safety framework and the IHI quality improvement model to shape the doctoral

project was introduced to establish the foundation of the planning phase. The next section outlines the collection and analysis of evidence.

Section 3: Collection and Analysis of Evidence

Introduction

Fall prevention in LTC settings has been an issue for healthcare professionals for many years. A significant amount of research, awareness, and intervention has been implemented to reduce the number of falls in LTC settings. However, at the DNP project setting, patients continue to fall. Over the past decade, the fall mortality rate in the United States has increased steadily by 30% (CDC, 2017). Falls and related injuries are documented as the first leading cause of unintentional death for all adults 65 years and older (CDC, 2016). Approximately 30% of falls that happen with older adults occurred within their homes and 50% occurred in LTC facilities (Hill & Fauerbach, 2014). The nursing home that is the setting for this project is a 134-bed skilled LTC facility, the Advanced Senior Long-Term Setting (ASLS) that provides care to short-term rehabilitation and long-term residential patients. The ASLS is a pseudonym for the LTC facility that served as the DNP project setting. The problem within the local setting is that residents have experienced an increased number of falls. The purpose of the project was to reduce the number of falls and injuries by educating staff about the “how-to” steps and importance of performing hourly rounding.

Currently, the ASLS has a basic assessment and prevention tool in place to help reduce the number of falls and injuries. Nurses at the site use the Faber assessment tool to evaluate patients at risk of falling upon admission, every three months, and if there is a change in the patient’s status. The ASLS also uses bed alarm, chair alarm, and yellow skid free socks to assess residents at risk of falling. However, these strategies were

limited in their effort to prevent falls and injuries. Hence, an additional supportive strategy was needed. Prior to the implementation of the DNP project, the ASLS did not have hourly rounding in place. The approach used in this project was to educate staff on how to properly perform hourly rounding. This hourly rounding project was a quality improvement project that was used as a safety tool to help reduce the number of falls and injuries with the patient in an LTC facility over a six-week period as a small test of change.

Practice-Focused Questions

The problem within the local clinical setting is that residents experienced an increased number of falls. The ASLS is a 134-bed skilled nursing service, rehabilitation care, and long-term care facility that provides comprehensive health care. The facility consists of three units: (a) short term rehabilitation, (b) long-term geriatric care, and (c) dementia care. The ASLS setting provides 24-hour care which includes six LPNs, three RNs, 10 CNAs, and a nursing supervisor. According to the Minimum Data Set (MDS) 3.0, section J for Resident Assessment Instrument Manual (RAI) facility quality measure report, for a recent six-week period of time, there were 36 residents on the unit, and 19 of the 36 residents fell (52.78%). Also, three of the 19 residents who fell (8.33%) sustained major injuries.

The purpose of this QI project was to reduce the number of falls in the LTC facility. The gaps in nursing practice are associated with several contributing factors such as (a) nursing deficits in identifying polypharmacy as a factor in preventing falls, (b) lack of reassessment after administration of pain medication, and (c) deficits in the facility's

intake assessment. The anticipated outcomes upon completion of this doctoral project included (a) successful staff education process where staff demonstrated understanding of properly perform hourly rounding safety, and (b) achievement of six consecutive weeks of decreased incidents of falls. Thus, the practice-focused questions addressed in the DNP project included: Will hourly rounding by staff members in a long-term care setting reduce the numbers of falls experienced by residents? Will the hourly rounding protocol resolve the gap in the nursing practice? The term *hourly rounding* is throughout the doctoral project to describe intentional rounding every hour to assess patient's care needs (Hicks, 2014).

The practice questions focused on the connection between hourly rounding and its impact on reducing the numbers of fall experienced by residents. The literature highlighted that fall prevention strategy such as hourly rounding can be successfully implemented by educating and sufficiently training staff using a detailed protocol. Currently, ASLS did not have a fall prevention intervention in place and their fall rates were higher than the national average. Thus, this project was timely fit to improve the gap in the nursing practice. The impact of the education to improve fall rate was used as a facility patient safety competency. The assurance of staff competency on correctly performing hourly rounding was evaluated by nursing leadership at the site. The various aspects of the QI projects align with the overall problem statement which was supported by evidence-based sources that provide information that guided the practice-focused questions.

Sources of Evidence

Published Outcomes and Research

The literature review was used to find evidence-based articles that supported the project problem and the practice-focused questions. Critical appraisal skills were used to guide the literature review to elicit those articles that were current and congruent with the practice-focused questions (Terry, 2015). The purpose of the literature review was to establish prior significance, knowledge, and outcomes of the research done on the selected project (Terry, 2015).

The review of literature was conducted using online databases known as PubMed, Cumulative Index of Nursing and Allied Health Literature (CINAHL), Medline and Health Reference Center Academic, ProQuest and Joanna Briggs Institute Evidence-Based Practice. Searches were performed using various combinations of subjective heading words and keywords: *falls, falls and related injuries, patient falls, falls intervention, hourly rounding, fall risk assessment tools, falls with elderly patients, adult patients, and long-term care facilities*. The review of literature produced a substantial number of peer-reviewed scholarly journals which supported the implementation that hourly rounding of patients could reduce the numbers of falls and injuries. Also, the primary literature confirmed that hourly rounding can be used in an LTC setting.

Archival and Operational Data

The baseline fall rate was reported by the nursing educator at the project site which indicated that an additional fall prevention strategy is needed to help reduce the number of falls and injuries at ASLS. To accurately evaluate the relevance of

implementing the DNP QI project and the impact of rounding hourly on patients, a six-week MDS facility quality measure report was evaluated and compared to a recent quality measure report over the same period of time the previous year. The RAI quality measures report on falls and injuries indicated that over a six-week period of time prior to the rounding intervention, there were 36 residents on the dementia unit and 19 of the 36 residents fell (52.78%). Also, of the 19 residents who fell, 8.33% sustained major injuries that required hospitalization. This operational data constitutes a baseline falls rate that was used for comparison after the implementation of the falls prevention rounding program.

The data on falls for the dementia care unit are reported to the QI nurse coordinator on an ongoing basis. The QI nurse coordinator then inputs the information into the MDS facility quality measure report, which forms the basis of the CMS nursing home compare star report published annually and available to the public. The quality and validity of the sources of data collection by MDS 3.0 were designed to improve reliability and enhanced accuracy, as an assessment tools to support the credibility of the nursing home compare program (CMS, 2015). No personal information about any residents at the facility were provided to me as these data were all completely de-identified. The nursing educational sessions were completed for all three shifts, before the implementation of hourly rounding started. After a six-week implementation period, falls data was secured for another six-week evaluation period to determine the impact of the rounding program on the falls rate. The expectation was that operational data collected as part of the MDS program would demonstrate that the falls rate had improved as a result of rounding.

Evidence Generated for the Doctoral Project

Participants. The ASLS is a 134-bed skilled facility that provides short-term rehabilitation and long-term residential care. The facility is subdivided into three units: (a) short-term rehabilitation, (b) long-term geriatric care, and (c) dementia care. Skilled care is provided by a staff of six LPNs, three RNs, 10 CNAs, two nursing managers, and three supervisors who staff each shift across 24 hours, seven days a week at ASLS. The nursing staff on the dementia unit participated in the educational session that discussed the importance of promoting patient safety by performing hourly rounding. The attendees included 10 LPN, 3 RN, and 10 CNAs, one nursing educator and one director of nursing. There was a total of 23 staff members who attended the in-services. Using the hourly rounding competency checklist, competency was assessed once by having RN nursing managers observing the RNs, LPNs and CNAs performing rounding technique properly.

Procedures. A four-page curriculum with the essential elements of patient safety and the details of the rounding procedure were presented to the staff in a one hour educational in-services (see Appendix A). The curriculum was developed by the DNP project leader using supporting evidenced-based materials from the literature review. The curriculum was presented to facility's nurse educator, RN nurse manager, and director of nursing for review and approval prior to use. The educational process of the QI project entailed gaining insight into staff's baseline knowledge on their perspective of hourly rounding, including changes to daily workflow, anticipated obstacles and barriers as well as readiness for change to improve patient safety in the clinical setting with a pretest questionnaire.

The nursing staff were educated over a total of three one-hour sessions and two make-up sessions were made available. Nursing staff were only required to attend one session. During the one-hour in-services, the nursing staff were given a pre-test to evaluate knowledge of patient safety, and a post-test to evaluate the comprehension of hourly rounding information presented during in-service. Nursing staff first consented to the pre-test and post-test before taking the test. If nursing staff did not consent to the test, their data were not used in the DNP project. During the in-service sessions, a case study was presented to the nursing staff, and a sample role play was outlined and carried out. A post-test questionnaire was given to staff members to assess their knowledge acquisition after teaching the educational strategy of hourly rounding.

The pretest and the posttest were developed based on the literature review and the content presented in the curriculum. The DNP project curriculum was approved for face and content validity by a small panel of experts at the DNP project site by (the nurse educator, the nurse manager on the unit and the director of nursing). The experts had more than 25 years combined experience in long term care and provided oversight to this DNP project.

To accurately evaluate the relevance of implementing an hourly rounding protocol, information from the pre-test and post-test administered at the in-services was examined carefully. The pre-test evaluated staff's prior knowledge of patient safety, awareness of increased levels of falls, and hourly rounding. The post-test evaluated staff's level of understanding after the DNP QI project in-service education. Also, the post-test evaluated staff knowledge on the rounding process.

To evaluate whether or not the knowledge gained in the in-service education was actually applied in the setting, a rounding staff competency checklist was developed by the DNP project leader and materials were reviewed by nurse educator, RN nurse manager, and director of nursing for face and content validity (see Appendix B). The organization took responsibility for this competency evaluation and provided completed, de-identified checklists to me as the DNP project facilitator for secondary analysis. Nursing staff competency data was used to evaluate whether or not staff demonstrated correct rounding technique and if the 4Ps were carried out during hourly rounding. After the posttest was completed, the nurse manager for the geriatric care unit assessed nursing staff competency in properly performing hourly rounding by demonstration and proper documentation by using the competency checklist, (see Appendix B). The expectation was for an improved knowledge and attitude towards hourly rounding after the educational process completion. The data collected after the implementation of hourly rounding for six weeks determined that rounding intervention improved the gap in practice. Information obtained during the assessment process evaluated staff knowledge and understanding of hourly rounding and the impact it had in improving patient safety.

Protections. The evidence-based QI DNP project was directed towards educating the staff on the importance of implementing an intervention that improved patient care outcomes, which did not put patients or staff at risk. Confidentiality and privacy were maintained to protect partner organization information from being disclosed by deidentifying details and data on falls and related injuries. Any information that was used for this project was maintained in accordance with Walden University's DNP QI project

manual. ASLS did not have an IRB and permission was sought from facility's administrator for site approval of the QI project. I secured approval from Walden University's IRB for QI doctoral projects; the approval number is 05-17-19-0409280.

Implied consent was used for the pretest and posttest. A deidentifying approach was used to obtain data for the pretest and posttest to protect participant's information. The nurse educator and the director of nursing had access to the data collected from the pre-test and post-test which were provided to me in a deidentified spreadsheet for analyses. After the completion of the pretest and posttest, data were destroyed after careful collection by the DNP project leader. Data were collected using a deidentifying approach to protect participant's identity.

Analysis and Synthesis

The data obtained from the hourly rounding in-service and protocol were used to evaluate staff knowledge on patient safety. Goldsack, Bergey, Mascioli, and Cunningham (2015) conducted a 30-day prospective pilot study at a 970-bed hospital facility on two units with pre and post-implementation evaluation to evaluate the impact of hourly rounding of patient fall rate. Results concluded that when patient leaders were involved in program planning of hourly rounding, inpatient fall rates decreased significantly (Goldsack et al., 2015). Also, inpatient call bell usage was reduced when leadership was actively involved in the program design and implementation of hourly rounding in the medical unit (Goldsack et al., 2015). Both the pretest and posttest were analyzed using descriptive statistics, and because of the small sample size and a violation of the normality assumption, I used a nonparametric Wilcoxon Signed Ranks test to determine

statistical significance. Also, the competency checklist was used to reinforce 100% compliance and competency with the nursing staff. Descriptive statistics were used to compare fall rates before the intervention to those in a period of time after full implementation of the rounding process. Thus, there were two important measures: (a) the actual number of falls, a patient outcome measure and (b) a change in knowledge and competency among the nursing staff on rounding, a process measure. The steps of the DNP project process are summarized below (see Table 1).

Table 1

DNP Project Steps Timeline

Weeks	Steps
Week 1	Receive IRB confirmation to proceed; schedule educational processes
Week 2	Provide education to all three shifts; Rounding starts
Week 3	Nurse manager competency assessments begin on rounding
Week 4	De-identified data pre and post tests provided to DNP project leader
Week 5	Rounding fully implemented
Week 6	Data Analysis on pre and post tests
Week 7	Falls data collected for weeks prior to education
Week 8	Falls data collected for weeks after competency checklists completed
Week 9	Data analysis for pre/posttest comparisons and falls completed

Summary

This section outlined a review of the practice problem and the purpose of the QI doctoral project to improve patient safety by educating staff on the importance of hourly rounding to reduce the numbers of falls and injuries. Sources of evidence were obtained from a literature review by critically appraising current and relevant scholarly articles that supported the practice-focused questions. Participants of the project included nursing

staff and nursing leaders. Nursing staff and nursing leaders participated by taking a pre and post questionnaire to assess knowledge acquisition of the importance of hourly rounding. The nursing manager evaluated the competencies of hourly rounding by evaluating staff processes in carrying out the rounding process on a daily basis. The project adhered to Walden University's QI project manual guideline to maintain organization privacy and protection of human subjects. The next section outlines the findings and recommendation of the project.

Section 4: Findings and Recommendations

Introduction

Residents living in LTC facilities have a higher propensity of falling. Due to the increased tendency of falling, maintaining the patient safety within the LTC setting is a significant priority for healthcare professionals worldwide. In order to maintain patient safety, implementing a reduction strategy was needed to prevent falls and related injuries with residents in LTC. The problem within the local clinical setting was that residents at the ASLS experienced an increased number of falls and falls with injury. The gap in practice was associated with several contributing factors that increased the resident's risk of falling. The purpose of this doctoral project was to educate staff on how to properly perform hourly rounding and achieve a decrease in fall from the current fall rate.

This doctoral project focused on residents in an LTC facility on the dementia unit who experienced an increased number of falls over six weeks. This facility used several different interventions to help reduce the number of falls and injuries. However, these strategies were not enough. The focus of this QI project was to educate staff on the dementia unit of how to accurately perform hourly rounding and implementing hourly rounding intervention for six weeks to help reduce the numbers of falls and injuries on this unit. A one hour in-service was given for nursing staff that included a pre-test and post-test to assess knowledge acquisitions at the conclusion of the in-service. A rounding competency checklist was used to evaluate staff demonstrating correct rounding technique addressing the 4Ps. Also, staff were evaluated for proper documentation in the patient's EHR after hourly rounding was performed.

Meade et al. (2006) conducted a nationwide six-week quasiexperimental study with nonequivalent groups design that included non-random assignment of 27 nursing units in 14 hospitals in which nursing staff performed hourly on their patients. The result of this quasiexperimental study concluded that the performed hourly rounding reduced the use of call bells, decreased patient fall rate by 50%, and improved patient satisfaction (Meade et al., 2006). Patient directly associated the quality of care on how well the nursing staff was able to fulfil their needs as well as fostering a meaningful relationship with them. Patient perceived that nurses who were proactive and consistent with providing emotional and physical needs provided better nursing care (Meade et al., 2006). It is important that nursing leadership educate, implement, support, and maintain evidence-based practices that will reduce the risk of harm to patient improve patient care outcomes. According Meade et al. (2006) reducing risk of harm, improving patient's safety, increasing patient satisfaction have been proved effective by using the hourly rounding protocol.

Implementing hourly rounding protocol to reinforce patient's safety within the LTC setting is essential in reducing the number of patient falls, promote quality care and patient care outcome. Evidence of hourly rounding have showed that it is an achievable intervention that can improve patient care and increase patient satisfaction in providing safe environments for residents in LTC settings (Meade et al., 2006). Intentional monitoring of patient throughout the day allows residents needs to be fulfill and forester a good report with staff and resident. These meaningful relationships with residents and nursing staff play a key role in providing a structured and safe environment for residents.

Findings and Implications

This evidence-based QI project focused on a 40-bed unit at a LTC facility that is located on the northeastern region of the United States. This TLC facility had experienced an increase in falls and related injuries over an assessed six-week period and needed additional safety reinforcement to ensure the safety of their patients. The facility uses Faber's fall risk assessment, bed alarms, chair alarms, yellow skid-free socks for patient at high risk of falling, however, these strategies can only as much. The additional fall prevention protocol was used to decrease the numbers of falls and injuries with patients on the dementia unit at the LTC facility. The aim of the project was to educate the nursing staff on the importance of patient safety and reducing the numbers of falls and injuries by performing hourly rounding on their patients.

The nurse educator, director of nursing, unit manager, RNs, LPNs, CNAs participated in the one hour in-service that included hourly rounding safety presentation, pre and post test, hourly rounding case study with role play, and hourly rounding competency. For this QI project, I wanted to determine whether educating the staff on the importance of safety through fall prevention strategy and implementing hourly rounding would decrease the number of falls and related injuries. The aim of this project was to evaluate the impact of hourly rounding implementation in a LTC setting to decrease the number of falls and injuries.

The multidisciplinary team at ASLS participated in the promotion of patient's safety in the implementation of the fall prevention project. The project focused on implementing purposeful hourly rounding process. The hourly rounding in-service,

pretest and posttest, and competency chest list were approved by nurse educator and director of nursing. The DNP project leader lead the in-service for the nursing staff. The purpose of the in-service was to educate nursing staff on the importance of promoting and ensuring patient's safety in LTC setting to prevent falls and injuries. The objective of the educational in-service to evaluate knowledge acquisition of nursing staff on the importance of patient safety through hourly rounding, discuss the importance of correctly performing purposeful rounding, EHR documentation expectation, and the projected outcome of reducing the numbers of falls and injuries by implementing fall prevention protocol. The nurse educator, and nurse manager took the lead on grading the pretest and the post-test and evaluated the nursing staff performing hourly rounding competency. The DNP project team members ensured CNA colleagues performed hourly rounding on the unit. The nurse manager ensured that the CNAs correctly documented hourly rounding during their shift for the six-weeks.

The data collection for the pretest, posttest questionnaire, and competency checklist were collected by the nurse educator using de-identifying format to ascertain information. The nurse educator used numeric code (1-22) for each nursing staff who participated in the in-service. Data information of the pretest and posttest questionnaire indicated that nursing staff knowledge acquisitions were improved after the completion of the educational in-service and staff member's post-test questionnaires grades were improved. The number of participants and their average scores on the pre and posttests are presented in Table 2.

Table 2

Pretest and Posttest Mean Scores by Job Role

	n	Pretest	Posttest
RN	4	82.5%	95%
LPN	7	75.7%	92.8%
CNA	11	73.6%	95.4%
Total	22	75.9%	94.5%

The mean scores were statistically significantly improved from the pretest to the posttest using the Wilcoxon Signed Ranks test ($z = -4.169, p < .0001$).

The nurse manager for the dementia care unit assessed nursing staff competency in properly performing hourly rounding and proper documentation in EHR. The first area reviewed for the purposeful hourly rounding components were the compliance with EHR documentation. Evaluation reviewed showed 90% compliance of documentation with nursing staff over the six-week period as part of their daily practice during all three shifts. Also, during the hourly rounding the 4 Ps were addressed by the nursing staff. Anecdotal information from the nurse educator after the implementation of hourly rounding revealed that documentation was not completed by all staff during the evening and night shift as evidenced by rounding checklist hanging on patient's clipboard in their room.

Fall rates were compared over a six-week period prior to and after the implementation of hourly rounding. The pre-fall data for the six-week period resulted in a total of 19 falls out of 36 residents (52.7%) and 3 falls with major injuries that required hospitalization (8.3%). The post-fall data resulted a total of 12 falls out of 40 residents fell (30%) and 2 falls with major injures that required hospitalization (5%). These results demonstrated an overall decrease of 22.7% in falls for a six-week period. Although there

are many factors that affect the falls rate, at least some of this decrease in falls and related injuries can be attributed to the implementation of intentionally rounding on patient every hour. Findings of this hourly rounding project were specific for the dementia unit at the ASLS LTC facility and have shown some success in reducing the fall rate. This project can be implemented throughout the facility to help reduce falls and injuries and promote optimal patient safety, that can demonstrate positive social change for patients, local facilities and communities.

Recommendations

The recommended solution that will potentially address the gap-in-practice is to perform hourly rounding to improve patient care, promote patient safety, and reduce the number of falls and injuries. The expected outcome of the hourly rounding protocol should be used in conjunction with facilities' already established safety prevention strategies. These safety strategies include Faber's fall risk assessment, bed alarms, chair alarms, and yellow skid-free socks for patient at high risk of falling. Hourly rounding addresses the gap-in-nursing practice by managing patient's polypharmacy deficits as a factor that contributes to falls, increase in re-assessment of patient's pain after medication administration, and the re-assessment of patient's physical and cognitive.

According to Meade et al. (2009), an eight-week quasi-experimental research study was conducted using hourly rounding to evaluate patients' safety and satisfaction. Data results concluded regular staff rounding increased patients' safety and increased patients' satisfaction. This study also concluded that using hourly rounding frequent intentional rounding protocol on patients' in the Emergency Department along with

individual patient care plan showed the most improved patient outcomes (Meade et al., 2009).

An hourly rounding protocol should be implemented with support from each discipline within the medical team. A multidisciplinary approach promotes a safer environment for patients throughout the facility. Having more avid supporters of the hourly rounding protocol can help facilitate new studies conducted that focus on educating staff on the importance of prompting patient safety and performing intentional rounding.

To continue the improvement of decreasing falls and related injuries at the ASLS LTC facility, the nurse educator should repeat hourly rounding in-service quarterly, for all new staff, and during each employee yearly evaluation. Ongoing education on hourly rounding can help remind staff members about the importance of the hourly rounding task, identify barriers to its use, and to provide staff with feedback on their efforts to reduce the falls rate. The nurse manager has agreed to incorporate reminders about hourly rounding at monthly staff meetings to reinforce with staff the importance of performing hourly rounding and appropriately documenting on the checklist in the room and in the medical record. During the staff meeting, the nurse manager should also engage the staff to discuss any barriers and provide feedback about performing hourly rounding. These recommendations can help to continue the success of reducing the number of falls and injuries in the facility.

Contribution of the Doctoral Project Team

The contribution of the doctoral project team helped facilitate the purpose

of the hourly rounding protocol with nursing staff on the dementia care unit. The doctoral team members included the unit nurse manager, three LPNs, four CNAs, one nursing supervisor, and the nurse educator. The team members reminded staff about mandatory in-service for hourly rounding, provided scholarly literature to substantiate the importance of promoting patient safety provided by project leader. Team members also encouraged nursing staff to perform hourly rounding and perform documentation in EHR during their shift.

Strengths and Limitations of the Project

After the completion of implementing the hourly rounding at the LTC facility for six weeks, the protocol was determined to be valuable and there is a plan to implement it throughout the entire facility. The doctoral project promoted consistent collaboration with nursing and administrative staff. The leadership team provided unwavering support and constructive feedback towards the implementation of the project. The nursing staff increased their awareness of the importance on promoting patient safety that yielded positive patient outcome. The implementation of the hourly rounding project in the LTC setting resulted in a decrease in fall rate by 22%.

One limitation of the QI project was the EHR documentation for hourly rounding was not consistent. Anecdotal information from the nurse manager reported that there were times that rounding was not properly documented on the patient's checklist after each hourly rounding was completed. Having frequent in-services and staff meetings can ensure that hourly rounding is done correctly with proper documentation. Another limitation of the project was the time allocated for the QI project. The QI project was

performed over a six-week period, a longer time frame for the project would have created more data to collect and analyze. An additional limitation was the time given to complete in-service with the staff. That is, a longer time to conduct in-services would have been preferable so that more members of the health care team could have participated. In-services given over a 6-week period of time for staff members to attend, monthly unit meetings, and implementation of hourly rounding over 6 month can help increase compliant for hourly rounding with staff members. Although the 6-week post-implementation period demonstrated a drop in the falls rate, a longer of period of time is necessary to demonstrate additional strides in the falls rate, progress towards eliminating falls and falls with injury altogether, and sustained progress overtime.

Summary

This section outlined how evidence-based sources were obtained and how analytical strategies were used to successfully perform hourly rounding to help reduce the numbers of falls and injuries at the ASLS LTC facility. Sources of evidence reviewed supported the practice-focused questions that would solve the clinical gap-in practice. Report findings concluded that the implementation of hourly rounding decreased falls and related injuries by 22% on the dementia care unit. Limitations of the project included inconsistency with documentation from staff and only 6 weeks allocation for hourly rounding implementation. Recommendations to address limitations include allocating adequate time for in-services and implementation of hourly rounding. The next section outlines the dissemination of the project.

Section 5: Dissemination Plan

To disseminate this QI doctoral project, I will convey the results and information acquired during the planning, implementation, and evaluation phase to the medical and nursing staff and key stakeholders at the ASLS site. First, the project will be presented during staff meetings to share the success of the implementation of hourly rounding and promotion of patient safety. After dissemination of the QI project is conducted at the ASLS LTC facility, further dissemination can be done at other LTC facilities, hospitals, communication centers, churches, journal publication, and conferences.

Based on the nature of this project, the targeted audience would be staff members caring for the geriatric population living in their homes, LTC settings, or hospitals. This QI would be ideal to present to the American Geriatrics Society (AGS) conferences. The AGS is a group of health care professionals devoted to improving patients' health, independence, and quality of care with the aging population. AGS also provides mentorship, leadership, and education to policymakers committed to implementing policy that will improve the health of older patients. Another nursing professional who will benefit from this QI project is the Nurse Practitioner Association (NPA). The NPA promotes and empowers nurse practitioners to provide high standards of quality healthcare.

Analysis of Self

As an educator, practitioner, scholar and project manager using all my skills, resources, knowledge and clinical expertise were crucial towards the implementation of a successful DNP project. The process has been difficult during each phase of the project,

however, each area of difficulty experienced has been meaningful. The opportunity given to identify a practice problem, develop a protocol to help resolve the issues, draw a connection between the project and the clinical practice problem has improved my leadership skills. I was able to confidently collaborate with other members of the healthcare team. My long-term goal is to continue contribute the healthcare arena to influence positive patient outcome.

As a practitioner overseeing this doctoral project, I have improved my leadership skills and become a more influential leader. I used evidence-based literature to educate and train staff to improve nursing staff knowledge and strengthen their clinical skills. The underpinnings of nursing knowledge have been based on the research evidence and thus an evidence-based practice (EBP) remains the cornerstone of nursing today. EBP encourages practitioners to assess the clinical problem, explain phenomena, plan corrective care, and promote desired outcomes (Polit and Beck, 2004). As a practitioner, I plan to bridge the gap in clinical practice by assessing clinical problems and creating optimal patient care outcomes to help promote healthier patients and build better communities.

As a scholar, I have applied both academic knowledge and clinical expertise to expand the scientific basis to improve patient care. This DNP scholarly project prepared me for the highest level of educational and clinical leadership in using scientific principles (AACN, 2006, p. 7). As a scholar, I used research methodology and statistical analyses to gather data on staff members' pretest knowledge of hourly rounding and comparing to the posttests to demonstrate knowledge acquisition. Using descriptive

statistics, I was able to determine a 22% decrease in falls and injuries in the LTC setting after the implementation of hourly rounding. These improved research skills have equipped me to complete an evidence-based project to improve clinical practice settings. These skills as a practitioner, as a scholar and as a project manager have enhanced my professional profile and will allow me to make a difference for patients in whatever direction my career takes me.

Summary

Hourly rounding protocol was used to reinforce patient safety and promote positive patient care outcome with residents living in the LTC setting. Hourly rounding as a fall prevention strategy has decreased the numbers of falls and injuries with patients in the DNP project setting. The success of the implementation of hourly rounding required several months of planning, weeks of implementation, and in-depth analysis for evaluation of results. Also, the collaboration with other members of the healthcare team contributed to the over accomplishment in the fall reduction rate. This QI DNP project can be used in many different healthcare settings to promote the importance of patient safety by performing hourly rounding.

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Appendix A: Fall Prevention Through Rounding Curriculum Overview

Learning Outcome(s): Prepare CNAs and Unit staff with basic knowledge of rounding process.			
Nursing Professional Development goal: To assure patient safety through rounding.			
Patient Outcome goal: To reduce the falls rate at ASLS			
Organizational Outcome goal: To improve the nursing home compare rating at ASLS.			
Topical Content Outline	Time frame	References	Teaching method/learner engagement and Evaluation method
Introduction of patient safety in LTC settings	10 min	Hicks, D. (2015). Can rounding reduce falls in acute care? An integrative literature review. <i>MEDSURG Nursing</i> , 24(1), 51-55.	Power Point Presentation
Pre-test on hourly rounding	5 min	Hill, F., & Fauerbach, L., A. (2014). Falls and fall prevention in older adults, <i>Journal of Legal Nurse Consulting</i> , 25(2), 24-29.	Paper Test
Hourly Rounding Presentation Case Study	20 min	Olrich, T., Kalman, M., & Nigolian, C. (2012). Hourly Rounding: A Replication Study. <i>MEDSURG Nursing</i> , 21(1), 23–36.	Power Point Presentation Role Play
Practicalities: How will rounding fit into our day-to-day workflow? What obstacles and barriers do you see and how will we overcome them?	15 min	Meade, C.M., Kennedy, J., & Kaplan, J. (2009). The effects of emergency department staff rounding. <i>The Journal of Emergency Medicine</i> , 20 (10), 1-10.	Questions and Answers Interactive Discussion
Review Competency Checklist	5 min	Johnson, L., & Topham, D. (2007). Reducing falls through RN rounding. <i>Clinical Nurse Specialist</i> , 21(2), 112-116.	Power Point Paper Checklist

Post-test on hourly rounding	5 min	Hill, F., & Fauerbach, L., A. (2014). Falls and fall prevention in older adults, <i>Journal of Legal Nurse Consulting</i> , 25(2), 24-29.	Paper Test
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Appendix B: Falls Prevention Through Rounding Pre and Posttest

Staff Code Number	Date
Unit	Score
1. Patient will be assessed for fall risk	
A. ONLY on admission	
B. When a patient falls	
C. When there is a change in the patient's medical condition	
D. On admission, change in medical condition, every three months, and after a fall.	
2. Hourly rounding is the process of checking on patient during regular intervals to meet their needs.	
A. True	
B. False	
3. What are the four (4) P's that should be asked during hourly rounding?	

4. Hourly rounding can improve patient safety, reduce falls, and improve patient outcomes.	
A. True	
B. False	
5. Other measures that can help prevent falls and injuries	
A. Bed Alarm	
B. Chair Alarm	

C. Yellow Non-Skid Socks

D. Floor Mats

E. All of the above

6. Patients who do not move around in bed should be turned and repositioned during hourly rounding to prevent pressure ulcers
- A. True
B. False
7. Before rounding is completed nursing staff should make room and common areas are free of clutter, walking path is clear, bed in placed in low position, and call bell is in reach.
- A. True
B. False
8. During rounding, if a patient asks for patient medication, how soon should you alert the nurse of patient's pain?
- A. Immediately
B. When you've completed rounding on all your patients
C. At the end of your shift
9. When leaving the patient's room, you should let the patient know you will be back in one hour to check on them again
- A. True
B. False
10. Documentation of hourly rounding should be charted
- A. When rounding is completed
B. The next shift
C. The next day

Note: Data obtained will be used in for hourly rounding DNP project only. Information will remain anonymous and confidential. An implied consent will be used for the pre-test and post-test and will remain as de-identifying data for the DNP project.

The pre and post test was developed by the DNP project leader and will be submitted to facility's nurse educator and director of nursing for review and approval prior to use.

Appendix C: Falls Prevention Through Rounding Competency Checklist

Staff Code Number	Date
Unit	Evaluator
Introduction: Knock on door, enter room, identify yourself, and explain the purpose of the visit.	
Competent () Needs Assistance ()	
Perform Hourly Rounding: Assess for the four (4) P's: pain, potty, position, and possessions, carry out tasks (if needed). Competent () Needs Assistance ()	
Pain: Was patient asked about pain or re-assessed for pain management	
Potty: Was patient asked to go to the bathroom/ or be changed- was task carried out.	
Position: Was patient repositioned in bed/ or placed in new position	
Possessions: Was patient personal possessions placed in reach on bedside table	
Evaluate Patient's Environment: Call bed is in reach, bed in lowest position, and room is clean and free of clutter.	
Competent () Needs Assistance ()	
Inform patient you will be back in an hour and documenting rounding in EHR.	
Competent () Needs Assistance ()	