2017

Hourly Rounding: A Fall Prevention Strategy in Long-Term Care

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This is to certify that the doctoral study by

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Abstract

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MSN, Webster University, 1999

BSN, North Carolina Agricultural and Technical State University, 1985

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

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May 2017

Abstract

Falls and injuries related to falls are some of the most common and costly incidents that occur in the long-term care environment. Purposeful hourly rounding is a proactive way for nursing staff to identify patient needs and demonstrate positive fall prevention outcomes. This project examined a process improvement endeavor of a long-term care unit that experienced an increase in the number of falls over 3 months. The purpose was to evaluate whether staff education and implementation of an evidence-based hourly rounding program would affect the number of patient falls. The Johns Hopkins nursing evidence-based conceptual model, Kurt Lewin's change model, and the Shewhart cycle process improvement model were used to implement the change process as well as the Studer Group best practice hourly rounding tools. A sample of 40 residents was included in a quantitative descriptive design describing the implementation of hourly rounding. Staff were educated 30 days prior to implementation. Pre and post project fall rates were retrieved from the VA fall data management system and revealed a 55% decrease over 3 months post staff education. The use of evidence-based hourly rounding measures increased over the same time period. Nurse leaders must ensure rounding programs are evidence-based, clearly defined in policies, and include robust education plans. There are limited studies on the relationship between education and hourly rounding; therefore, future studies should focus on outcomes of initial and ongoing education for program success and sustainability. Falls are a healthcare concern nurses must address at any point-of-care to promote public safety through prevention and to facilitate positive social change by providing a safe hospital environment.

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Acknowledgments

It is with special thanks and acknowledgement to my course mentors and preceptors, Dr. Darlene Scott, Dr. Beverly Owens, Dr. Robert McWhirt and the Walden University committee faculty for their guidance throughout my doctor of nursing practice journey.

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Introduction

Nursing staff in long-term care (LTC) facilities are faced with the arduous task of keeping their patient population safe from falls and injuries related to falls on a daily basis. Patients, or residents within the LTC environment, are generally age 65 years and older with extended lengths of stay, numerous comorbidities, taking multiple medications and experiencing functional decline. Nursing home residents may present with a combination of the above characteristics and are therefore at an increased risk to fall and sustain a major injury. When considering the number of residents nursing staff are responsible for during a given shift, it is clear how imperative it is to implement fall prevention measures to address individual care needs and promote patient safety.

Falls are a major health concern for aging adults, the World Health Organization (2016) reported that 20% to 30% of older adults experience moderate to major injuries from falls and are at greater risk for mortality from fall related injuries. Neily, Quigley, and Essen (2015) explained nearly 3% to 20% of inpatients fall at least once during a hospital stay and patients in acute and rehabilitation facilities experience 30% to 51% of injurious falls. Falls and injuries related to falls significantly impact the quality of life and increase health care cost. In an effort to reduce injury, cost, and promote a safe environment, long-term care organizations must implement evidence-based fall reduction strategies supported in current literature. Fall prevention strategies must be multifactorial and address functional, physical, psychological, and educational components. In addition,

LTC nursing staff must utilize collaborative interdisciplinary prevention measures to reduce the likelihood of falls and injuries related to falls (Wexler & D'Amico, 2015).

Hourly rounding is known as a nurse-led proactive strategy to anticipate patient needs while utilizing evidence-based interventions (Deitrick, Baker, Paxton, Flores, & Swavely, 2012). Conducting hourly rounds requires nursing staff to check on their patients during specific time frames, but it also requires staff to make critical assessments of surroundings and take actions to promote patient safety, improve the quality of care, and enhance team communication (Forde-Johnston, 2014).

The most common evidence-based outcome measures used during hourly rounding are the 4Ps (pain, position, personal needs, and placement). These components can be associated with risk assessment tools based on national standards and criteria from accrediting agencies (Forde-Johnston, 2014). Therefore, patients at risk for falls should be monitored and assessed hourly to ensure their personal needs are met and the environment is free from obstacles to help reduce the likelihood of experiencing falls and fall-related injuries (Forde-Johnston, 2014).

This project evaluated a LTC unit that experienced an increase in the number of falls and explored how education and implementation of an evidence-based hourly rounding process combined with other multifactorial fall prevention strategies impacted the nursing sensitive indicator of falls. Hourly rounding provides nursing leadership with identified problems at the point-of-care in order to ensure nursing actions are developed to improve patient-centered outcomes. The outcome measures provide leadership with valuable information for planning future nursing care for the population being served. Providing

education on evidence-based measures to reduce resident falls for the long-term care population is an organizational priority and leads to the evaluation of the effectiveness of hourly rounding.

Problem Statement

Patient safety is at the forefront of all patients receiving care within a health care organization. Health care team members are responsible for protecting their patient populations from falls and injuries related to falls. Residents in LTC facilities are more likely to experience fall episodes because of long lengths of stay, multiple comorbidities, polypharmacology, functional decline, and advanced age (Healey & Darowski, 2012).

Falls occur commonly with aging populations and have been identified as the second leading cause of unintentional injury deaths worldwide (Yoshida, 2007). Given the global impact of falls on the aging population, it is understandable why fall reduction programs must be implemented to help reduce falls and injuries associated with falls. In addition to injury, the cost associated with falls and fall related injuries can be extremely costly. Neily, Quigley, and Essen (2015) cited a study by Wu et al. in the VA National Patient Safety Center Implementation Guide for Fall Injury Reduction which explained that patients with two falls or more without serious injury incur an estimated annual health care cost of $16,000 and falls with serious injury can cost up to $27,000.

The problem in the current project is that residents within a LTC unit experienced a significant increase in the number of falls over a 3-month time span. Hourly rounding was being conducted without the use of evidence-based concepts of purposeful or intentional rounding to demonstrate measurable outcomes and its relationship to falls.

Advanced practice nurses must maintain current knowledge to ensure optimal patient care is carried out, therefore, it is important for LTC nursing staff to be educated on the link between professional, financial, and operational foundations behind the practice of hourly rounding and the relationship between the outcomes and the organizations strategic plan for promoting a safe environment (Kelly, 2011).

It is essential for frontline nursing staff to understand the importance of their role and impact of specific nursing activities associated with *purposeful rounding*. Staff must understand how their activities translate into daily practice measures that promote safety, improve satisfaction, and reduce falls and cost associated with falls. Nurses must learn to depend on their clinical judgment and expertise to manage population-specific fall prevention strategies as a part of an interdisciplinary team (Quigley, 2015).

The focus of this project was to examine the education and implementation of an evidenced-based hourly rounding program to assist in reducing the number of falls. The PICO problem is as follows:

P (patient, population, or problem): Residents on a LTC nursing unit

I (intervention): Education on purposeful rounding provided to nursing staff for implementation

C (comparison): Pre and post

O (outcome): Falls reduced by 10%

Nursing staff on a nursing home unit with approximately 40 beds experienced an increased fall rate from 6.0 to 11.0 per 1,000 bed days of care over a three-month period. The standards for outcome measures of the organization were based on the Veterans

Health Administration's National Center for Patient Safety (NCPS) goals and the Joint

Commission's National Patient Safety Goals related to reducing falls. A fall rate of 5.45

per 1,000 bed days of care was used as an aggregated average measurement. In addition

to increased fall rates, the nursing unit faced challenges with staffing shortages and

changes in nursing management and leadership. The nursing staff mix consisted of

registered nurses (RNs), licensed practical nurses (LPNs), and nursing assistants (NAs).

Nursing staff work three shifts (days, evenings, and nights) following 12- and 8-hour

schedules with an RN on each shift.

Implementation of an hourly rounding program on the LTC unit was in

accordance with the strategic goals of the organization. The organizational strategic goals

focused on patient satisfaction, coordination of care, and patient safety initiatives.

Individuals in the nursing profession have a responsibility to protect the patient

populations they serve, and therefore it is imperative for nurses working within LTC

environments to implement fall reduction programs such as purposeful rounding to

identify factors that contribute to an individual's potential to fall and help minimize the

risk and harm for the older population.

Purpose Statement and Objectives

The purpose of this project was to evaluate the impact of education and

implementation of an evidence-based purposeful rounding program against the unit fall

rates. The overall objective upon completion of education was to evaluate the compliance

of nursing staff performing the components of purposeful rounding over 3 months and to

achieve a 10% reduction in falls. Alternative outcomes from the expected goal were

considered using clinical reasoning to develop optional strategies to evaluate alternative outcomes (Simmons, 2010).

Simmons (2010) explained clinical reasoning is a complex process that utilizes formal and informal thinking methods to gather and evaluate patient information to determine the value of alternative actions. An alternative outcome for this project may result in no change in the number of falls, or the number of falls may increase in relation to the education provided. Simmons (2010) cited nursing studies from Bynes & West, 2000, Funkesson et al., 2007, and Banning, 2008 regarding clinical reasoning and informal thinking strategies which included pattern recognition, setting priorities, and making generalizations.

Identification of historical patterns with inconsistent documentation and frequent changes in staffing were considered. The number of nursing staff participants educated would affect how well the education and use of tools were put into practice during each shift for effectiveness. Priority setting assist with proactive advertisement to ensure awareness of the project in advance to minimize and address concerns that arise from the change process. Generalizations can be made that all staff are able to put into practice what they learned and that all staff will use the tools developed 100% of the time. This is nice, but not realistic.

During this project education was provided to nursing staff prior to the implementation of hourly rounding. Alternative outcome considerations need to be made to acknowledge and plan for potential adjustments that could lead to a different outcome. By applying a clinical reasoning strategy such as informal thinking, potential issues with

documentation compliance, training times to educate staff, and generalizations regarding staff use of tools for application were considered as things that could impact the outcome of the project from what was originally expected.

Nature of the Doctoral Project

The World Health Organization's global report on fall prevention revealed the incidence of falls among LTC residents was approximately 30% to 50% a year, and 40% of those residents' experienced repeat falls (Yoshida, 2007). Approximately 20% to 30% of falls resulted in hip fractures and 20% of hip fractures led to death within six months of the injury (Yoshida, 2007). The Centers for Disease Control and Prevention (CDC, 2015) reported that 22,900 older adults died as a result of fall-related injuries in 2011. The direct cost of fall-related injuries for adults 65 years and older was estimated at $34 billion and Medicare cost averaged between $14,306 and $21, 270 per a fall (CDC, 2015). Therefore, it is essential that health care organizations make every effort to reduce falls and the cost associated with falls by implementing standardized evidence-based fall prevention strategies.

In addition, Wagner, Damianakis, Mafric, and Robinson (2010) explained falls are the most frequently reported adverse events in LTC facilities. Approximately one half of LTC residents fall annually, which was found to be 2 to 3 times greater than in the community. Performing hourly or purposeful rounding in the LTC environment is one way of meeting basic care needs to help reduce the risk of harm from falls.

Hourly rounding time frames may be designated for every 1 or every 2 hours to ensure patients receive appropriate attention to their individual needs. The use of hourly

rounding addresses nursing indicators such as pain, positioning for relief of pressure ulcers, hydration, toileting, environmental safety measures, and patient satisfaction (Mason, 2012).

Hourly rounding is not a new concept; nurses have been conducting some form of hourly rounding since the middle of the 20th century. The importance of hourly rounding resurfaced in the United States when nursing shortages increased on inpatient units (Olrich, Kalman, & Nigolian, 2012). During that time, the quality and compassion of nursing care was being questioned and the need for systematic and routine interactions with patient rounds emerged. Forde-Johnston (2014) emphasized that intentional rounding was introduced in the United States as an evidence-based approach because it was found to improve patient outcomes and experiences. Intentional rounding was initially utilized to document behaviors on a checklist during nursing rounds. The term *intentional rounding,* or rounding with a purpose*,* was developed in Owensboro Medical Health System in Kentucky and the history of intentional rounding has been linked to the term *back rounds* from the 1970s and 1980s (Forde-Johnston, 2014). *Back rounds* were task-oriented rounds used to reposition patients every 2 hours to reduce pressure ulcers and promote comfort. The difference between *back rounds* and *intentional rounds* is that *intentional rounds* are performed with a specific purpose that is measurable and documented. Monitoring the intent of the round is what makes the difference and reduces the risk.

Consider the patient on bed rest who constantly reaches for a cup of coffee from the bedside table; if nursing staff ensure the bedside table is within reach during rounds, it

will decrease the risk of the patient falling while reaching for the cup. Another example would be the patient with lower extremity weakness who gets up on his or her own to go to the bathroom because his or her call bell is nowhere in sight. If nursing staff routinely ensure the call bell is within reach and remind the patient to call for help during purposeful rounding, this will also reduce the risk of a fall and possible injury.

Significance/Relevance to Practice

Falls have been designated as a nursing-sensitive indicator by the American Nurses Association since 1995 (Quigley, 2015). Nurses play an essential role in the prevention of falls and maintaining the safety of an individual patient's environment regardless of the care setting. Nurses can determine the value of an evidence-based fall prevention program by utilizing a strategy such as purposeful rounding to demonstrate positive outcomes. Some of the outcomes include a reduction in falls and fall-related injuries, improved patient satisfaction scores, and cost savings.

Fall-related outcomes are essential to the leadership of health care organizations since positive outcomes demonstrate a commitment to the culture of safety and quality by benchmarking quality measures against other like organizations (Quigley & White, 2013). Therefore, nurses are critical in bridging the gap between practice and fall-related outcomes to promote a culture of safety, quality, and organizational change through a fall prevention strategy such as *purposeful rounding*.

Project Question

Will education and implementation of an hourly rounding program for nursing staff directly impact the number of falls among LTC residents?

Evidence-Based Significance of the Project

The NCPS is the Veterans Health Administrations (VHA) leading patient safety resource with a goal of reducing and preventing harm to patients while receiving care. In May 2015, falls were the most frequent event type reported to the NCPS and the second highest sentinel event reported in 2014 to The Joint Commission (NCPS, 2015). Reducing falls and injuries related to falls was significant enough that the NCPS developed a falls tool kit website as a resource to help VHA organizations develop robust fall prevention programs. The falls tool kit recommends the integration of injury risk into purposeful rounding as a part of the clinical practice change. *Purposeful rounding* is the execution of the individualized plan of care and serves as a means to evaluate an organizations fall program (NCPS, 2015).

The Agency of Healthcare Research and Quality (AHRQ, 2013) highlighted the importance of educating all health care team members and integrating an hourly rounding protocol into daily patient care activities of nursing staff as one of the best practice measures that can be utilized as a fall prevention strategy. In addition, the Studer Group (2007) developed an evidence-based tool on hourly rounding as a model for tracking patient outcomes in relation to purposeful rounding.

Implications for Social Change in Practice

The Centers for Medicare and Medicaid Services (CMS, 2014) identified falls and fall-related injuries such as fractures as hospital acquired conditions that could be prevented with the use of evidence-based guidelines. In addition, evidence on the quality of health care supported that 27% of nursing time was spent in direct care (CMS, 2014). This minimal percentage of time adversely impacts nursing-sensitive indicators. The ability to link processes to outcomes with quality indicators, such as falls, helps nurses and the Doctor of Nursing Practice (DNP) nurse leaders to identify, change, and understand the modifications needed to affect change (Zaccagnini & White, 2012).

The goals of outcomes management are to increase quality of care and decrease adverse events. Nitz et al. (2012) emphasized that the implementation of evidence-based fall prevention strategies within LTC facilities results in cultural changes. Improvements in outcomes related to the resident's environment and education for staff and family members contribute to positive outcomes. Increased surveillance and attention to basic care needs by staff improves the quality of care and contributes to the reduction in the number of falls and injuries related to falls (Nitz et al., 2012).

Although the concept of hourly rounding is not new as expressed by Olrich, Kalman, and Nigolian, (2012), staff encounter many challenges that may lead to undesirable or unexpected results. When there is a trend of undesirable results, there is a need for positive change of the current practice. The Shewhart cycle, also known as the plan, do, check, act (PDCA) cycle (Kelly, 2011), is a continuous improvement model that health care facilities can use to ensure staff put into practice interventions to meet

outcome measures for such things as safety and prevention of injuries related to falls. An

example of the PDCA cycle in relation to this project with the implementation of

purposeful rounding appears in Figure 1.

PLAN	Identify problem/plan change	➤ Increased falls on LTC unit
DO	Implement the change	➤ Educate staff, conduct trial of purposeful rounding
CHECK	Collect data/analyze results/identify difference	➤ Collect monthly data on rounding components and number of falls
ACT	Implement needed changes/continue to assess effectiveness	➤ Implement changes identified from evaluation of data

Figure 1. Shewart PDCA Cycle

Implementation of purposeful hourly rounding allows nursing staff to spend more

time at the bedside attending to the direct care needs of the residents and therefore will

communicate to leaders, family members, and stakeholders that patient safety and quality

of care is the nursing staff's priority for patient-centered care. This is in line with

transforming quality of care and maintaining a culture of safety.

Definitions of Terms

The following definitions guide the project:

Fall: An unplanned descent to the floor with or without injury to the patient

(AHRQ, 2013). The loss of an upright position that results in landing on the floor or

ground, uncontrollable, unintentional, and nonpurposeful, excluding falls from violent

blows or other purposeful actions (NCPS, 2015).

Fall-related major injury: Any fall that results in fractures and/or trauma requiring emergency treatment, such as head trauma, behavioral changes, and death as a result of the fall (NCPS, 2015).

Purposeful rounding: A nurse-driven, proactive, evidence-based systematic process with interventions that help anticipate and address individual patient care needs.

Hourly rounding: Purposeful rounding applied in practice every 1 hour for patient care activities.

Intentional rounding: A therapeutic relationship with the patient through verbal communication, guidance of care plans, use of risk assessment tools, and documentation of essential care of the patient during the shift (Forde-Johnston, 2014).

Nursing staff: Refers to RNs, LPNs, NAs and health technicians (HTs) working as frontline staff.

Long-term care (LTC) unit: A unit that encompasses residents for 30 days and greater. Includes rehabilitation, nursing home, and hospice residents.

Assumptions and Limitations

Limitations to the project include that this is a veteran population and there is a greater number of men than women. The average age group in the LTC facility is approximately 65 years and older. There is a mix of rehabilitation and hospice residents included in the study. A large portion of the population are diagnosed with dementia and are high risk for wandering or elopement. Many of the residents are ambulatory on the unit.

Staff are required to record completed interventions on a hard copy form and also have to document data in the computerized patient record. Manual documentation of data may account for some duplication of information as it is translated from a hard copy tool to the computerized patient record.

The nursing care delivery model is a mixed model and may not allow the staff to work as a team to conduct the hourly or purposeful rounding. This may result in the unlicensed nursing staff bearing the sole responsibility of performing hourly rounding on the unit.

Summary

This section outlined the need for review of the implementation of a purposeful hourly rounding project to help promote a safe environment for the residents. Developing and implementing an hourly rounding project on the LTC unit will help nursing staff demonstrate the impact of direct nursing care on the nursing quality indicator of falls. The project will help illustrate nursing outcome measures and nursing's contribution to quality of care.

Section 2: Background and Context

A literature review was conducted to describe past and current data published on hourly and purposeful rounding related to fall reduction programs. The literature review is also used to critically appraise data for its relevance based on the research question. The purpose of this review is to establish the value of previous research on the topic being studied (Terry, 2012).

In order to review the literature, a search was conducted using the Cumulative Index to Nursing and Allied Health Literature (CINAHL), MEDLINE, and the Cochrane Database of Systematic Reviews. The key terms used for the search were *falls, injuries, long-term care, nursing homes, extended care, patient safety, hourly rounding, intentional rounding, purposeful rounding, walking rounds, older adults,* and *elderly*.

Conceptual Models and Theoretical Frameworks

The Johns Hopkins nursing evidence-based model was used during this project. The model utilizes a problem-solving approach for clinical decision making to integrate the best evidence into practice. The goals of the model are to assure high quality care, promote optimal outcomes, promote patient satisfaction, quality of life and create a culture of critical thinking and ongoing learning (White & Dudley-Brown, 2012). Newhouse, Dearholt, and Poe (2007) explained that the Johns Hopkins nursing model is a process that allows consideration of internal and external influences on the practice, as in this project of hourly rounding and encourages nurses to critically think while applying the evidence (see Figure 2).
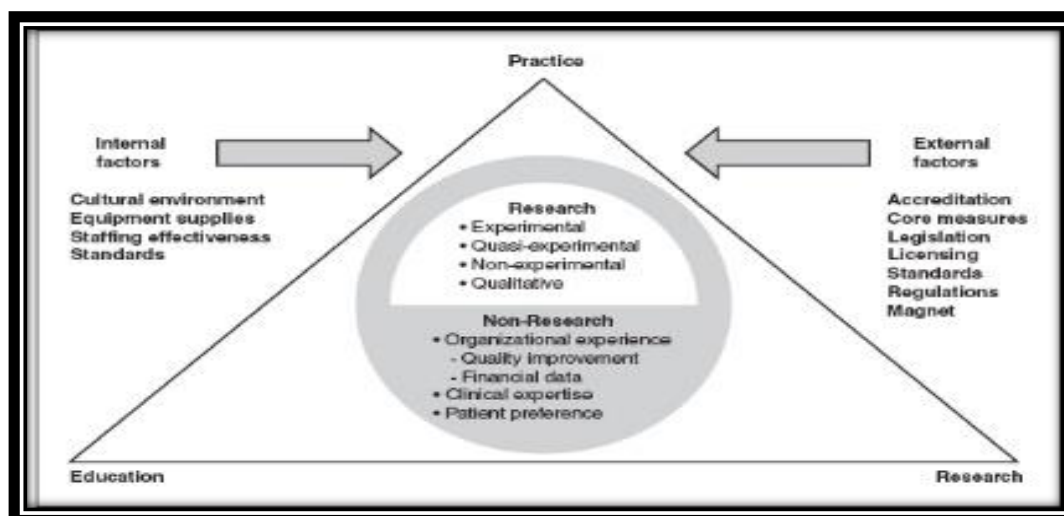
Figure 2. The johns hopkins nursing evidence-based conceptual model. © Permission from The Johns Hopkins Hospital/The Johns Hopkins University.

In addition, the Kurt Lewin model describes a common planned change theory of unfreezing, movement, and refreezing. This change model is used when planning to implement new ideas to staff members (McEwen & Wills, 2011). Rondinelli et al. (2012) explained clinical excellence is demonstrated in patient outcomes when patient satisfaction and quality is improved. Nursing staff can achieve improved satisfaction and patient safety when various interventions are carried out independently.

A descriptive study design such as a case study can be used with addressing the impact of the educational efforts on staff regarding the implementation and compliance of hourly rounding. Grove, Burns, and Gray (2013) explained case studies explore single units of study and descriptive correlation designs to evaluate relationships that exist between criteria elements for hourly rounding and resident falls. This project will be an evidence-based process improvement endeavor.

Importance of Fall Prevention Strategies

Providing a Safe Environment

Ensuring safety and protecting patents from injury in LTC facilities is important to nursing, health care organizations, patients, and their families. Nursing staff spend 24 hours a day, 7 days a week providing direct care to their patients. For that reason, nursing staff need to have the appropriate knowledge, skills, and resources to protect their residents from falls and injuries related to falls to promote a culture of safety.

Nurses have to keep the end in mind as they think about the significance of a fall and fall-related injuries. Moncada (2011) reported that falls are the leading cause of death from injury in adults 65 years and older. Twenty-five percent of older adults die from injuries related to falls (Moncada, 2011). Injuries may range from something as minor as a bruise or laceration to something as major as a hip fracture or traumatic brain injury. Major injuries have been reported as resulting in 1.9 million emergency room visits annually (Moncada, 2011). Patients that end up in a nursing home as a result of a major fall injury, combined with the fact that nursing home residents are already at high risk for falls, puts them at a risk that is 3 times greater than a community dwelling adult to experience a fall (Moncada, 2011).

Healey and Darowski (2012) conducted a systematic review and found effective fall prevention strategies led to a 20% to 30% reduction in falls when multifactorial assessments and interventions were used. The most common approach for health care organizations to prevent falls and fall-related injuries is to implement multiple universal interventions, such as risk assessments, fall prevention education, medication reviews,

mental health evaluations, and assessment of environmental factors (Ang, Mordiffi, & Wong, 2011).

In regards to risk assessment, interdisciplinary staff should meet periodically to evaluate a resident's surroundings for the availability and use of equipment such as toilet seats, fall mats, wheelchairs, bed/chair alarms, and call bells (NCPS, 2015). In addition, nursing staff should use a reliable and valid fall risk assessment tool to identify risk factors in an effort to implement preventive measures and improve the environment. Baek, Piao, Jin, and Lee (2013) emphasized that The Joint Commission International recommended the use of a tool that focuses on effectiveness, patient symptoms, and nursing workload. The Morse Falls Scale is one of the most commonly used fall-related assessment tools in clinical trials and has been deemed a major component in fall prevention that meets The Joint Commission International recommendations (Baek et al., 2013). The Morse Fall Scale is a valuable inpatient tool used to categorize patients as low, medium, or high risk for falls.

Over the years, researchers have conducted studies on strategies to help staff reduce falls and implement safe practice measures. Wagner et al. (2010) used a focus group method to demonstrate the importance of fall risk information and methods for risk identification, communication, and responses among licensed and unlicensed staff in LTC facilities. A fall risk assessment is essential in a fall prevention program as well as including frontline staff in quality improvement processes to enhance communication regarding fall prevention strategies. A gap noted in the study was the self-selection of participants, which led to a limited sampling of the staffing mix (Wagner et al., 2010).

Therefore, staffing patterns, roles, and responsibilities will have to be clearly defined for all members of the health care team involved in the fall prevention program. The health care team must be educated on the operation of equipment (i.e., beds, mechanical lifts, and assistive devices), facility culture of safety, values, and customer service endeavors in order to communicate and perform safety measures to enhance the level of quality.

Ang et al. (2011) conducted a randomized control trial to evaluate the effectiveness of multiple intervention strategies in reducing the number of patient falls. This study revealed that multiple interventions were effective in reducing falls, but the authors only studied one center in an acute care facility. On the other hand, the researchers had adequate time to implement an individualized approach with multiple interventions (Ang et al., 2011). Of note, this study highlighted targeted multiple intervention strategies, which seemed to be effective in reducing falls in older adults living in community and residential facilities. Ang et al. (2011) cited universal approaches as being inadequate in preventing falls and therefore further studies needed to be conducted. Universal fall prevention measures include such things as specific identifiers such as the use of a yellow arm band, yellow star on the door, and color coded nonskid socks to identify patients as high risk for falls known throughout the facility.

Nitz et al. (2012) conducted a prospective cohort study to measure the impact of the number of falls after implementing evidence-based fall prevention strategies in residential care facilities. An action research approach was used with patient specific interventions. The study included 670 residents and 650 staff from nine facilities and

three states (Nitz et al., 2012). Results varied between facilities, but there was a

significant reduction in falls per a site. The total number of falls was reduced by 67% by

all facilities studied, but the number of repeat fallers was noted to increase (Nitz et al.,

2012). The authors noted that the multifactorial fall prevention measures were not

consistent throughout each facility studied. The study lacked adequate information on

environmental interventions that would assist in reducing falls. Other patient specific

interventions included balance and strengthening exercises, recreational activities, and

pharmacologic reviews (Nitz et al., 2012).

Hempel et al. (2013) conducted a systematic review of 59 studies to evaluate the

implementation, components, comparisons, adherence, and effectiveness of fall

prevention approaches among acute care hospitals in the United States. Inconsistent

reporting of outcomes from all components studied led to gaps in the data. Hempel et al.

(2013) found that most of the interventions (81%) were geared towards provider behavior

such as use of new risk assessments or protocols. Despite these findings, it was noted that

knowing whether fall prevention approaches were effective required consistent

documentation to draw conclusions (Hempel et al., 2013). The previous studies focused

on multiple strategies used to implement a falls reduction program and presented findings

to support and/or improve sustainable interventions for nursing staff and other health care

professionals involved in the prevention of injuries and the reduction of falls to keep their

patient populations safe.

Rounding Strategies

Thus far, many literature reviews reported when fall prevention programs are implemented successfully, the result is a decrease in adverse patient events and improved patient/staff satisfaction. The Department of Health, Quality, Innovation, Productivity and Prevention, which is recognized as the safe care coalition, identified hourly rounding as a method of keeping patients free from harm by reducing the risk of falls and pressure ulcers (Hodgson, 2012). Hourly rounding was known in the past as a traditional method referred to as *back rounds*. *Back rounds* involved two nurses rounding on each patient and attending to their care needs such as in hourly rounding today (Bates, 2011). As a result, the nurses were able to spend more time with their patients, reduce pressure ulcers, and attend to the patient's immediate care needs in the same way practitioners describe the outcomes of hourly rounding today.

Melnyk (2007) reviewed the level of evidence and the implications for practice on an hourly rounding research study conducted by Meade, Bursell, and Ketelsen (2006). The quasi-experiment compared three study groups performing hourly rounding with specific protocols. The three categories studied included: hourly rounding, 2-hour rounding, and no rounding. The results demonstrated hourly rounding was more effective than 2-hour and no rounding at all for call light usage, patient satisfaction and the number of falls. Melnyk (2007) pointed out that the study was rated as a Level III for the hierarchy of evidence, which is defined as evidence being obtained from well-designed controlled trials without randomization based on the rating system for the hierarchy of evidence (see Figure 2).

Level I: Evidence from a systematic review of all relevant randomized controlled trials (RCT's), or evidence-based clinical practice guidelines based on systematic reviews of RCT's
Level II: Evidence obtained from at least one well-designed Randomized Controlled Trial (RCT)
Level III: Evidence obtained from well-designed controlled trials without randomization, quasi-experimental
Level IV: Evidence from well-designed case-control and cohort studies
Level V: Evidence from systematic reviews of descriptive and qualitative studies
Level VI: Evidence from a single descriptive or qualitative study
Level VII: Evidence from the opinion of authorities and/or reports of expert committees

Figure 3. Levels of evidence rating system (Melnyk, 2007).

Although there was strong evidence to support the benefits of hourly rounding, the review showed the need for additional randomized control trials to demonstrate the strongest level of evidence with relationships. In addition, it was recommended that cost benefit analysis and follow-up studies be conducted for units that decided to adopt the hourly rounding program (Melnyk, 2007).

Rondinelli, Ecker, Crawford, Seelinger, and Omery (2012) conducted an action research design study on 11 facilities regarding their processes, structure, and outcomes with hourly rounding. This study only included populations from one state and found that implementing multiple components of fall prevention with rounding led to a decrease team focus and limited resources. Overall, rounding was recommended to be customized to the unit, staff, and patient needs should be observed for improvements in fall reduction (Rondinelli et al., 2012). It is important that unit and facility leaders are on board with the implementation strategies. Obtaining methods of continuous feedback from staff and

patients is essential when implementing methods for rounding. Rondinelli et al. (2012) highlighted that there are major aspects involved in rolling out a rounding process improvement program on a unit. The implications of the study emphasized the uniqueness of implementing structures, processes, and outcomes to meet the individual needs of patients and staff within the scope of the practice area.

Frontline Staff Considerations

Although this project focused on LTC facilities, it is important to evaluate fall prevention strategies in the acute care settings and focus on a specific fall prevention strategy in order to compare its effectiveness, which can be tailored within the LTC environment based on outcomes. One of the common interventions conducted by nursing staff for fall reduction is *purposeful o*r *hourly rounding,* terms which are often used interchangeably. Goldsack, Bergey, Mascioli, and Cunningham (2015) conducted a 1-month prospective pilot study to evaluate the effectiveness of patient-centered proactive hourly rounding compared to fall rates during a process improvement project on two units. The authors found the use of interdisciplinary teams, unit champions, education, frontline staff and leadership involvement significantly contributed to a reduction in fall rates. The study was designed using the principles of (a) avoiding repetition of current strategies, (b) ensuring patients were active participants, and (c) building a culture of accountability with staff buy-in (Goldsack et al., 2015). All of these principles are important to consider for implementation of hourly rounding within the LTC care setting. Monitoring staff compliance, leadership observations, and frontline staff feedback were considered in the results. The project revealed a decrease in fall rates, but a noted

limitation was the short period of time for the study. It was also emphasized that evidence

demonstrated hourly rounding alone is not an effective prevention strategy and it must be

combined with other fall prevention strategies to be effective. Involvement of leadership

throughout the entire process was essential for sustainability of the change process.

Staff perceptions and perspectives in the implementation of an hourly rounding

program also provides essential information when initiating a fall prevention project.

Fabry (2014) conducted a descriptive analysis on a survey study with 67 frontline staff

members. The study found 25% of the RNs felt an ownership of the hourly rounding

initiative, whereas 23% thought that completion of a hard copy hourly rounding

documentation tool actually validated the completion of hourly rounding. When a change

project is initiated, it is important to gain the input and involvement from the direct care

staff members. Knowing the barriers and challenges faced by a particular unit prior to

implementing an evidence-based project will aid in the appropriate translation of the

practice at the bedside (Fabry, 2014).

McLeoad and Tetzlaff (2015) explained that frontline nursing staff experience

challenges and frustrations when attempting to implement purposeful or hourly rounding;

therefore, implementation should be customized to the unit. Implementation of hourly

rounding forces staff to change the way they work in a completely different way to

accommodate an hourly rounding schedule. It is important that unit leaders be vigilant in

using a planned change process such as the PDCA cycle when implementing hourly

rounding. Frontline staff must be included in all aspects of the process and understand the

value and expected patient goals of purposeful rounding procedures. Providing staff with

the oral or written intent of task to be accomplished when entering and exiting the

patient's room as well as using scripts assist staff in developing a daily routine. These

methods help staff realize they are not just completing another task, but they are carrying

out purposeful work. Of special interest, leaders should perform *validation rounding*

(McLeoad & Tetzlaff, 2015). Validation rounding requires the leaders to round on the

patients and the staff. Inquiries from patients include information as to whether needs

were met and the level of satisfaction. Inquiries from staff include questions regarding

resources, technology, barriers, and challenges encountered with accomplishing

purposeful rounds (McLeoad & Tetzlaff, 2015).

Forde-Johnston (2014) conducted a literature review to evaluate the use and

effectiveness of hourly rounding on patient outcomes. Of note, the studies were reviewed

starting in the year 2006 when the term *intentional rounding* originated. Nine studies met

the criteria for intentional rounding. Two of the most extensive reviews were conducted

by the Studer Group (2007) and Meade et al. (2006) where quasi-experimental studies

were done to evaluate the effects of intentional rounding. Meade et al. reported that there

was a 12-point increase in patient satisfaction, 50% reduction in falls and a 38%

reduction in the use of call bells. There was a significant correlation between the

reductions in falls related to hourly rounding as opposed to rounds conducted every two

hours.

Hicks (2015) performed an integrative literature review of fourteen studies within

the acute setting to summarize current knowledge and help guide future nursing practice.

The evidence demonstrated fall rates were reduced as a result of rounding in all but three

studies. Although fall rates vary from one patient population to another, Hicks (2015) recommended that additional research be conducted with different populations during the same time to compare findings. It is imperative for nursing staff to be educated and committed towards the practice of rounding in order to gain the benefits of the practice. Nurse leaders initiate hourly rounding in an effort to improve effectiveness and address the benefits of reducing falls (Hicks, 2015).

Olrich et al. (2012) conducted another quasi-experimental study on two medical-surgical units measuring three variables; fall rates, patient satisfaction and call bell usage. The study revealed a 23% decrease in falls which was described as being clinically significant, but statistically insignificant. This demonstrated the importance of the staff sustaining the practice to achieve a change (Olrich et al., 2012). Overall, hourly rounding was found to have a positive impact on falls, patient satisfaction, and call bell usage. Building the patients trust to expect staff members would return to check on them led to a strong recommendation that nurse leaders should recruit unit champions as they implement rounding to ensure activities were performed consistently during all shifts (Olrich et al., 2012).

Hill and Fauerbauch (2014) emphasized the importance of units implementing patient-specific fall prevention measures in an effort to reduce the financial burden on the patients, family members and the health care organization. Hill and Fauerbauch (2014) reiterated that CMS will no longer reimburse health care organizations for injuries obtained by patients that fall while hospitalized. Therefore, strategies such as frequent checks or hourly rounding should be deployed to ensure patient safety by attending to the

residents' personal needs. The use of the 4Ps (potty, pain, positioning, and possessions) was emphasized as well as documenting the rounding measures to assist in litigating cases if needed (Hill & Fauerbauch, 2014).

Falls are recognized as a nursing quality indicator monitored by agencies such as the National Database of Nursing Quality Indicators, the National Quality Forum and the Collaborative Alliance for Nursing Outcomes. Nursing quality indicators should be implemented as autonomous nursing functions by frontline staff in order to achieve expected outcomes. Hourly rounding is an evidence-based autonomous nursing intervention. Trepaniar and Hilsenbeck (2014) reported an evidence-based study that used hourly rounding as a critical component during the implementation of a process improvement endeavor to standardize a fall prevention program within a health care system of 50 hospitals across 11 states. The standardized fall prevention program was aimed towards implementing multiple patient-specific interventions with an outcome of decreasing falls with injuries. The organization reported experiencing a 58.3% decrease in falls and a cost savings of approximately $776, 064 over two years. A notable positive change was the link with one-on-one observation of the cognitively impaired older population (Trepaniar & Hilsenbeck, 2014).

Krepper et al. (2014) set out to conduct a 6-month hourly rounding study that focused on a formal standardized education program. In addition, an evaluation of sustainability was performed. This study was conducted due to a gap in the literature regarding staff education related to outcomes. A quasi-experimental study was done with two groups on acute care units. A structured 4-hour education program was deployed

with the use of role playing and videos on the components of implementation and documentation of hourly rounding. A significant change in the number of falls in relation to the hourly rounding was evident due to the baseline fall rate being low.

As a result of the study surveys and staff perceptions, hard copy forms used to document hourly rounding actions were converted to white boards to communicate rounding information to patients and family members. It was suggested that further studies need to be conducted to evaluate the effectiveness and efficiency of patient care outcomes related to educational efforts (Krepper et al., 2014).

Moncada (2011) highlighted a Cochran review of four randomized control trials which found it was effective to conduct multidisciplinary team approaches and multifactorial interventions for nursing home residents because falls were reduced by 40% and risk of hip fractures were reduced by 52%. The interventions included environmental safety measures such as ensuring the bed was in the low position, bed/chair alarm usage, appropriate footwear, adequate lighting in rooms and patient/family education. The American Geriatrics Society weighed in with the inclusion of environmental interventions as evidence-based modifiable fall prevention measures. All of these interventions can be performed by nursing staff during purposeful or hourly rounds.

The AHRQ (2013) emphasized the importance of hospitals implementing universal fall precautions as a part of their culture. A key component of fall prevention measures is the incorporation of an hourly rounding protocol to keep the patients' environment safe by frontline nursing staff.

Role of the DNP

The advanced practice nurse demonstrates the ability to integrate knowledge, skills, research findings and current evidence into practice for the population being served. It is important for the DNP nurse leader to use transformational leadership skills to facilitate change during a process improvement project to empower team members working towards a common goal (Zaccagnini & White (2012).

The DNP functions as a nurse leader, change agent, facilitator, and educator when involved in a project such as this one. The emphasis is on analyzing research findings and best practice outcomes for fall prevention strategies which include purposeful rounding and the impact on falls in the LTC population. The information is utilized to evaluate a unit's implementation of hourly rounding and identify best practices for future endeavors to translate new knowledge into practice. Finally, one of the essential roles of the DNP nurse is to apply scholarship to disseminate findings and outcomes to the nursing profession.

The focus on patient safety is at the forefront of this project concentrating on reducing falls and injury for LTC residents. Therefore, the importance of collaboration with disciplines outside of nursing is vital to develop a multidisciplinary team approach and implement the change process to ensure multifactorial fall prevention strategies are addressed. Staff input and feedback obtained during the planning phase assist in decreasing barriers and building trust with frontline staff. A clear understanding of the purpose and actions of the project is needed to drive positive outcomes and translate evidence into practice.

Summary

This section highlighted literature on fall prevention strategies of the entire health care team to maintain a safe environment for the patient population. Significant findings from implementing hourly rounding strategies were reviewed from multiple studies which publicized the impact on patients, staff and health care organizations for consideration in future evidence-based projects. The role of the DNP nurse is essential during a change process and is clearly different from other doctoral roles. It is important for the reader to understand the DNP prepared nurse focuses on translating the best evidence and knowledge into practice. The Johns Hopkins nursing evidence-based practice model and the Kurt Lewin change models were introduced to establish the groundwork for process planning of the project.

Section 3: Collection and Analysis of Evidence

Hourly rounding is used as an intervention to help frontline staff provide measures to keep patients safe from injuries. In an effort to focus on environmental fall prevention measures, this project evaluated the effects of education and implementation of an evidence-based hourly rounding program related to its impact on the number of resident falls. The selected LTC unit currently performs hourly rounding by staff members placing their initials on a hard copy checklist each hour. The form did not address exactly what nursing interventions were performed to demonstrate the outcomes of nursing actions and therefore may be an indication of the rise in the number of resident falls over a 3-month period.

With this project, I set out to evaluate whether the education and implementation of an hourly rounding program impacted the number resident falls. A newly proposed hourly rounding tool and process would provide measurable results on how effective purposeful interventions will be related to providing specific fall prevention measures each hour staff members attend to a resident's specific needs. The terms *rounding*, *purposeful rounding*, and *intentional rounding* are used interchangeably throughout the project.

Grove et al. (2013) explained how quantitative descriptive designs provide a picture of the situation as it happens and researchers use it to identify problems with current practice. Case studies are a type of descriptive design that explore a person, group, or community with potentially large variables (Grove et al., 2013). Case studies allow observations of daily interventions common to nursing practice. I have used a case

study design with this project to observe the effects of purposeful rounding while addressing safety, possessions, and comfort measures of LTC residents on one unit. Nursing staff can obtain improved satisfaction and patient safety with various interventions carried out independently.

A hard copy spreadsheet was utilized to evaluate the compliance and impact of each hourly rounding component of comfort, safety, personal possession, and toileting. Compliance with documenting the measure was analyzed and compared to its impact on the number of falls. The results will be compiled and reported to nursing leadership for evaluation of its effectiveness and the development of action plans for further improvements to nursing practice to help reduce injuries and falls. The results will benefit the organization's executive staff, LTC director, and chief nurse executive by providing data on hourly rounding and its impact on promoting a safe environment and quality of care.

Population and Sampling

The population sample included male and female veteran residents on a LTC unit in the northeastern region of the United States. Medical conditions, effects from medications, age, and use of assistive devices did not exclude participants. Residents admitted for rehabilitation purposes were also included in the study if admitted to the unit. Although the majority of the residents are age 65 years and older, there is no exclusion criteria for age or diagnosis. Of note, the selected unit has a large amount of ambulatory residents diagnosed with dementia.

Data Collection

In an effort to evaluate the impact of fall rates in relation to the implementation of new fall prevention strategies, the fall rates from 3 months prior to the implementation of the new hourly rounding process was compared to data collected 3 months after implementation. Data was collected from hard copy hourly rounding sheets based on the Studer Group (2007) concept, which utilizes the 4Ps: pain, potty, position, and possessions. The 4Ps acronym was modified for the unit to address comfort, personal possessions, toileting, and safety measures. The staff used the hourly rounding tool on a 24-hour basis for all residents in accordance with the facility policy. The rounding tools were reviewed for 3 months of analysis after education and implementation of the new rounding process.

Terry (2012) discussed the use of focus groups and the use of existing data to assist in timely data collection and planning throughout the project. A multidisciplinary falls collaborative group was developed to plan, implement, and evaluate new fall prevention strategies to include post fall huddles, diversional activities, and hourly rounding. The hourly rounding project evolved as one of the multifactorial fall prevention strategies. The hourly rounding project was led by a nurse leader. Nursing staff were active participants in the development of the hourly rounding documentation tool as modifications were required to meet the unit's current practice. The staff had the opportunity to modify the Studer Group (2007) rounding tool to fit unit practice needs as well as ensure staff had buy-in to the documentation process.

Nursing staff were allowed the opportunity to identify specific care measures to meet safety and comfort needs while providing meaningful data to address ways to improve interventions or gain information on how well the interventions worked. This information was instrumental during the PDCA cycle as the data were evaluated for compliance to the change process.

Analysis and Synthesis

The use of an evidence-based hourly rounding protocol, such as the Studer Group (2007) model, provided environmental safety measures to help reduce the number of falls as demonstrated by the positive outcomes reported in the literature review. The Alliance for Health Care Research (2006) reported the impact of hourly rounding in a study with 27 nursing units from 14 hospitals across the nation using the Studer Group model. The study revealed the main reasons patients used their calls lights were as follows: assistance to bathroom/bedpan (15%), IV alarms (15%), pain medication (10%), need for nurse or NA (9%), positioning (4%), accidentally hitting call light (13%), and miscellaneous reasons (13%). The results demonstrated improved clinical outcomes for patients and increased nursing time at the bedside when the evidence-based protocol was implemented (see Figure 4).

Response to Call Lights	Down 37.8%
Patient Satisfaction	Up 12 mean points
Patient Falls	Down 50%
Skin Breakdown	Down 14%

Figure 4. Hourly rounding results, Studer Group Research Subsidiary: Alliance for Health Care Research Study Findings.

Nursing staff were educated on eight rounding behaviors using key words prior to the study in an effort to ensure all staff were communicating the same information on all shifts and that actions were being proactive instead of reactive (Alliance for Health Care Research, 2006). An example of the eight rounding behaviors appears in Figure 5 and a modified version was adopted for staff use during this project.

Use opening key words to reduce anxiety.	Perform scheduled task.
Address the 3P's: pain, potty, position and possessions (4th P added).	Assess additional comfort needs.
Conduct environmental assessment	Prior to leaving the room, ask, "Is there anything else I do for you? I have the time."
Tell each patient when you will be back.	Document the round on the chart.

Figure 5. Alliance for Health Care Research: Eight rounding behaviors used to educate nursing staff prior to study.

Special attention towards the type of tool used for documenting the rounding actions on the unit cannot be overlooked. Staff education regarding the use of the rounding tool and the feasibility of the tool are essential for staff compliance and ease of use. Forde-Johnston (2014) expressed that comparative studies of various rounding tools and approaches used during rounding will aid in understanding what works best in

different clinical areas. Knowing this information will help educate nurses who plan to

implement rounding procedures in various settings in the future. A sample of a hard copy

intentional rounding tool is displayed in Figure 6.

Figure 6. Sample of an hourly rounding checklist.

Forde-Johnston (2014) explained that there have not been any comparative studies at this point to differentiate which type of staff or educational training levels work best for conducting rounding outcomes in clinical settings. Additional methods have been used to promote compliance with rounding documentation, such as a rounding clock, prompt cards, and scripts. For this project, a team approach was used and scripts were included in the education to staff regarding rounding expectations when engaging with the residents from entering to exiting the room. The number of falls were compared to the documentation of rounding interventions. There was no existing data on rounding components for the LTC unit to obtain baseline information. There are existing data on the number of falls and monthly fall rates, which are calculated by a data management system.

Ethical Considerations

This evidence-based improvement project will not directly involve interventions with the residents or nursing staff; therefore, there will not be any foreseen risk to any participants. The data being collected on falls are currently collected and reported on an ongoing basis by the unit, LTC department, and nursing services and are reported at the monthly nursing performance improvement meetings and quarterly at the executive performance improvement committee to include injuries and any adverse events related to falls. In addition, the project was presented to the evidence-based practice sub council. Confidentiality and privacy were maintained to protect information that could possible disclose a resident's identity during the project. Data used for this project is maintained in accordance with Walden University and the facility protocols.

In coordination with the facilities evidence-based practice sub council, the Research and Development Service: Human & Animal Research Protection Office granted approval to conduct a review of an operational level nonresearch quality improvement project and Walden University's Institutional Review Board (IRB) department approved and confirmed the project met ethical standards (IRB approval #11-17-16-0502128). There will not be any personal identifying information recorded on residents from data reviewed, only the number of falls and/or fall rates for the months reviewed. Nursing staff were educated on maintaining the respect and autonomy of the residents while conducting rounds as well as using veracity to report truths regarding fall risk and fidelity in keeping their promise to return to the residents' rooms to check on them each hour. These ethical considerations were essential to implement during the project to translate evidence into practice (White & Dudley-Brown, 2012).

Summary

In this section, I discussed the use of case study methods to evaluate hourly rounding techniques of the nursing staff. The project is an evidence-based process improvement project that will adhere to confidentiality and privacy of the resident's personal information. IRB approval for the project was received from the facility as well as Walden University. All hourly rounding sheets submitted for review will be included in the 3-month data collection period. The project will use the concept of the best practice evidence-based protocols established by the Studer Group (2007). Nursing staff received education on the rounding procedures as well as the rounding tool. The results and outcomes will be presented to nursing leadership and the department performance

improvement councils as requested in an effort to communicate quality improvement

measures.

Section 4: Findings and Recommendations

Introduction

LTC facilities must focus on promoting a culture of safety when developing fall prevention programs. Promoting a culture of safety is essential and it begins with strong leadership oversight. Residents age 65 years and older living in nursing home facilities are at an increased risk to experience falls and major injuries such as hip fractures as a result of a fall. Falls are considered a major health concern for older adults living in nursing homes (Rapp et al., 2010). Falls are a nursing-sensitive indicator, which require nurse-led interventions to reduce harm and promote a safe environment.

This project focused on a LTC unit that experienced an increase in the number of falls over 3 months. The purpose of the project was to find out whether education and implementation of a purposeful hourly rounding process would impact the number of falls. Nursing staff were performing hourly rounds, but it was identified that the rounds were not being documented using an evidence-based purposeful rounding process. This created a gap in the practice based on literature reviews and current evidence.

The Studer Group (2007) and Meade et al. (2006) conducted a well-known quasi-experimental study on an evidence-based hourly process with groundbreaking results of positive outcomes impacting falls, call bell usage, and patient satisfaction. Leaders must set the tone, support interdisciplinary teams and evidence-based practice, and maintain open communication with direct care staff to provide necessary resources (human and fiscal) to reduce the risk of harm to the population being served. Utilization of evidence-based practices will aid in standardization, improved system processes, identification of

barriers, decrease variation, and improve environmental conditions with fall prevention programs (Quigley & White, 2013).

Incorporating a purposeful hourly rounding program as a component of a multifactorial fall prevention program emphasizes the key role that nurses play in promoting patient safety, quality care, and positive nursing outcomes. Monitoring residents on a routine basis and utilizing a structured process will allow each resident's individual needs to be anticipated and met proactively. Anticipating the needs of residents every hour is vital in addressing call bell usage, comfort measures, toileting, personal possessions, and fall prevention (Forde-Johnston, 2014).

This project focused on a 40-bed LTC unit located on the northeastern region of the United States that had experienced an increase in the number of falls over 3 months. Nursing staff were conducting hourly rounds, but the rounding process was not being performed using an evidence-based practice model. The unit sought to implement an evidence-based purposeful hourly rounding program established by the Studer Group's (2007) best practice model along with other fall prevention strategies. The additional multifactorial fall prevention strategies included post fall huddles, medication management, physical therapy, recreational therapy, fall risk assessment tools, and the use of universal fall prevention measures. For the project, I sought to address whether implementation and education of a purposeful hourly rounding program would impact the number of falls. The aim of the project was to identify the impact on fall rates when nursing staff conducted hourly rounding by proactively addressing safety, comfort, personal possessions, and toileting.

The American Nurses Association (Quigley, 2015) identified patient falls as a nursing-sensitive indicator, which designated nursing actions as directly impacting patient outcomes. When nurses perform interventions addressing safety measures, they can provide positive outcomes related to falls and injury reduction. In 2008, the CMS identified falls as a hospital acquired condition, and therefore CMS no longer covers the cost of inpatient care as a result of fall-related injuries. It is imperative that organizations work to prevent falls by using evidence-based measures (Quigley & White, 2013). The Studer Group (2007) conducted one of the largest detailed research studies on *purposeful or intentional rounding* using a quasi-experimental study. The study revealed positive outcomes with patient satisfaction, decrease call bell usage, and a 50% decrease in patient falls using hourly rounding. An evidence-based method was used with documentation utilizing a checklist addressing the 4Ps: pain, position, personal needs, and placement (Forde-Johnston, 2014).

Findings and Implications

Nursing leadership and the patient safety department took the lead in designating a multidisciplinary working group to review fall prevention measures with a focus on *purposeful hourly rounding*. The work group was led by a nurse and consisted of a LTC provider, two RNs, a nurse educator, physical therapist, recreational therapist, and a pharmacist. The work group developed multifactorial fall prevention practice measures to assist with decreasing the number of falls, which included post falls huddles, diversional activities, physical therapy and purposeful hourly rounding. This project focused on the implementation of the purposeful hourly rounding process; the team started with the

development of an updated hourly rounding checklist or tool that was agreed upon with

nursing management and frontline nursing staff feedback. Codes were added to the

legend of the checklist to identify nursing tasks that were modeled after the Studer

Group's 4Ps. These codes were based on staff input, and were familiar codes adopted to

identify hourly rounding actions. The final codes included the following:

- C for call bell and identified personal possessions being within reach;

- P for pain

- R for repositioning addressed comfort measures;

- A for alarms addressed safety measures in place; and

- T for toileting addressed assistance with bowel/bladder elimination.

The team planned and conducted educational in-services using the Studer Group

(2007) model. In-services were performed by the nurse leader for staff members over a

1-month period to cover day and night shift staff prior to implementation of the new

hourly rounding process. The objectives of the education were to explain the reason for

the change process, the importance of having specific actions identified during rounding,

documentation expectations, and the projected outcomes based on evidence related to fall

reduction and patient/staff satisfaction. Plans were made for ongoing online education

with the nurse educator to ensure new staff members received the hourly rounding

training. The charge nurse and lead nurses were responsible for ensuring the staff

working on their shift were educated about the process. The below graph explains the

application of the process to the Johns Hopkins Evidence based practice model to the

project (see Figure 7).
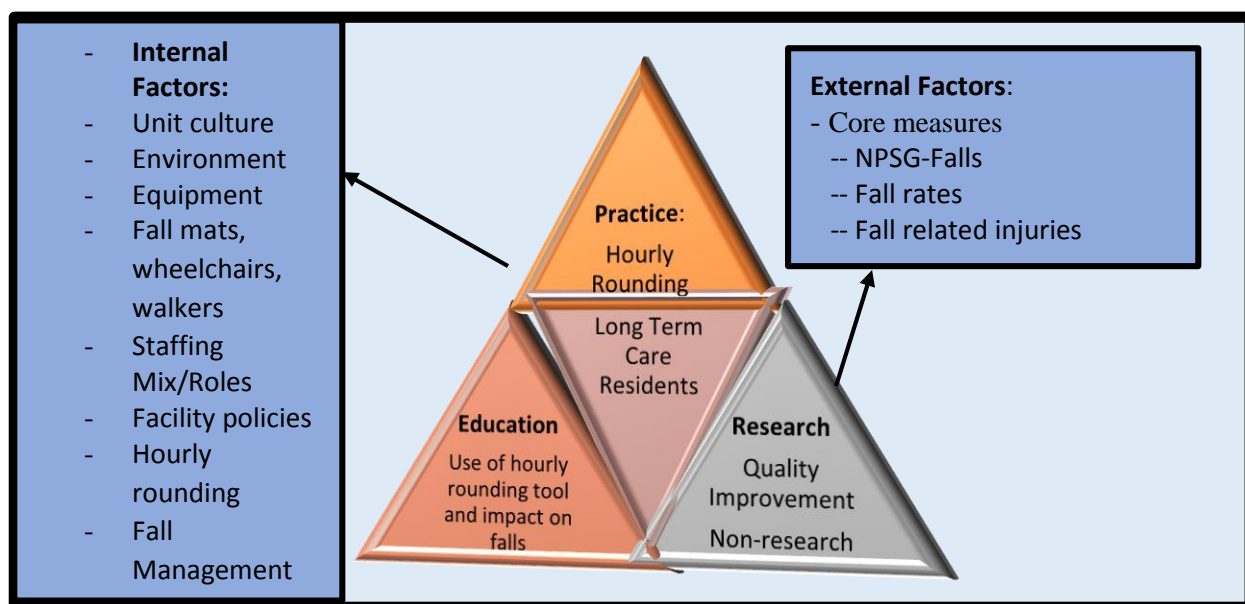
Figure 7: Application of Johns Hopkins evidence based practice model

A hard copy hourly rounding tool was used for all residents, and unlicensed nursing staff were the main members to document on the forms each hour. The data collected from the hourly rounding forms for quality improvement analysis addressed the following categories: safety, comfort, toileting, and personal possessions, closely modeling the Studer Group (2007) model. Nursing management added acronyms to the form to address whether the residents were out on pass, sleeping, or in the dining room for accountability purposes. This information was not collected as part of the data for this project. The staff were educated to write the letter code of the task adjacent to the hour the task was completed. A description of the hourly rounding codes were reviewed for 3 months as discussed below.

Annotation of documentation of the rounding elements was a critical first step in order to identify gaps and barriers with the tool and the process. The first element reviewed for the hourly rounding components was the overall completion of documentation for three months was 90%. Submission of forms and compliance in documentation improved over the three months. The first rounding component of comfort measures included notations for pain and positioning and was documented 55% of the time. Of note, pain was usually addressed by licensed staff in the electronic record and therefore there was limited documentation regarding the comfort element of pain from unlicensed staff on the forms. Safety measures included the use of bed/chair alarms, bed position, and use of fall mats. Safety measures were addressed 78% of the time. Safety measures resulted in the highest compliance of documentation. This may have been due to the measure being familiar and commonly documented by the staff in the computerized patient record as a part of the daily practice. Toileting was addressed 34% of the time. It is highly likely that toileting was only documented for those residents on a toileting program or who were bedridden, which would contribute to the low number of documentation for this area. Finally, personal possessions included whether the call bell was within reach as well as other personal items. Personal possession documentation was addressed 77% of the time.

Fall rates were compared three months prior and after the implementation of the purposeful hourly rounding. Figure 8 demonstrates the comparison of fall rates pre- and post- implementation of the purposeful hourly rounding.
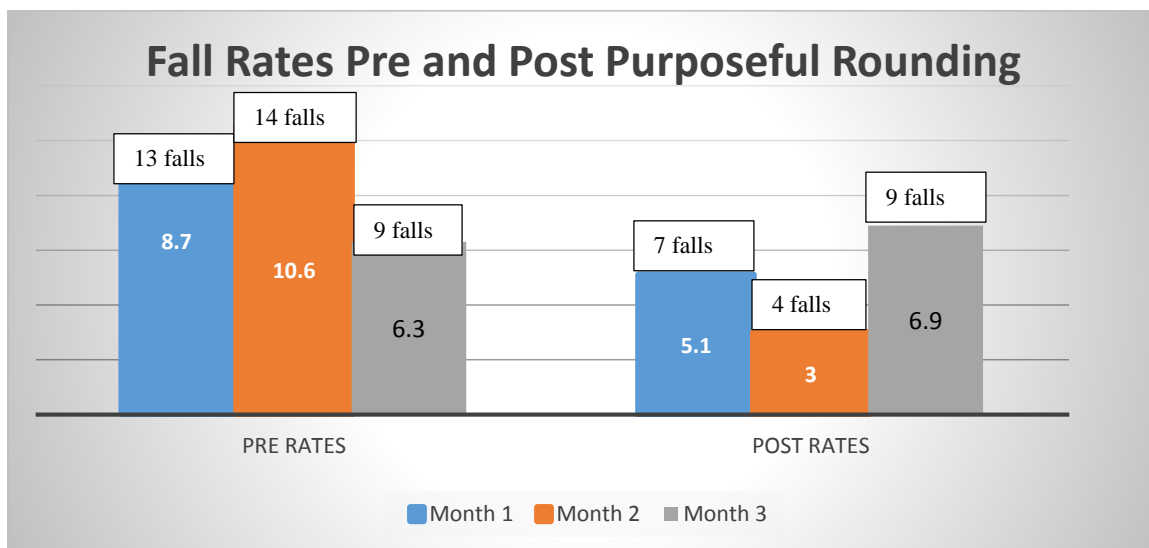
Fall Rates Pre and Post Purposeful Rounding

Legend: Month 1, Month 2, Month 3

PRE RATES: 13 falls (8.7), 14 falls (10.6), 9 falls (6.3)
POST RATES: 7 falls (5.1), 4 falls (3), 9 falls (6.9)

Figure 8. Falls rates per 1,000 bed days of care pre and post implementation of purposeful rounding.

During the data analysis of the hourly rounding forms, it was identified that a large number of hourly rounding forms were incomplete each month. Usually, one shift documented more than another shift. This may have occurred due to insufficient education to staff working all shifts regarding the importance of appropriate use of documentation codes on the rounding sheet. The first and second months demonstrated inconsistent use of the appropriate codes on the legend. In addition, staff initials were occasionally used on the hourly rounding form instead of the codes on the legend. Additional codes were also written on the forms, which made it difficult to identify what interventions were being addressed. This was a clear indication that additional feedback from the staff was necessary during the re-evaluation phase of the PDCA cycle to gather feedback as to whether there was a deficiency in education provided or if the codes on the form were inadequate to meet the rounding actions for resident's needs. The unit culture and customs also played a role in the documentation changes. Incomplete forms made it

difficult to accurately account for the evidence-based actions during the review of data. The unit experienced staff turnover during the process improvement project and there was a notable gap in knowledge with new staff regarding the correct use of the rounding forms. There was also a change in nursing leadership during the implementation of the project, which may have contributed to some of the inconsistent practices.

The pre-fall data for three months resulted in a total of 36 falls (raw number) and the post fall data resulted in a total of 20 falls (raw number) which demonstrated an overall decrease of 55% (20/36) in falls for the months reviewed. The decrease in falls can be attributed to the full implementation of multifactorial fall prevention efforts, and not solely on the implementation of the purposeful hourly rounding. There was a notable change in the staff's awareness in attending to the resident's specific needs and the documentation of actions every hour.

The findings in this project were specific to this LTC unit's care practice model and culture, but it is understandable that other patient populations with different practice models may have very different findings with documentation compliance. Regardless of the care setting, it is important for all inpatient nursing units to find the best method of proactively meeting their patient needs to reduce falls. Hourly rounding is a proven nurse-led process that results in positive patient outcomes and every effort should be made to tailor the process to the environment in which the rounding is being implemented to optimize patient safety, satisfaction and demonstrate nursing's impact for social change to the individual, organization, and community being served.

Recommendations

Hourly rounding is intended to improve the quality of care and reduce harm by achieving positive patient outcomes. Hourly rounding cannot be evaluated independent of other fall prevention strategies. A coordinated effort to manage a resident's medications, physical functioning, cognitive status and comorbidities are all essential factors to consider when implementing and evaluating patient outcomes.

Future hourly rounding projects should be implemented with the development of an interdisciplinary team as a first step to address all fall prevention measures for the population being served. An identified unit champion that functions as a liaison between the team and the unit is essential for continuity of the practice change and for immediate feedback from staff. Secondly, there should be more studies completed that focus on the education provided to staff in relation to the implementation of hourly rounding. This information would provide valuable feedback on the effectiveness of new knowledge required to implement the change process, and finally there should be a focus on hourly rounding conducted without the use of hard copy checklist. The elimination of hard copy checklist would reduce duplication of information and move towards the use of electronic documentation to improve data collection that would provide meaningful use through technology. Hodges (2011) highlighted two studies which found rounding checklist or rounding logs were an ineffective tool to monitor patient care due to duplication of documentation, incomplete logs and staffs' perception of increased paperwork.

Implications

When evaluating the impact of the hourly rounding project it is important to consider the use of unit based shared-governance councils, nurse leadership rounds, on-going education and unit dashboards to highlight project outcome successes. Input from unit based shared governance groups is instrumental to address immediate staff concerns, obtain feedback, and staff buy-in to share with leadership prior to a change project and during all phases of the PDCA cycle. Incorporating nurse leadership rounds on a routine basis would allow nurse leaders the opportunity to gain real-time feedback from patients and staff regarding successes, resources, staffing and requirements for sustainability. Nurse leaders should strongly consider the development of unit protocols, policies and practice guidelines for hourly rounding functions. An in-depth training plan for initial and on-going education with competencies on hourly rounding is also essential to ensure all employees (newly hired and permeant) are knowledgeable of the process, use of equipment, and educated on documentation requirements. A dashboard display of unit outcomes from the hourly rounding and fall prevention program would empower staff and increase awareness of patients, visitors, leaders and regulatory agencies on changes in practice and patient safety successes.

The successes and lessons learned from this project should be shared with other inpatient units to improve the implementation of future hourly rounding projects. Organizations should ensure their fall management policies clearly address the hourly rounding process to include educational components and staff responsibilities. Nurses are the only healthcare discipline to spend 24-hours around the clock providing direct

care to inpatients and, therefore the actions implemented during hourly rounding are major contributions in promoting a safe environment. The hourly rounding actions implemented by staff significantly contributed to reducing falls, injuries, and cost associated with falls which addressed a major health concern for the patients, family members, unit, organization and the public. This project initiated an evidence-based process improvement trial for hourly rounding in long-term care which increased awareness and opened the door to the first steps towards social change within the clinical center.

Strengths and Limitations

The LTC leadership demonstrated a strong commitment to reducing falls and fall-related injuries by providing support to evaluate the current program and trial the change process to improve patient safety and quality of care. The development of a multidisciplinary working group or team to evaluate specific fall prevention measures within LTC was an essential component to ensure the success of a multifactorial fall prevention program. Nursing leadership provided the needed support to focus on improving interventions for the environmental component of the fall prevention program that we know as "*Hourly Rounding*." In addition, there were no major injuries reported during the trial period.

One of the main limitations was the short three month trial period for the project. The trial period should be at least six months or greater to allow enough time to gather data and evaluate findings. Another limitation was that there was not a consistent project lead or liaison between the multidisciplinary team and unit staff during the process

improvement project. The presence of the project lead or unit liaison could assist with the gaps in education and provide timely resolution of barriers/staff concerns (Olrich et al., 2012). Staff turnover to include nursing leadership was a significant challenge during the project. The presence of the nurse leader is instrumental in maintaining communication, accountability, staff empowerment and recognition (Olrich et al., 2012).

   Documentation was a concern from two standpoints, first there was duplication of charting the hourly rounding task codes on a hard copy form (which was not a part of the legal record), and charting the daily care of the resident in the computerized record, which is the legal document of care. The second documentation concern was the amount of codes used to identify a task. The use of less acronyms would have been easier to communicate with all staff.

   An additional limitation was that documentation of hourly rounding task were mainly performed by the unlicensed staff as part of the unit practice and culture. Therefore, the comfort measure component was not consistently reflected on the rounding sheets due to unlicensed staff notifying the nurse if the resident complained of pain. The registered nurse was responsible to document the care provided in the resident's computerized record and not on the rounding form. This was another area where feedback and education would have been beneficial during the implementation phase. Future hourly rounding projects which use hard copy checklist should strongly consider eliminating the use of a checklist and documenting the patient care actions solely in the patients' record.

Finally, the project was conducted on one unit with only one population sample size, additional studies should be expanded to include other inpatient populations within the facility with a randomized approach.

Section 5: Dissemination Plan

Conveying findings and new knowledge from evidence-based projects is an essential DNP function to translate information into practice. The DNP has a responsibility to dissemination project results and showcase clinical scholarship by sharing findings with stakeholders, the academic community, and professionals working in similar environments (White & Dudley-Brown, 2012). This project will be shared with facility leaders and professional organizations in written and oral format. The plan for dissemination to the public will be done through written publication in selected journals and professional organization conferences.

As a certified Clinical Nurse Leader, it is fitting to request to present this project during the annual Clinical Nurse Leader Association (CNLA) conference. The Clinical Nurse Leader Association is focused on collaboration and improving patient outcomes by concentrating on safety and applying evidence-based practice measures at the point-of-care. In addition, the Nurses Organization of Veterans Affairs (NOVA) is an organization focused on nursing practice issues within Veteran Affairs. The mission of NOVA is to educate, communicate, and advocate for Veteran Affairs nurses professionally, personally and legislatively. NOVA holds an annual conference where this project can be presented in the format of a poster presentation to share findings impacting the Veteran population. Finally, communication to the editors of *Nursing Management: The Journal of Excellence in Nursing Leadership* and *The Association of Nursing Professional Development* was made to obtain guidelines and requirements for publication.

Analysis of Self

As a lifelong learner in the nursing profession with a passion for education and quality improvement, this journey has been an exciting learning experience while developing as a DNP scholar. The opportunity to identify a health care problem such as falls at the microsystem level, and apply evidence-based practice measures to address the adverse impact falls can have on the aging population created a great appreciation for the influence a nurse leader can have on social change from the local level to the community. Utilizing systems thinking and project management tools as a DNP scholar allowed me to develop an interdisciplinary team through inter-professional collaboration and lead a change project within a three-month timeline to demonstrate the positive outcomes that can impact the entire healthcare organization.

As I progressed through each step of the DNP process I understood the importance of the nurse leader to have the proper skill set to advance nursing practice at any level to impact changes in population health, policy, advocacy, ethics, and technology. Application of the DNP essentials of scholarly inquiry, systems thinking, use of evidence-based practice, inter-professional collaboration, and addressing the health of the long-term care population enhanced my development as an advanced practice nurse. My journey started with a practice question concerning reducing falls and implementing an evidence-based hourly rounding program to promote safety measures for the LTC population. As a result, I successfully integrated the DNP essentials to translate knowledge and demonstrate positive outcomes within the long-term care environment, nursing practice and the organization.

Summary

Purposeful hourly rounding are actions that all inpatient nursing staff can perform to demonstrate a significant impact on patient outcomes. It is important to remember that hourly rounding is only one component of an effective multifactorial fall prevention program. Hourly rounding was evaluated in this project related to the outcome of reducing falls and injuries from falls, and it can be used to measure other nursing-sensitive indicators in any inpatient population. Adequate planning prior to implementation, evaluation of the current practices and customs of the unit, collaboration with other disciplines, support and buy-in from frontline staff as well as leadership are all key factors to consider when implementing a change process. Hourly rounding can be successful based on current evidence. It is the role of the DNP nurse to translate that knowledge into practice for the population being served by utilizing all of the acquired DNP essential skills.

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