Walden Dissertations and Doctoral Studies

2016

Fall Safety Bundle

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Baili Campbell

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Walden University
2016

Abstract

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by

Baili Campbell

MSN, Walden University, 2014

BSN, Walden University, 2012

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

August 2016

Abstract

The Centers for Medicare and Medicaid Services (CMS) report thousands of falls in hospitals each year. The CMS does not reimburse hospitals for fall related injuries, costing the hospital system organization for which this DNP project was designed millions of dollars each year. Framed within the Iowa model of evidence-based practice and using a team approach, the purpose of this project was to develop an evidence-based (EB) fall safety bundle for use by nursing staff and a curriculum to educate staff on prevention strategies. The components of the EB fall bundle kit were approved by the stakeholder committee. Evaluation of the curriculum and the pretest/posttest items was completed by three content experts. The curriculum was evaluated related to the objectives using a "met" (2) and a "not met" (1) response. All responses were "met" for an average score of 2 showing the content met the objectives. Validation of the pretest/post items was conducted using a 10-item, Likert scale, ranging from 1- "is not relevant" to 4- "is highly relevant". The content validation index was 1.0, showing that the test items met the objectives and content of the course. Recommendations included providing a consistent methodology to disseminate the fall safety bundle and educational curriculum across the entire healthcare system as well as adding the fall safety bundle tool kit to the hospital's intranet page for ease of access for all staff. Social change will be achieved by facilitating prevention of fall related injuries and avoiding the financial impact on the facility.

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Acknowledgments

This dissertation would not have been possible without the help of so many people. I would like to express my deepest gratitude to my professor Dr. Joan Moon EdD, CNM, RN. Thank you for sticking by my side throughout this process and for pushing me to be the absolute best that I could be. You are a wonderful example of an outstanding professor and I could not have done this without your support and encouragement along the way.

I would like to dedicate this work to my mentor, supervisor, and friend Dr. Sonya Zeller DNP, MBA, RN. Not only did you support me through this wild and crazy adventure called DNP School, you encouraged me to *always* follow my dreams! You have been one of the most significant people in my life thus far, and I will forever be thankful for all of your support and guidance along the way. Thank you for giving me a chance in 2013 that forever changed my life and for always believing in me.

Finally, I want to thank my husband, Anthony. Thank you for coming along with me on this wild adventure called life. Not only are you my husband, you are my best friend, my soulmate, my punkin', and my lifelong travel partner. I love you more and more each day and I am so thankful that God gave me you.

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Section 1: Overview of the Evidence-Based Project

Introduction

Falls are the leading cause of injury-related deaths among patients age 65 or older (Centers for Medicare and Medicaid Services, 2014) and the impact of injuries that are caused by falls is detrimental to the patients', families', and health care workers' overall perception of falls. The increase in falls costs the health care system billions of dollars each year (The Joint Commission, 2014). Serious fall-related injuries are often irreversible and can result in a fear of falling, extreme financial burden, depression related to extended hospitals/extended care facility stays, and death (Halm, 2011). Also, hospitals are no longer being reimbursed for injuries related to falls, which significantly impacts hospital finances leading to unnecessary cost for the hospital and decreased reimbursement (Centers for Medicare and Medicaid Services, 2014). A patient care bundle is a structured way of improving the processes of care and patient outcomes: a small, straightforward set of evidence-based practices — generally three to five — that, when performed collectively and reliably, have been demonstrated to improve patient outcomes by decreasing the overall number of falls, decreasing the number of falls resulting in injury, and increasing staff and patient's fall awareness (Sutton, 2014).

Falls were identified as an ongoing problem in the organization where this study took place, which is a multi-hospital system in the Midwestern region of the United States. The health care system ranges from a 22 inpatient bed hospital to a 600 inpatient bed facility. The inpatient units include medical surgical, obstetric, psychiatric, dialysis, cardiac inpatient, rehabilitation, and surgical inpatient as well as the emergency department. The problem identified by the Falls Committee of the organization is an

increased number of falls and fall-related injuries in the health care system within the last 5 years. The total number of falls included approximately 400 patients over a 5-year period (National Database for Nursing Quality Indicators [NDNQI], 2015). The falls data were collected and analyzed monthly for a strategic overview with the intention to move forward in solving this issue.

Background

The Joint Commission (TJC; 2014) requires accredited hospitals to conduct fall risk assessments for hospitalized patients to identify each patient's risk for falls so that prevention measures can be implemented into the plan of care. Since TJC began to monitor voluntarily reported sentinel events in 1995 through the end of 2013, there were 689 reported fall-related events, which resulted in death or permanent loss of function. According to TJC (2014), because this number reflects voluntary reporting, only a small portion of actual events are represented. The actual number is unknown but most likely much greater, attesting to the importance of fall prevention interventions. What is clear is that patients are still falling in hospitals and experiencing injury (TJC, 2014).

In 2013, TJC (2014) reported that the average increase in a hospital's operational costs for a serious fall-related injury is more than $13,000, and the patient's length of stay increases by an average of 6.27 days. The systems overall number of falls per year is estimated to cost the facility approximately $654,100. The falls that make up this total are the total number of major, minor, and no injury falls that resulted in surgery, extended stays, and/or extensive rehabilitation for the patient ($13,082 per major injury report times 50 reported major injury cases in 2013).

In acute and rehabilitation hospitals, falls resulting in injury occur in 30% to 51% of patients, and falls resulting in fracture occur in 1% to 3% of patients (NDNQI, 2015). The healthcare system where this study took place had a total of 1,605 patient falls in 2013, which is roughly 1.6% of the patients seen in the hospital system for that year. The falls range from an infant drop to falls on mother/baby units, in inpatient units, or emergency rooms (NDNQI, 2015). Falls are associated with increased lengths-of-stay, increased use of health care resources, and poorer health outcomes (NDNQI, 2015). Soft tissue injuries or minor fractures can cause significant functional impairment, pain, and distress (Currie, 2006). Even minor falls can trigger a fear of falling in older persons, leading them to limit their activity and lose their strength and independence (TJC, 2014). As of 2008, the Centers for Medicare & Medicaid Services (CMS) has not reimbursed hospitals for certain types of traumatic injuries that occur while a patient is in the hospital (CMS, 2014). Due to the reimbursement and the patient safety issues surrounding falls, a fall prevention plan was created by CMS to be used in hospital systems around the United States (CMS, 2014).

Problem Statement

The problem identified for this quality improvement (QI) DNP project was the number of patient falls in a hospital setting per year, which have resulted in major and minor injuries or death and/or increased health care costs to an organization. The study site healthcare system had a total of 1,605 patient falls in 2013 ranging from infant drops to falls on mother/baby units, inpatient units, to falls in the emergency rooms (NDNQI, 2015). The falls ranged from no injury falls to major injury falls. Fall prevention has been

identified as relevant to nursing practice because fall prevention helps to bring awareness
to the nursing staff as well as provide education to the staff on adverse effects of falls and
fall-related injuries in the identified practice setting. Falls and fall-related injuries have
consistently been associated with the quality of nursing care in acute care facilities (CMS,
2014). They are included as nursing quality indicators monitored by the American Nurses
Association, NDNQI, and by the Nation Quality Forum (NDNQI, 2015).

Project Purpose

The purpose of this DNP project was to develop an evidence-based fall safety
bundle for use by nursing staff and an education curriculum to increase staff awareness
and knowledge for prevention of falls and fall-related injuries. The existing healthcare
system's Falls Committee consisted of individuals from each of the hospitals within the
system. The hospital system identified a gap between nurse's overall awareness of fall
prevention as well as the patients' overall knowledge and understanding of fall
prevention techniques. A fall safety bundle consisting of nurse- and patient-focused tools
was proposed to all hospitals in the system through the falls team. The fall safety bundle
will help to prevent patient harm by decreasing the number of falls and will increase
nursing awareness regarding falls and fall safety. The overall purpose of the fall safety
bundle provided an avenue for the hospital systems to use a standard work process
around fall prevention techniques that are demonstrated to be evidence based. The target
audience for the project was the nursing staff which includes LPNs, RNs, and nurse
techs. The bundle includes evidence-based processes to positively influence nursing
practice by influencing nursing staff to become more aware of fall safety precautions as

well as providing essential education to the patients and their families. The bundle focuses on patient safety and can fill the gap between risk of falls and actions to improve communication of nurse-to-nurse, nurse-to-patient, and nurse-to-family to facilitate patient safety and care (Sutton, 2014). To bridge the gap between the evidence-based literature and the problem with falls in the organization, the fall safety bundle was developed as well as an evidence-based policy and procedure and an education curriculum.

Project Goals and Outcomes

The project goal was to prevent patient falls and fall-related injuries in the study site healthcare system. Outcomes for the project included the development of:

- An evidence-based fall safety bundle tool kit (Appendices A, B, and C).

- An evidence-based educational curriculum for staff (Appendix I).

- A content validation index plan for a pre- and posttest.

Theories and Frameworks for the Project

The Iowa model for evidence-based practice was used for the planning and implementation of this DNP project. The Iowa model for evidence-based practice is intended to provide guidance for nurses and other direct patient care staff who are making decisions about practice that affects patient outcomes (Hertz, 2007). The project was framed within the Iowa model by using the PICO framework. PICO stands for P: Patient or Population, I: Anticipated Intervention, C: Comparison group or Current standard, and O: Outcome desired (Hertz, 2007; See Appendix J) The framework first begins with identification of the problem, which for this study was identified as the total number of

falls and the potential for fall-related injuries or death and/or cost to the facility as a result of the falls. The identified problem was presented to the falls team to identify the problem-focused triggers as well as the knowledge-focused triggers. The next question was: "Is this topic a priority for the organization?" The top priority for the system was to increase nurse awareness and decrease the total number of falls and fall related injuries.

Nature of the Project

A care bundle approach to falls prevention can be implemented with sustained effort and commitment from multidisciplinary ward teams that include nurses, doctors, therapists, pharmacists, and patient care staff (nurse technicians and unit clerks). The team is best driven by a nominated member of the nursing team with a strong personality and leadership attributes who is able to inspire and motivate others and who recognizes several teaching and communication styles will be required (Sutton, 2014). I collaborated with the Falls Committee team members and made suggestions on the items that were included in the fall safety bundle. The fall bundle process will help to prevent patient harm and increase nursing awareness regarding falls and fall safety. The bundle includes evidence-based tools to influence nursing practice and to influence nursing staff to become more aware of fall safety precautions as well as providing essential education to the patients and their families.

Project planning is a discipline for stating how to complete a project within a certain timeframe, usually with defined stages, and with designated resources (Polit & Beck, 2010). One view of project planning divides the activity into setting objectives (these should be measurable), identifying deliverables, planning the schedule, and

making supporting plans (Polit & Beck, 2010). For this DNP project, project planning and organization was key. A Falls Committee team was already in place at the study site healthcare system organization. My responsibilities as the leader of the team included:

- Completion of a thorough analysis of the literature and presenting the synthesis of the results to the committee.

- Making recommendations on the most effective fall prevention strategies as found in the literature.

- Development of the fall prevention bundle toolkit for the nursing staff to use.

- Development of the educational curriculum for the nursing staff and physicians.

- Development of evaluation components of the project to consist of content evaluation of the curriculum and fall bundle kit; and a summative evaluation of the project, process, and my leadership, as well as a content validation of pretest/posttest items by a content expert.

- Leading the team and presenting the draft of all development components for their review and recommendations. Three content experts from within the team provided evaluation and validation of the components.

Definition of Terms

In order to provide clarity for the reader of this study, the following terms are defined.

Age, bones, anticoagulation, and surgery (ABCS): A risk-for-injury assessment tool used to identify patients at risk for moderate-to-serious injury (Halm & Quigley, 2011). A = age greater than 85 years old. B = bones, osteoporosis, bone metastasis, and history of fracture – especially hip, treatments/medications that cause bones to be weak. C = anticoagulation therapy and bleeding disorders. This tool does not include medications for venous thromboembolism (VTE) or deep vein thrombosis (DVT) prophylaxis. S = surgery, recent major abdominal, thoracic, or lower extremity (Halm & Quigley, 2011).

Assisted fall: A fall in which any staff member attempted to minimize the impact of the fall by easing the patient's descent to the floor or in some manner attempting to break the patient's fall. Assisting the patient back into bed or chair after a fall is not an assisted fall (TJC, 2014).

Fall: A sudden, unintentional descent, with or without injury to the patient, that results in the patient coming to rest on the floor, on or against some other surface (e.g., a counter), on another person, or on an object (e.g., a trash can). When a patient rolls off a low bed onto a mat or is found on a surface where one would not expect to find a patient, this situation is considered a fall. If a patient who is attempting to stand or sit falls back onto a bed, chair, or commode, this situation is only counted as a fall if the patient is injured (TJC, 2014).

Patient care bundle: A patient care bundle is a structured process of improving the processes of care and patient outcomes: A small, straightforward set of evidence-

based practices — generally three to five — that, when performed collectively and reliably, have been demonstrated to improve patient outcomes (Sutton, 2014).

Standard work: A tool used for maintaining productivity, quality, and safety at a high level. Standard work can be defined as work in which the sequence of job elements has been efficiently organized and is repeatedly followed by a team member (Grove, Burns, & Gray, 2013).

The Johns Hopkins Fall Risk Assessment Tool (JHFRAT): a risk-stratified tool predicting which patients are at risk for falling (Ganz, 2013).

Assumptions

When implementing a major workflow project and standard work processes, one can assume that all nursing staff members will be on board with the changes and impact to their workflow. Including the nursing staff (RNs, LPNs, and nurse techs) in the initial planning stages of a major project is important especially if the change directly impacts their work flow (Grove, 2013). The major assumptions for the project were:

- One standard work process will fit each nursing unit in each facility.

- The nursing staff will want to provide the best patient care in fall prevention.

- The administration teams in the hospital system will be on board with the initiation of the fall bundle.

- The process will be accepted and embraced by all nursing staff as well as any ancillary team members.

- Senior leadership will approve for the inpatient units to purchase the appropriate fall prevention equipment required for the bundle implementation.

Scope

The development of new processes that included fall prevention and education of nursing staff and physicians was presented at each healthcare facility. Successful implementation and education surrounding fall prevention will be achieved by including nursing staff. The overall goal was to improve the awareness of falls and understand fall prevention techniques and strategies. This goal was achieved by creating a fall safety bundle that will be readily assessable to all nursing staff. The project included the adult patients admitted to any inpatient unit as well as the caregivers. The inpatient units include medical surgical, obstetric, psychiatric, dialysis, cardiac inpatient, rehabilitation, surgical inpatient, and the emergency department. The emergency department is the only outpatient department impacted by this fall bundle at this time due to the population.

Limitations

Barriers in health care have been conceptualized as organizational, structural, and clinical (Kettner, Moroney, & Martin, 2008). Once the barrier is classified, one can begin to break down the barriers by working through each one. One barrier to this project was the potential communication issues with the entire healthcare system. The system wide communication function is currently set up for web-x and telephone meetings due to the vast size of the organization. The project would have benefitted best from in-person communication during the planning and implementation stages of the project. The plan for this barrier is was to work diligently during the planning stages and create both in-

person and telephone/web-x meetings. The preplanning and date setting allowed the team members involved to plan ahead to ensure they were able to attend the in-person meetings. A major organizational barrier to the project is the implementation for the entire hospital system which is an expectation of senior leadership. Falls Committee members included a representative from each facility. The challenge with implementing a process across an entire hospital system is staying organized between the hospitals. The benefit of having a system-wide falls committee is that implementation will be consistent.

Another challenge was the purchasing the fall prevention resources that will be needed to ensure proper implementation. The fall safety bundle requires fall prevention equipment to be readily available to all clinical staff. Examples of the equipment requirements would be a gait belt, roll belt, and chair alarm at each patient's bedside. The cost of this equipment adds up over time. The fall safety bundle focuses on standardizing the fall logo (black and yellow falling man), standardizing fall safety equipment in each patient room, and the standardization of the patient communication boards. The implementation of these standard items will take time and several thousands of dollars for all of the hospitals to achieve. The plan to help avoid this limitation would be to implement pieces of the total bundle on one nursing unit, per hospital, at a time. Over the course of 12–24 months all nursing units will have fully implemented the standard work.

Evidence-Based Significance/Relevance to Practice

The use of a standard work process helped ensure that all nursing units were practicing the same practice in regards to fall safety. This practice will be evidence based and will help to ensure the overall safety of all patients on each nursing unit. The overall

impact of a fall safety bundle based on the current research shows that the more consistent a patient safety measure is in a facility, the more effective the overall safety outcomes will be for the patients (Kettner et. al, 2008). The standardized fall bundle could potentially lower the facility's total number of falls and/or fall-related injury reports by nearly 60% based off of current literature and research from other facilities in other states who have successfully implemented a fall safety bundle in their facility (Icoli, 2008).

Summary

The problem identified for this DNP project was the number of patient falls per year throughout the organization's healthcare facilities as well as the injuries resulting from the falls. The purpose of this quality initiative DNP project was to develop an evidence-based fall bundle and education curriculum to prevent falls and fall-related injuries in the health care system. The project goal was to prevent patient falls and fall-related injuries in the healthcare system. The goal for this project was to develop a standard fall bundle tool kit that includes seven pieces of standard work. An education curriculum was developed and will be used by nursing staff across all of the hospitals. In Section 2, the literature review portion of the DNP project, I explain the importance fall prevention has on the hospital system and establish the importance of implementing standard work and the use of bundle projects.

Section 2: Review of the Scholarly Evidence

Introduction

The problem identified for this design-only DNP project was the number of patient falls per year, which have resulted in major and minor injuries or death and/or increased health care costs to the study site healthcare organization. The problem was evidenced by the total number of falls and fall-related injuries reported within the inpatient units at the identified hospital system. The purpose of this DNP project was to develop an evidence-based fall safety bundle for use by nursing staff and an education curriculum to increase staff awareness and knowledge for prevention of falls and fall related injuries. Although the number of reported falls has decreased 14.7% nationally since 2010, falls are still a major issue for many hospitals around the United States (CMS, 2014). In this section, I will provide a detailed analysis and breakdown of the existing literature on the topic as well as an introduction of the background context of the project.

Literature Search Strategy

The library databases used for the research of this project included Walden University Library, Medline, CMS guidelines webpage and user manual, NDNQI manual, TJC Manual, the Indiana University Health PULSE (intranet reference) page, and Google Scholar. The following keywords were searched: *inpatient fall statistics, injuries related to falls, nurse advocacy, nurse awareness, evidence based practice for fall prevention, patient care bundling, standardization around toileting, patient rounding, purposeful rounding, patient teach back,* and *utilization of audit tools.* The types of

sources used included foundational, current, peer-reviewed literature dealing with evidence-based nursing practice. The research gathered ranged from sources published from 2006 to 2015 with a total of 28 articles. The following topics are covered in the literature review subsection: theoretical frameworks used in the study, conceptual models and frameworks, the overall impact of patient falls (cost, physical impact, and physiological impact), and patient care bundles.

Models

Iowa Model

The Iowa model of evidence-based practice was developed in the early 1990s and works to promote quality care through research and utilization (Hertz, 2007). This specific nursing framework is intended to provide guidance for nurses and other direct patient care staff that make decisions about practice that affects patient outcomes (Hertz, 2007). This framework assists in providing quality care to clients of clinics, home health agencies, and hospitals (McEwen & Wills, 2014).

The Iowa model uses key triggers that can be either problem focused or knowledge focused to lead the clinician in utilization of the components of this model (Hertz, 2007). Initially, the clinician will generate a question either from a problem or as a result of becoming aware of new knowledge (Hertz, 2007). In the case of this study, the problem question was regarding falls and fall-related injury and how a fall safety bundle will impact overall patient safety. The second step in this model is to determine if there is relevance to organizational priorities (McEwen & Wills, 2014). In 2014, the facility under study noted on an overall needs assessment that a top priority in the organization was to decrease the total number of falls and fall related injuries. The simplest way to

formulate a question when using the Iowa model is to use the PICO format. This format was used during the presentation of the project proposal to the Falls Committee and to each individual hospital's administration team (See Appendix J). Once the question is deemed relevant, the decision is up to the student and/or the Falls Committee to determine if there is any evidence to answer the question.

Modeling and Role Modeling (MRM)

The modeling and role modeling (MRM) theory (Hertz, 2007) was used in the project to help develop the education curriculum and implementation plan for the fall bundle. This theory was used in the curriculum planning and implementation stages of the DNP project with the main focus being on nursing education. The MRM theory focuses on nursing practice, intervention, assessment, and implementation (Parker & Smith, 2010). This model was represented during the education curriculum development as well as the implementation with the patients and caregivers. Modeling refers to how the method is demonstrated, and role modeling refers to the use of the teach-back method (McEwen & Wills, 2014). MRM is based on philosophical beliefs and assumptions about people, environments, health, and nursing (Hertz, 2007).

In the MRM theory, modeling can be defined by understanding the clients' world from the clients' perception (Parker & Smith, 2010). The understanding of this process allows the nursing staff to better assess their clients by understanding the way their client is thinking. MRM is based on the assumption that all humans want to interact with one another and that they want to carry out their selected roles in society (Hertz, 2007). The knowledge of the MRM theory allows the nurses to be able to use the client's own model

of the world to plan interventions that meet their perceived needs to group interventions,

develop a care plan, and to heal. By being based directly off of the client's own needs and

perceptions, the model is very user friendly for both the client and the nurse. The client is

always the primary source of data with this theory, hence the importance of using this

theory during the development of the educational curriculum. The nursing staff and key

experts helped to identify the gaps in the education per the pre- and posttest and content

validity index.

Literature Review

Impact of Falls

Falls and fall-related injuries cost health care billions of dollars each year (CMS,

2014). Although there has been a slight decline in the average number of falls over the

past 5 years, the annual cost for the United States was between 16 and 19 billion dollars

in 2012 for nonfatal, fall-related injuries and approximately 170 million dollars for fall-

related deaths across all care settings (CMS, 2014). Although the underlying status of the

individual who sustains a fall may contribute to the fall and subsequent injury, the trauma

resulting from the fall itself is most often the cause of morbidity and mortality (CMS,

2014). Not only are falls expensive for the facilities, the patients are often the ones

suffering. Major falls are the most obvious problematic type of fall for patients; however,

more times than not, the minor injury falls are just as problematic because they can cause

fear of falling, minor injuries, and an altered level of consciousness (TJC, 2014). The

emotional harm to the patient can be just as damaging. The patient may become afraid of

ambulation and often times can develop a fear of falling (CMS, 2014). Fear can cause the

patient to ambulate inappropriately (reaching out for items, hunching over, or scooting their feet) which makes them more prone to falls (Williams et al., 2007).

Each year, hospitals across the United States report on average between 700,000 and 1,000,000 patient falls (Ganz, 2013). Although the number of reported falls has decreased by approximatly14.7% since 2010, falls are still a major issue for many hospitals around the United States (CMS, 2014). A patient fall is defined as an unplanned descent to the floor with or without injury to the patient (NDNQI, 2015). A fall may result in fractures, lacerations, or internal bleeding leading to increased health care utilization (CMS, 2014). According to CMS (2014), approximately one-third of all patient falls could have been prevented if the proper fall precautions were in place at the time of the fall. As of 2008, CMS does not reimburse hospitals for certain types of traumatic injuries, including falls that occur while a patient is in the hospital (CMS, 2014). Due to the lack of reimbursement and the patient safety issues surrounding falls, a fall prevention plan needs to be created that can be used in hospital systems around the United States.

Several contributing factors have been identified during the research and study of falls and fall prevention (Robey-Williams, 2011). Patient contributing factors such as hypotension, medication side effects, or confusion are always going to be present no matter the age, mental status, or sex of the patient (Robey-Williams, 2011). The goal for the project of this study, a fall bundle implementation, was to identify contributing factors that can be addressed by the patient's care team as well as the patient and the family to help prevent the falls in the first place. Safety measures such as toileting, safe

handoff communication, patient and family teach back, proper use of fall safety

equipment, shift-to-shift daily safety huddles, and the standardization of post fall huddle

report sheets (see Appendix C) can all assist with fall prevention (Robey-Williams,

2011).

Patient Care Bundles

Patient care bundles are an effective way to perform successful standard work

when implementing a project (Sutton, 2014). The goal of the bundle approach is to pull

together a short list of interventions and project goals/requirements that have already

demonstrated effectiveness (Sutton, 2014). It is important to keep the bundle organized

by selecting only a few key elements for the project (Robey-Williams, 2011). The more

bundle elements can decrease the likelihood that the project will be successful in the end

due to the complexity of the bundle work (Robel-Williams, 2011). When designing

patient care bundles, it is important to follow the following guidelines: (a) a successful

patient care bundle includes three to six key interventions; (b) each bundle element is

relatively independent, but once the bundle elements are combined together, the overall

care package is achieved; (c) the bundle is used with a defined population in one specific

location (example, inpatient unit); (d) the key stakeholders are heavily involved in the

planning and creation of the patient care bundle and will be involved during

implementation; and (e) the bundle elements should be descriptive rather than

prescriptive to allow for local customization and appropriate clinical judgment (Sutton,

2014). The standard bundle will also include a standard auditing process that can be

easily used by the team members on the inpatient units. The compliance of the bundle should be measured by an all or none approach (Sutton, 2014).

Fall Patient Care Bundles

According to NDNQI (2015), the evidence suggests that facilities that have implemented a fall safety bundle for fall safety and fall-related injury prevention have reported a drastic decrease of the total number of patient falls as well as a decrease in major injuries noted over a 10-year time span (Ganz, 2013).. The research and literature supports the use of fall-focused standard work packages that include screens for fall risk patients on admission; a screening tool for fall related injury risk factors and history upon admission; a complete assessment of any anticipated physiological falls and risk for serious injury from a fall; communication and education for staff, the patients, and the patient's families about fall and injury risk; standardized interventions for patients at risk for falling; and customized interventions for patients at the highest risk for falls and fall-related injuries (Ganz, 2013). The fall safety bundle items will be included heavily throughout the fall bundle package that resulted from this project. The items are supported by evidence to be effective in the reduction of falls because the items brings awareness to the nurse, the patient, and to the patient's family by quickly identifying any key issues or risk factors for falls (Halm, 2011).

Toileting

A recent study found 50% of all falls were elimination-related (i.e., a fall occurring during an activity related to elimination or the need to toilet) (Hitcho et al., 2014). Studies have shown that elimination-related falls are a significant predictor of a

fall-related injury with a fall involving a bedside commode as a particularly high risk

factor for serious injury of a patient (Hitcho et al., 2014) The evidence surrounding fall

prevention strategies in regards to toileting, encourages the use of proactive toileting

routines such as using toilet alarms for all fall risk patients and the use of a toileting

schedule (Schmid, 2009).

Patient/Family Communication

Patient communication boards may improve communication among members of

the healthcare team (e.g., nurses, physicians, and others) and between providers and their

patients and family members (Rutherford, 2009). The first step one must consider when

use the communication board is to ensure the board is filled out appropriately and is easy

to read for the patient and family (Rutherford, 2009). The next step is to assess the

patient's understanding of falls and fall prevention strategies (Rutherford, 2009). This can

be done by using a standard patient communication board that prompts the nursing staff

to discuss the most common fall prevention items. The standard items include: the

patients fall risk and the reasons why behind it (i.e., "you are a high fall risk because you

are taking IV pain medication", "you are a high fall risk because you have a recent

history of falling"), the fall prevention techniques the bedside nurse wishes to focus on

for the patient (i.e., routine toileting scheduled, bed alarm, chair alarm, use of the call

light, etc.), and the use of the universal fall precautions (i.e., hourly rounding, use of call

light, bedrails up, etc.).

Educating the family is just as important as educating the patient. Studies have

suggested that patients who have actively involved families have a higher success rate

with fall prevention than those patients of families who are not involved with their care

(Dykes, 2011). Education is vitally important and the need for family involvement is

necessary if the patient wishes to succeed post-hospitalization (Carroll et al., 2010).

Daily Safety Huddle

Daily safety huddles work to bring awareness to the entire healthcare team

regarding high risk patients and help to build a culture of safety in any organization. A

culture of safety is built on high awareness of real and potential safety issues at all times

and at all levels of organizational operations (Gerke et. al, 2010). Daily safety huddles

should happen on each shift and should only last approximately 5–15 minutes (Goldenhar

et. al, 2013). The team should include the caregivers for that day (nurses, patient care

assistants, rehab, patient care directors, managers, etc.) The items that should be included

during the safety huddle include, but are not limited to, the identification of all high risk

fall patients, patients who are being consulted by physical therapy or occupational

therapy, the patients who are on fall precautions ("be on high alert" patients), and finally,

those patients who have fallen in the past.

Hand Off Communication that Includes the Fall Risk Assessment

Safe handoff communication that includes the patients' fall risk assessment

information is vitally important in the prevention of falls. When those who remain closest

to the patient are actively engaged and are aware of the patients fall risk assessment

results, the bedside care providers are more likely to hold each other accountable for

patient safety (Wallace, 2005). As of 2006, TJC added the handoff communication

expectation as a requirement under the National Patient Safety Goals (NPSG) for

improving communication. The requirement specifically expects healthcare organizations to "implement a standardized approach to handoff communications, including an opportunity to ask and respond to questions" (TJC, 2006, p. 52). For the purpose of this DNP project, it was requested for each facility to simply add fall risk assessment and interventions to the current safe handoff forms for each facility.

Standardized Equipment

Gait belts, bed alarms, chair alarms, and toilet alarms have been suggested by the literature to help decrease the total number of falls in a hospital (Nelson & Baptiste, 2004). The gait belt is the most cost effective way to assist a patient with ambulation while keeping them safe. The purpose of the gait belt is to control the patients' center of mass during mobility, control the descent if a fall occurs, and reduce the chance of grabbing a patient's upper extremity if a fall does occur (Nelson & Baptiste, 2004). A very simple way to ensure that gait belts are ready to use for every fall risk patient is to have them located in a standard location in each patient room.

Another effective fall prevention tool is the use of alarms. Most falls in hospitalized patients occur in patient rooms and are related to ambulating from a bed, chair, or toilet without adequate assistance (Shorr et. al., 2012). Bed alarm systems (for example, bed or chair alarms) could therefore reduce falls by alerting personnel when at-risk patients attempt to leave a bed or chair without assistance. Bed alarms, chair alarms, and toilet alarms should be utilized for every fall risk patient regardless of their mobility and/or their compliance with the call light. Alarms are safety features that can be captured a little cost to the facility to help with the prevention of falls (Oliver et. al.,

2010). It is very important to remember that alarms do not prevent falls, they are used simply as an alert for nursing staff to get to the patient's bedside quickly. Another potential benefit is that bed alarm systems may reduce the need for physical restraints—a CMS quality-of-care indicator (CMS, 2014).

Postfall Huddle

A post fall huddle is a brief meeting immediately (must occur before the end of the shift) after a fall that includes staff caring for the patient and (ideally) the patient and family (Gates et. al. 2008). The purpose of a post fall huddle is to encourage and guide critical thinking about a fall event for an individual patient with the overt goal of discovering the root cause of the fall, to decrease the risk of a future fall by increasing staff awareness and by providing education to the patient and the family on fall prevention and safety, and to discuss the lessoned learned from the fall including hidden assumptions, contributing factors, etc. (Anderson et. al. 2009). Post fall huddles will also improve teamwork by including all individuals who participated in the patients care and to improve overall intraprofessional collaboration in relation to patient safety (Anderson et. al. 2009).

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Background and Context

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Regulatory Body

TJC (2014) requires accredited hospitals to conduct fall risk assessments for hospitalized patients to identify each patient's risk for falls so that prevention measures can be implemented into the plan of care (TJC, 2014). Since beginning to monitor sentinel events in 1995 through the end of 2013, TJC had 689 fall-related events. The fall

related events resulted in death or permanent loss of function, voluntarily reported as a

sentinel event. According to TJC (2015), this number reflects voluntary reporting and

represents only a small portion of actual events. The actual number is unknown but most

likely much greater, attesting to the importance of fall prevention interventions. Patients

across the healthcare system, including the setting of the student, are still falling. What

seems to still remain unclear is the reasons why (TJC, 2014).

Summary

In this section, I summarized the pertinent literature on the topics of falls, fall

prevention, patient care bundling, and the framework for the project. Falls and injuries

resulting from a fall have been identified as a problem for the hospital system identified

in this paper. Evidence based practice supports the use of standardized safety bundles,

fall patient care bundles, and the use of an educational curriculum for the nursing staff. In

Section 3, I will discuss the approach that was used to develop the program of patient

care bundling for the prevention of falls and injuries resulting from a fall in the hospital

setting.

Section 3: Approach and Method

Introduction

The purpose of this DNP project was to develop an evidence-based fall safety bundle for use by nursing staff and an education curriculum to increase staff awareness and knowledge for the prevention of falls and fall-related injuries. In this section, I present plans for development of the project. Those plans consist of the team, the access to evidence-based literature, development of the bundle, and the educational curriculum.

Approach and Rationale

Project Design

The Iowa model framework and the MRM theory were used in both the planning and implementation stages of the project as well as during the development of the education curriculum for the bedside staff (Ganz, 2013). The problem was identified and a detailed and complete research analysis and synthesis of the research was conducted. Once the analysis and synthesis of the research was completed, the final project was presented to the Falls Committee. The top priority for the system was to prevent falls and fall-related injuries as well as increase overall nurse awareness about fall prevention.

During this project, I was the team leader. There was a team approach to the project which helped ensure successful outcomes (Salas et al., 2005). The fall safety bundle was then developed based on the feedback of the entire team after the presentation was complete. I presented the information and the literature to the team and together the decision was made to include six standard work components in the toolkit. Accurate models of teamwork, including distributed decision making and information flow, are needed for developing and evaluating new equipment and procedures through human-

behavior representation (HBR) studies (Blicken et al., 2008). Teams are viewed as groups

of interdependent individuals working together to accomplish a common goal (Blicken et

al., 2008). Effective teamwork requires a number of competencies, which can be taught.

However, the key insight is that team members must possess a mutual awareness (shared

mental model) which enables them to interact; anticipate each other's actions and needs;

and carry out team processes like communication, coordination, and helping/back-up

(Cannon-Bowers et al., 2003).

When undertaking change, it is important to understand how much power key

political stakeholders have to either facilitate or hinder the change (Cannon-Bowers et al.,

2003). Once the planning team understands the power each stakeholder has, the next step

is to understand their predisposition to the project (Kelly, 2011). The standard work

bundle and curriculum was developed and evaluated by key stakeholders. The key

stakeholders for this project included the facility's chief nursing office, chief operating

officer, quality team, risk team, case managers, bedside registered nursing staff, the

patient care support team, and the system-wide Falls Committee. The fall safety bundle

project was based on the evidence found involving fall prevention, patient safety bundles,

and nurse education. The fall safety bundle includes the seven standard work components

of supporting fall prevention, an educational reminder page that can be used as a quick

reference, the policy and procedure, and the education curriculum. The fall safety bundle

will be available to all staff through the use of the hospital's intranet pages as well as in a

binder on each nursing unit. The standard work process consists of an educational

reminder page (see Appendix A) for a simple reference of the main points regarding the

listed topics. The project binder includes all of the necessary elements for the staff

including the standard post fall huddle form that will be used on all inpatient units, daily

auditing tool, daily safety huddle form (see Appendix B), and a list of all of the standards

of work processes for necessary references.

Methods

I used the Iowa model for the development of the fall safety bundle and the MRM

theory for the development of the education curriculum. The Iowa model suggests that

once the research is deemed appropriate and adequate, it is time to complete the items of

the change in the healthcare practice setting to ensure quality outcomes (McEwen &

Wills, 2014). Examples of evidence-based nursing practices include selecting outcomes

to be achieved, collecting baseline data, designing evidence-based practice guidelines,

and implementing the process on the pilot units (McEwen & Wills, 2014). The final steps

of this process are to identify whether the change was a success, identify if the standard

work process was achieved, monitor and analyze the data, and finally, disseminate the

results of the project (McEwen & Wills, 2014).

Teamwork during the planning and implementation stages of this project was

essential for the success of the fall safety bundle. The keys stakeholders listed in the

previous subsection were included in the implementation and evaluation of the project.

The education is a key piece to implementing change. The explanation of the reasons

why as well as the roll out of the project are both essential to the success of the

implementation of change in any workforce (McEwen & Wills, 2014). The input of the

key stakeholders was valued and their comments, concerns, and suggestions were taken into consideration during the organization stages of the project.

Intraprofessional collaboration refers to practice between members of the same discipline or profession who may have different education and scopes of practice, and interprofessional collaboration is a partnership between a team of healthcare providers and a client in a participatory collaborative and coordinated approach to shared decision making around health and social issues (Jelley, 2013). Interprofessional collaborative practice has been defined as a process which includes communication and decision-making, enabling a synergistic influence of grouped knowledge and skills (Jelley, 2013). Elements of collaborative practice include responsibility, accountability, coordination, communication, cooperation, assertiveness, autonomy, and mutual trust and respect (Zaccagnini, 2012). Without the elements of collaborative practice, this project will not be successful due to the need for a multidisciplinary approach.

Regularly scheduled meetings and planning sessions were held and will continue monthly and as needed to measure the process of the project implementation. The meetings are set up for weekly, every Friday from 11:00-12:00 Eastern Standard Time. Those meetings are offered via telephone conference and web-x. Agendas for the meeting are sent out approximately 1 week prior to the meeting for the committee members' review. The meeting minutes are also sent out after the meeting via electronic mail. During the planning stages of the standard work, the team reported the total number of weekly falls along with any injuries. My role was to:

- Conduct a thorough examination of the literature and present the synthesis of the results to the committee.

- Make recommendations to the team on the most effective fall preventive strategies.

- Develop the fall safety bundle.

- Develop the educational curriculum for the nursing staff.

- Develop the implementation and evaluation plans which will be executed after graduation.

Role of the Falls Team

The falls team includes several key stakeholders. These individuals included the hospital's inpatient managers/directors, the facilities' chief nursing officer, quality manager, risk manager, one RN representative from each unit, and/or one patient care tech from each inpatient unit. The managers' role was to present the total number of falls for the week as well as any injuries that occurred. The managers were also the main stakeholders who provided direction to the end users on the unit by leading the team during the change and implementation process. The risk and quality managers provided the statistical and financial impact of the falls and/or fall-related injuries as well as discussed any legal ramifications related to the falls. The RNs and the patient care techs represented the bedside staff members and discussed any lessons learned, barriers, breakdowns in communication, or equipment malfunctions identified during the falls so the team can learn from the bedside staff. The RNs and patient care techs also took back the information from the meetings to the other bedside staff members. The team will do

ongoing formative evaluations of the project. Formative evaluation often lends itself to qualitative methods of inquiry (Grove, 2013). The questions asked in formative evaluation are generally more open and lead to exploration of processes, both from the viewpoint of participants and also from that of project staff and other stakeholders (Grove, 2013). The use of participatory evaluation is particularly relevant and appropriate for a formative evaluation (Sadler, 2013). Some of the approaches to consider in undertaking a formative evaluation are briefly outlined later in this section.The evaluations will occur as the process continues. The evaluations will be reviewed and captured in the meeting minutes (Sadler, 2013).

Fall Bundle Tool Kit

The fall safety bundle includes seven standard work pieces that were determined by the Falls Committee. The standard pieces of work include: a patient communication board, toileting safety, patient/family teaching, a safe handoff communication form, standardized availability and use of fall prevention equipment, a daily safety huddle form, and a standard postfall huddle form. The daily huddles and the postfall huddles are both evidence-based practices that have been shown to increase nursing awareness (Sutton, 2014) The standardized bundle also helps with implementation by bringing awareness to change by using a collaboration method (Sutton, 2014).

Educational Curriculum

The curriculum includes the seven standards of work processes and the reasons "why" behind each level of care. The impact the nursing staff had on the success of this implementation was very large; therefore, they needed to understand the reasons "why"

behind the education they were receiving so they would become engaged in the

implementation (Parker & Smith, 2010). If the project outcomes are not explained well,

the nursing staff might view this project as "just one more thing to do" and that mindset

and attitude will inhibit their ability to retain the information and might hinder them from

practicing the evidence-based work.

The MRM theory was used to build a framework for the basis of the education

and curriculum for the nursing staff (Ganz, 2013). The MRM focuses on nursing practice

and encourages nurses to be advocates for their patients (Ganz, 2013). The use of the

theory helped the key stakeholders with developing a concise curriculum that focused on

nursing practice and fall prevention. The theory is based on several nursing principles

that guide the assessment, intervention, and evaluation aspects of professional nursing

(Parker & Smith, 2010), which is why including nursing staff on the committee is so

important.

Evaluation Methods of the Project

Process evaluation of the project will be ongoing as evident by ongoing meeting

minutes from the Falls Committee as well as from the system-wide fall's leadership team.

Process evaluation will be evident by reviewing the minutes and discussing the progress

of implementation. A content validation index was completed on the pretest/posttest

items by content experts (See Appendix F). An assessment expert, Dr. Moon, evaluated

the construction of the pretest/posttest items and content experts evaluated the

curriculum.

Resources and Budget

The education time and meeting time that will be allocated for this project will be dependent upon the facility size and the size of the falls committee that will be involved in the project planning, education, and implementation. A falls committee that consists of 15 key stakeholders that averages one, 1 hour meeting every month could expect to allocate approximately $412.50 a month in meeting expenses. This cost is based on an average hourly pay of $27.50 at 1 hour a month. The education for the fall bundle implementation would be conducted during the hospital's board meetings, nursing competency meetings, staff meetings, and any other planned mandatory meetings. The meetings and education will be expensed to the education (nonproductive) budget to avoid affecting any productive hours in the budget. The educators will be included in the curriculum planning as well as the education portion of the project which includes the development and dissemination of the booklets and signage. These items will be included in the initial budget configuration. Additional costs include gait belts, chair alarms, communication boards, and falling men signs for each room.

Institutional Review Board

An IRB Form A application was submitted to the Walden University IRB for approval or further direction to assure that the project meets the ethical standards of the university in December 2015. An approval was obtained in January 2016 after which a revised Form A was submitted. Please see Appendix D for the IRB approval letter.

Summary

In this section, I presented the methods and approach for developing the patient care bundle and educational plan for prevention of falls in the organization for all nursing staff. I also reviewed the evaluation data as well as the budget in this section. I will discuss the evaluations and findings; the implications for the project based on the policy, practice, research, and social change; the strengths and limitations of the project; and the analysis of oneself in Section 4.

Section 4: Discussion and Implications

Introduction

The purpose of this DNP project was to develop an evidence-based fall prevention bundle for use by nursing staff and an education curriculum to increase staff awareness and knowledge for prevention of falls and fall related injuries. The Falls Committee of the healthcare system study site consisted of individuals from each of the system's hospitals. The fall bundle was proposed to all hospitals in the system. The fall bundle process will help to prevent patient harm by decreasing the number of falls and will increase nursing awareness regarding falls and fall safety. The targeted audience for the project is the nursing staff which includes LPNs, RNs, and nurse techs. The bundle included evidence-based processes that will positively influence nursing practice as well as educate staff on precautions and help the bedside provider to provide essential education to the patients and their families. The bundle focused on patient safety and can fill the gap between risk of falls and education and actions to improve communication of nurse-to-nurse, nurse-to-patient, and nurse-to-family to facilitate patient safety and care (Sutton, 2014).

The project goal was to prevent patient falls and fall-related injuries in the healthcare system under study. That overall goal was supported by the development of a standard work package and a nursing education curriculum that will increase nursing awareness of falls and fall prevention. The Iowa model was used for the development of the standard work package and the MRM theory was used in the development of the nursing educational curriculum. I developed an evaluation process that was conducted by the key stakeholders. A content validation index for the fall prevention bundle and

curriculum was completed by the key stakeholders and experts. A pre- and posttest was used to evaluate the educational curriculum. Both evaluation plans were successful for this project. The Walden University IRB confirmed that this project met Walden University's ethical standards (see Appendix D).Outcomes for the project included the development of a standard fall bundle tool kit and an educational curriculum for the nursing staff. In this section, I present the evaluation and findings for the project, the project implications, strengths and limitations, and an evaluation of self.

Evaluation, Findings, and Discussion

The following goals and outcomes were met for this project: the development of an evidence-based fall safety bundle tool kit, the development of an evidence-based educational curriculum for staff, the development of an evaluation plan for the educational curriculum and fall safety bundle content that was completed by the key stakeholders, and a content validation index for the pretest/posttest items that was completed by content experts. The system- wide Falls Committee approved the proposal for the fall safety bundle and will move forward with the implementation of the project in 2016–2017. Once the approval is reviewed by the systems new falls team, the proposal for the project will be revisited at that time.

The Iowa model was used to present the project proposal to the Falls Committee and to each individual hospital's administration team (See Appendix J). The MRM theory (Ganz, 2013) was used to help develop the education curriculum and implementation plan for the fall bundle. This theory was also used in the curriculum planning and implementation stages of this project with the main focus being on nursing education. The literature review as well as the education curriculum were both evaluated and

approved by the key stakeholders and content experts for the project (See Appendix I).

The overall literature review and project implementation was deemed appropriate for the

targeted audience as evidenced by the pre- and posttest content validation. A panel of

three experts evaluated the education curriculum and performed a content validation

index on the pretest and posttest. The committee members evaluated my role and the

project using a summative evaluation.

Implementation Plan

The implementation plan for this project will take place over a 1 year time period.

The Falls Committee will present the fall safety bundle to each facility's administrative

team. This team will provide feedback and will discuss any gaps with the

implementation. Once the bundle is presented to each facility, the committee member

will work with the administrative team to discuss the implementation of the fall safety

bundle on the inpatient units. This process will take up to 4 months. During that time, all

equipment will need to be evaluated and purchased to support the fall bundle

implementation. The second piece of the process will include presenting the fall bundle to

each of the organizations' leadership groups for the inpatient units, quality, risk

management, and case management. This process will take 1 month to complete.

Once administration, leadership, quality, risk, and case management are informed,

the plan to educate the nursing staff will begin. The educational curriculum developed by

me will be presented to the system-wide education committee. This will be a "teach the

teacher" approach to ensure the education committee members are the main contact

persons for the nursing education at each facility. Each Falls Committee member will be

responsible for presenting the fall bundle education piece to the inpatient units at each facility. This education will take 2 to 4 months to complete.

Once the education is completed, each hospital will choose one to two pilot unit(s) to trial. The pilot unit(s) will participate in the fall bundle launch and will conduct daily audits to ensure the implementation is successful. Learning and feedback sessions, will be held each Friday to discuss any barriers with implementation on the pilot unit(s). This trial period will be for 1 month. At the end of the 12 months, the system will be ready to implement the project system wide on all inpatient units.

Expert Review and Content Validation

The methodology used for the organization of the literature was the development of a literature review matrix (See Appendix E). The three experts reviewed the literature by listening to my oral presentation, reviewing the literature review matrix as well as the education curriculum, and providing me with feedback. The feedback and analysis of the findings were compiled and presented via a literature review table as well as a content validity index (See Appendices F and H).

The second evaluation was for the educational curriculum. A pre- and posttest content validity index was created to help identify any gaps in the education curriculum (See Appendix H). The pre- and posttest, the literature review matrix, and the education curriculum were presented to the Falls Committee members as well as the three experts. The three experts included a bedside registered nurse from an oncology unit, a department director for obstetrics, and a clinical educator. The findings were compiled and presented using a content validation index (CVI; See Appendix F). A CVI value can

be computed for each item on a scale (which is referred to as I-CVI) as well as for the overall scale (which is called an S-CVI; Davis, 2012). To calculate an I-CVI, experts are asked to rate the relevance of each item, usually on a 4-point scale (Davis, 2012). The scale used for this project was, 1 = *not relevant*, 2 = *somewhat relevant*, 3 = *quite relevant*, and 4 = *highly relevant* (Davis, 2012). Then, for each item, the I-CVI is computed as the number of experts giving a rating of either 3 or 4, divided by the number of experts—that is, the proportion in agreement about relevance (Davis, 2012).

The third evaluation used for the fall safety bundle was a standard daily audit tool that should be used on each nursing unit daily. This daily audit tool will include the date and time of the audit, the unit that the auditor is rounding on, the auditor's name, and the number of patients being audited (fall risk patients only; See Appendix C). The items on the audit sheet include six boxes titled: equipment, safe handoff communication, patient/family communication, toileting, daily safety huddle, and a post fall huddle. Each box will have specific auditing criteria that are pertinent to the title. For example, the toileting box should state, "Does the communication board in the patient's room address the need for mobility equipment and the number of staff assistance documented? Y/N." The daily safety huddle box might state, "Is there evidence that a daily safety huddle was completed today?" The bottom of the daily audit tool will have an area for lessons learned as well as wins and rewards for the day. This audit sheet will be used each day by the unit until the work becomes standard on the unit. Once that level is achieved, the audit tool will be used randomly throughout the month as well as during a patient's post fall huddle if there was a fall on that unit.

Project Outcome

The project outcome was to create a standard work bundle that includes seven pieces of standard work that will help with the prevention of falls as well as influence the overall improvement of staff and patient awareness of falls. The project was developed based on evidence-based practice with the use of care bundles. A care bundle approach to falls prevention can be implemented with sustained effort and commitment from multidisciplinary ward teams that include nurses, doctors, therapists, pharmacists, and patient care staff (nurse technicians and unit clerks). The team is best driven by a nominated member of the nursing team with a strong personality and leadership attributes who is able to inspire and motivate others, and who recognizes several teaching and communication styles will be required (Sutton, 2014). The fall bundle items were suggested to me from the Falls Committee team members during a fall summit in 2014. The fall bundle process will help to prevent patient harm and increase nursing awareness regarding falls and fall safety. The bundle will include evidence-based tools to influence nursing practice and to influence nursing staff to become more aware of fall safety precautions as well as providing essential education to the patients and their families. This standard fall bundle kit will be placed on the hospital's website for ease of access. A hard copy of the bundle binder will also be available to staff on each nursing unit. The location of the fall bundle will depend on the manager's preference. For example, the manager of the unit might want the printed binder at the nurse's station or attached to the units quality board located in the breakroom. The expectation is that the fall bundle is

visible for staff to use during their shift until the fall bundle tools become standard work on the unit.

Project planning is a discipline for stating how to complete a project within a certain timeframe, usually with defined stages, and with designated resources (Polit & Beck, 2010). One view of project planning divides the activity into setting objectives (these should be measurable), identifying deliverables, planning the schedule, and making supporting plans (Polit & Beck, 2010). For this project, project planning and organization was the key. A Falls Committee team was already in place at the study site organization. During the planning and implementation stages of the DNP project, my responsibilities as the fall's team leader were to conduct a thorough analysis of the literature and present the synthesis of the results to the committee; make recommendations on the most effective fall preventive strategies; create the fall prevention bundle toolkit for the nursing staff to use; develop the educational curriculum for the nursing staff and physicians; and present an evaluation of the project that consisted of a process, a summative evaluation, as well as a content validation by expert key stakeholders.

During the course of this project, regularly scheduled meetings and planning sessions were held. The planning and discussion meetings were held in Indianapolis, every Friday from 11:00-12:00 EST time for the first 6 months. Those meetings had telephone conference and web-x offerings as well for those who could not attend in person. The agenda for the meeting was sent out approximately 2 days prior to the meeting for the committee member's review. The meeting minutes were also sent out

after the meeting via electronic mail. During the planning stages of the standard work, the team reported the total number of weekly falls along with any injuries. Once the project was approved through Walden University, the meetings went from weekly to monthly. The monthly meetings lasted approximately 4 hours instead of 1 hour and included key members from each organization. Those meetings consisted of the presentation of the entire fall bundle, a proposed implementation plan, the proposed education curriculum, as well as a literature and product evaluation per the content experts. All data were analyzed and reported back to the team via a CVI. I was able to contribute to the team as the content expert. The educators on the team helped with the development and construction of the education curriculum and the falls committee chair helped with the dissemination of the information via the senior nursing executive council.

Implications

The standard work bundle will be implemented as a standard work package but will also be implemented as a policy. The policy will be applicable to all inpatient units within a system wide setting. The policy will include the purpose, scope of practice, definitions, procedures, documentation standards and requirements, and references. The policy will be utilized as an educational piece for the nursing staff during the facility wide hospital training prior to implementation. The policy will include an ongoing educational piece that will be added to the educational curriculum for the project implementation. The policy will include evidence based research and literature and will be used to influence nursing practice surrounding fall prevention by.

Policy

Health policy refers to decisions, plans, and actions that are undertaken to achieve specific health care goals within a society (Grove, 2013). An explicit health policy can achieve several things: it defines a vision for the future which in turn helps to establish targets and points of reference for the short and medium term. It outlines priorities and the expected roles of different groups; and it builds consensus and informs people (World Health Organization, 2015). The fall bundle implementation is based on an evidence based model that takes individual standard pieces of work and places them all together in a bundle format. Bundling work allows for the implementation to be rolled out all at once which helps with overall retention of the information (Sutton, 2014).

Practice

Nurses face daily ethical challenges in the provision of quality care. To retain nurses, targeted ethics-related interventions that address caring for an increasingly complex patient population are needed (American Nursing Association, 2015). It is very important that the standard work process is explained to the nursing staff prior to implementation. This will allow for questions, concerns, and feedback to be gone over and gathered prior to implementation. Standard nursing practice allows for patients to be taken care of appropriately per their diagnosis as well as for any identified risk they have (Grove, 2013). The fall safety bundle is based on an evidence based model that includes identifying standard work pieces to help improve the overall awareness of fall prevention strategies and techniques.

Patient care bundles are an effective way to develop successful standard work when implementing a project (Sutton, 2014). The goal of the bundle approach is to pull together a short list of interventions and project goals/requirements that are already proven effective. It is important to keep the bundle organized by selecting only a few key elements for the project. The more bundle elements can decrease the likelihood that the project will be successful in the end due to the complexity of the bundle work. When designing patient care bundles, it is important to follow the listed guidelines (Sutton, 2014). A successful patient care bundle includes three to six key interventions. Each bundle element is relatively independent but once the bundle elements are combined together, the overall care package is achieved. The bundle is used with a defined population in one specific location (example, inpatient unit). The key stakeholders are heavily involved in the planning and creation of the patient care bundle and will be involved during implementation. The bundle elements should be descriptive rather that prescriptive to allow for local customization and appropriate clinical judgment. The standard bundle will also include a standard auditing process that can be easily utilized by the team members on the inpatient units. The compliance of the bundle should be measured by an all or none approach.

The evidence suggests that facilities that have implemented a standard work bundle for fall safety and injuries that occur due to a fall have reported a drastic decrease of the total number of patient falls as well as a decrease in major injuries noted over a 10 year time span (NDNQI, 2015). The research and literature supports the use of fall focused standard work packages that includes screens for fall risk patients on admission;

screening tool for fall related injury risk factors and history upon admission; a complete

assessment of any anticipated physiological falls and risk for serious injury from a fall;

communication and education for staff, the patients, and the patient's families about fall

and injury risk; standardized interventions for patients at risk for falling; and customized

interventions for patients at the highest risk for falls and fall related injuries. The six

listed items will be included heavily throughout the fall bundle package that is being

proposed for this project. The six listed items are supported by the research to be

effective in the reduction of falls because it brings awareness to the nurse, the patient, and

to the patient's family by quickly identifying any key issues or risk factors for falls

(Halm, 2011).

DNP Use of Research in Practice

The research surrounding falls and fall prevention strategies utilized

throughout the project was based on evidence based literature reviews, practice, and

the overall theory that making the nursing staff and patients more aware of falls and

fall prevention will ultimately reduce the overall number of falls and fall related

injuries in the hospital. Refining the standards and training surrounding fall

prevention for the registered nurses can serve to both improve overall patient

outcomes and ensure all registered nurses are practice evidence based practice

regarding fall and injury prevention strategies. Future research efforts need to focus

on the development of nursing interventions that improve nursing workflow as well

as standardizing the new hire education surrounding fall and injury prevention during

the onboarding and orientation period. With the proper education and understanding

regarding fall and injury prevention, nurse researchers could play a key role in preventing future falls in a hospital setting.

Social Change

The societal response to ethical problems associated with clinical research has been the implementation of regulatory laws and policies, including detailed federal regulations governing research involving human subjects (Grove, 2013). The application of these regulations has led to improved protection of the rights and welfare of research subjects; however, there remain deficiencies that need to be addressed (Grove, 2013). Falls are the leading cause of injury-related death among patients age 65 or older (CMS, 2014) and the impact of fall related injuries have on social change is detrimental to the patients, families, and health care worker's overall perception of falls. The implementation of the fall safety bundle will increase the overall awareness of falls and fall prevention with not only the nursing staff but the patients and their family. The overall awareness of falls and injuries that occurs due to a fall will bring awareness of the consequences for the patient as well as the financial impact on the facility. The project proposed to change one's perception of the importance of properly identifying the high fall risk patients on admission and to express the importance of initiating fall prevention strategies as soon as the patient is identified as a fall risk.

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Strength and Limitations of the Project

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Strengths

There are three major strengths that can be identified throughout this project. The most evident strength is the profound amount of literature that supports fall safety and patient care bundles as well as supporting evidence behind each bundle piece. The

literature validates that the standard work pieces identified in the project bundle are

evidence based and are demonstrated to be effective in the prevention of patient falls. The

literature was reviewed via a literature review matrix by the key stakeholders and

evaluated via a CVI. The second strength for this project is the support of the Falls

Committee team members. They are committed to improving patient care overall and

have a unique ability to ensure that happens within the organization. The team is a group

of individuals who are used to being proactive instead of being reactive and strive for

perfection when it comes to education and implementation of any project surrounding

falls and fall prevention. The third strength for the project was the overall inclusion of

each facilities' leadership teams, the bedside nursing staff, and many other key

stakeholders. This goal of explaining the reason "why" behind the fall safety bundle was

achieved by allowing the bedside staff to participate in the planning and training sessions,

including the bedside staff in mandatory training (minimally as possible), keeping

ongoing communication open and effective, and by explaining how the fall safety bundle

will impact the nurses work.

Limitations

Barriers in health care have been conceptualized as organizational, structural, and

clinical (Kettner, Moroney, & Martin, 2008). One can begin to break down the barriers

by working through each one. One barrier for the project has been communication issues

with the entire health care system. The system wide communication function is currently

set up for web-x and telephone meetings due to the vast size of the organization. The

project would benefit best from in person communication during the planning and

implementation stages of the project. The plan for this barrier is to work diligently during

the planning stages and create both in person and telephone/web-x meetings. The pre-planning and date setting will allow the team members involved to plan ahead to ensure they are able to attend the in person meetings. A major organizational barrier to the project is the implementation for the entire hospital system which is an expectation of senior leadership. Since falls' committee members are a representative from each facility, implementation will be represented well at each facility. The challenge with implementing a process across an entire hospital system is staying organized between the hospitals. The benefit of having a system wide falls committee is the consistency of a unified team will provide during implementation.

Another challenge is the resources that will be needed to ensure proper implementation. The fall safety bundle requires fall prevention equipment to be readily available to clinical staff. Examples of the equipment requirements would be a gait belt, roll belt, and chair alarm at each patient's bedside. The cost of this equipment adds up over time. If the bundle focuses on standardizing the fall logo (black and yellow falling man), fall safety equipment in each patient room, and the standardization of the patient communication boards will take time and several thousands of dollars for all of the hospitals to achieve. The proposed plan to help avoid this limitation would be to implement pieces of the total bundle on one nursing unit, per hospital, at a time. Over the course of 12-24 months all nursing units will have fully implemented the standard work.

Analysis of Self

The amount of work, effort, energy, and dedication the DNP program requires is tremendous. During the course of the DNP program, I was able to absorb so much about nursing leadership, management, and patience. My mentor provided guidance throughout

this program which impacted my overall leadership skills. Throughout the DNP program, I have grown so much as a scholar, a practitioner, a project manager, and my overall professional development has exceeded all expectations I had set prior to my overall understanding of the healthcare system and also the role of the mentor and preceptors.

As Scholar

The DNP project has helped to improve my overall research, literature review, and data analysis skills. The project has made me more persistent, passionate, productive, and has helped improve my overall outlook on evidence based literature and practice in a healthcare setting. As a scholar I have learned the importance of using frameworks and theories. As I continue to identify problems in the practice setting, I now know the importance of bringing the evidence from the literature to solve those problems. Also, learning how to develop curriculum plans including evaluation methods such as content validation have broadened my abilities as a scholar.

As Practitioner

As a practitioner, the DNP project improved my overall clinical skills regarding patient safety and fall prevention. I am much more passionate about patient safety and quality measures than I was before the DNP program. I now understand the importance of evidence based practice and now fully grasp the reality of hospital reimbursement with CMS and other payers. This was not something I was fully aware of prior to reviewing the literature on fall reimbursement. I am much more productive with my work now after working several months with bedside nursing staff to improve efficiency with fall prevention and safety. I have the unique ability to quickly analyze my patients and

properly identify them as fall risk patients and implement the proper fall risk interventions much more effectively than before my work with the project.

As Project Manager

As a project manager I learned how to connect with the team I was working with in a way that allowed each members' voice to be heard. I took charge as the project leader and felt very confident in doing so. I knew that I was the content expert and I needed to show them by managing the team well and ensuring a very successful project implementation. A great project manager has the ability to listen carefully to the team and utilize the feedback in an effective way (Davis, 2012). In addition, understanding and managing the right way by exceeding the expectations of all the stakeholders, getting the everyday job done by utilizing all of the allocated resources, knowing exactly the final result of the project rather than every single development's detail, reporting any requirement's change and quickly identifying any possible outstanding problems are all important qualities that a good project manager should possess (Davis, 2012). I was able to enhance my overall organizational skills and attention to detail throughout the project and was able to utilize those skills in my DNP project implementation.

Contribution to the DNP Student's Professional Development

During the course of this program, my professional growth and insight have grown much more than I could have ever anticipated. One's profound ability to research and formulate a plan of action for a project is one of the DNP requirements. I did not have the required confidence with research and project development at the beginning of the DNP program, but I do have that confidence now.

Summary

In summary, the target population for this DNP project is any adult patient on an inpatient unit. Once the patient is identified as a fall risk patient, the nursing staff will proceed with the fall bundle to properly care for the patient. The project design consists of the development of a very organized bundle package that includes the necessary tools for the nursing staff to use. This bundle will be located on the intranet of the facility as well as on each nursing unit. Four distinct methods will be used when analyzing the data when using the fall bundle, all of which will be used in different ways. The analysis included descriptive, predictive, exploratory, and causal methods. The project has three particular evaluation methods and they are included on the daily auditing form. That form will be filled out daily by each nursing unit auditor and will be collected for the manager's review. The collection of data will allow trends and themes to be identified and tracked to see how effective the fall bundle toolkit is. Daily audits will also allow the team to track issues in real time which will allow them to be proactive in regards to fixing the issues at hand sooner rather than later.

Section 5: Scholarly Product for Dissemination

I will submit an abstract as well as a poster presentation for The Pathways to Excellence conference for the spring of 2017. The conference location for the fall will be announced during the April 2016 conference. The calling of abstracts and poster presentations opens on July 29, 2016 at 7:59 a.m. and will remain open until 11:59 p.m. on August 18, 2016. The poster board is presented in Appendix K.

The submission requirements for the abstract are:

- 250 words or less, exclusive of footnoted references.

- Must be blinded, all references to the organization and/or authors by name must be omitted from the title, program description, and body of the abstract in order to ensure a fair, unbiased review process.

- Abstracts that have been submitted or presented elsewhere are not automatically rejected; however, it is asked that the submitter specifies if the abstract has been submitted elsewhere.

Abstract

As of 2008, the Centers for Medicare and Medicaid Services does not reimburse hospitals for certain types of traumatic injuries including falls that occur while a patient is in the hospital. Due to the reimbursement and patient safety issues surrounding falls, a fall prevention plan needs to be created and used in hospital systems around the United States. The total number of falls and any injuries were collected and analyzed weekly and monthly for a strategic overview with thoughts to move forward in solving this issue. Therefore, the project goal was to decrease the number of patient falls and fall-related injuries and to increase nursing awareness of falls and fall prevention. Outcomes for the

project included development of a fall safety bundle tool kit and an educational

curriculum for staff. The implementation of a fall safety bundle standard work package

will help to ensure and promote consistency across the care continuum for the hospital

organization in question as well as increase nurse awareness. The standard work bundle

includes seven standards of work processes, including but not limited to the

standardization of the patient's communication board in each room (to the extent that is

appropriate for the patient), the standardization of the fall safety equipment that is

available on the unit, and standardization with face-to-face communication during shift

report (safe handoff communication).

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Appendix A: Standard Work Process Education Reminders

Toileting

- Stay with the patient at all times
- Utilize Toilet Alarms if the patient is a fall risk patient.

White Board Communication

- Include
  - Toileting Method
  - Ambulation
  - Phrases like "Because I care about your safety, please press your call light before you get up".

Hand Off Communication

- ABCS (Age, Bones, Coagulation, Surgery).
- Fall Risk
- Interventions in Place
- Mobility Needs
- Past Falls?

Patient/Family Communicaiton

- Safe Hand Off and Bedside Shift Report are to be completed in the room at all times.
- Review the patients safety plan with family present (if patient allows).

Daily Safety Huddle

- Conducted at the beginning of each shift.
- Brief 5-10 mins
- Includes all safety measures for the unit.
  - CLABSI
  - FALLS
  - CAUTI
  - ISOLATIONS

Equipment

- All HIGH fall risk patients require a bed, chair, and toilet alarm.
- Equipment should be easily accessible to all staff.
- Keep equipment in a designated area for consistency.
- Gait belts should be placed in every room.

Post Fall Huddle

- To be completed immediatly after a fall.
- Lead by the team leader or manager.
- includes individuals who were involved with the patients care.
- To include patient and family (if applicable).

Reminders

- Purposful hourly rounding should be completed on every patient.
- ALWAYS address the 5 P's when doing hourly rounding.
  - Potty
  - Pick Up
  - Position
  - Pain
  - Personal Items (make sure they're in reach for the patient).

Appendix B: Daily Safety Huddle

Date:

Time:

Huddle Leader: _____

Safety Risk	Number of Patients	Patients' Room Number										Interventions in Place for Prevention? Y/N
High Fall Risk												
Catheters												
Lines (Ports, PICCS, etc.)												
Isolation Patients												
Full Codes												

<u>Questions to Ask the Team During the Huddle</u>

1. Which patient(s) are you most concerned about? Why?

2. What barriers do you foresee today that will prevent your patient(s) from remaining safe during your shift?

3. Do you have what you need today to take care of your patients?

****Huddle should take no longer than 15 minutes. Huddle to be performed at least once during each shift, preferable at the beginning of the shift.

Appendix C: Daily Safety Audit Tool

Date:

Time:

Auditor: _____

Safe Handoff Communication

Was fall risk and fall prevention strategies discussed during handoff?
1.
2.
3.
4.
5.

Toileting

Does the communication board in the room identify the mobility needs for toileting?
1.
2.
3.
4.
5.

Patient and Family Communication

Can the patient and/or the family members identify the reason why they are a fall risk patient?
1.
2.
3.
4.
5.

Patient Safety Huddle

Was a patient safety huddle completed during this shift?

Yes / No; why _____

Equipment

Is there a gait belt and a bed/chair alarm in the Fall Risk patients' room?
1.
2.
3.
4.
5.

Post Fall Huddle Form

Was there a fall duirng this shift?
No
Yes; See Post Fall Huddle for Details

After the fall, was a post fall huddle form completed by the care team? Yes / No

Notes:

_____

_____

Appendix D: IRB Approval

IRB Materials Approved - Baili Campbell

IRB <irb@waldenu.edu>
Thu, Jan 14, 2016 at 4:41 PM
To: "Baili Campbell (baili.campbell@waldenu.edu)" <baili.campbell@waldenu.edu>
Cc: Joan Moon <Joan.Moon@waldenu.edu>

Dear Ms. Campbell,

This email is to notify you that the Institutional Review Board (IRB) confirms that your doctoral capstone entitled, "Fall Safety Bundle," meets Walden University's ethical standards. Since this project will serve as a Walden doctoral capstone, the Walden IRB will oversee your capstone data analysis and results reporting. Your IRB approval number is 01-14-16-0319698.

This confirmation is contingent upon your adherence to the exact procedures described in the final version of the documents that have been submitted to IRB@waldenu.edu as of this date. This includes maintaining your current status with the university and the oversight relationship is only valid while you are an actively enrolled student at Walden University. If you need to take a leave of absence or are otherwise unable to remain actively enrolled, this is suspended.

If you need to make any changes to the project staff or procedures, you must obtain IRB approval by submitting the IRB Request for Change in Procedures Form. You will receive confirmation with a status update of the request within 10 business days of submitting the change request form and are not permitted to implement changes prior to receiving approval. Please note that Walden University does not accept responsibility or liability for research activities conducted without the IRB's approval, and the University will not accept or grant credit for student work that fails to comply with the policies and procedures related to ethical standards in research.

When you submitted your IRB materials, you made a commitment to communicate both discrete adverse events and general problems to the IRB within 1 week of their occurrence/realization. Failure to do so may result in invalidation of data, loss of academic credit, and/or loss of legal protections otherwise available to the researcher.

Both the Adverse Event Reporting form and Request for Change in Procedures form can be obtained at the IRB section of the Walden website: http://academicguides.waldenu.edu/researchcenter/orec

You are expected to keep detailed records of your capstone activities for the same period of time you retain the original data. If, in the future, you require copies of the originally submitted IRB materials, you may request them from Institutional Review Board.

Both students and faculty are invited to provide feedback on this IRB experience at the link below:

http://www.surveymonkey.com/s.aspx?sm=qHBJzkJMUx43pZepKlmdIQ_3d_3d

Appendix E: Literature Review Matrix: Fall Safety Bundle

Baili Campbell DNP, RN

Full Reference	Theoretical/ Conceptual Framework	Research Question(s)/ Hypotheses	Research Methodology	Analysis & Results	Conclusions	Grading the Evidence
Apold, J. & Quigley, P. (2012). Minnesota Hospital Association Statewide Project-SAFE from FALLS. J Nursing Care Quality, 27(4), 299-306.	Middle Range Theory	How does a fall prevention bundle work? Is it effective enough to empower change?	Qualitative Abstraction Case studies Minnesota Hospital organization. 14 hospitals included in the study. 1 unit per each facility.	MHA set the goal in 2010 to eliminate serious fall-related injuries, especially head injuries. The outcomes that large-scale, multi facility health care organizations can have in reducing hospital-based falls resulting in serious injury (25% reduction) are presented, along with lessons learned.	Since 2007, the Minnesota Hospital Association (MHA) has developed, managed, and promoted a statewide fall and injury reduction program to reduce inpatient falls and injuries, SAFE from FALLS. A fall bundle is very effective if the overall concept is kept simple. A proper education method is also required to ensure the overall success of the program.	Level 3
Centers for Medicare and Medicaid Services (CMS). (2014). Outcome measures for patient falls: CMS standards for hospital reimbursement for hospital injuries. Retrieved from www.cms.gov	Practice Theory and Grand Theory	Outcome measures for patient falls; statistical data analysis	Qualitative Official Statistics 390 organizations included in the reporting study for this reference.	Increased number of falls cost the health care system between 16 and 19 billion dollars each year.	As of 2008, the Centers for Medicare & Medicaid Services (CMS) does not reimburse hospitals for certain types of traumatic injuries that occur while a patient is in the hospital.	Level 3
Currie, L., (2006). Fall and Injury Prevention in the Hospital Setting. Columbia University School of Nursing. New York, New York, USA. 24:39-74.	Descriptive Theory	Fall injury prevention strategies	Quantitative data Participant Questionnaires 190 hospital units at 36 hospitals were included in this study.	Each year the United States reports on average between 700,000 and 1,000,000 patients in a hospital fall each year (Currie, 2006). Falls represent a major public health problem around the world. In the hospital setting, falls continue to be the number one adverse event with approximately 3-20% of inpatients falling at least once during their hospitalization. Of those, 30 to 51% of falls in hospitals result in some injury.	Due to the increased number of falls in a hospital system, a fall prevention strategy can help prevent falls and fall related injuries thus decreasing the current statistics at this facility.	Level 3
Ganz, D., A. (2013). Preventing falls in Hospitals: A toolkit for improving quality of care. Agency for Healthcare Research and Quality of Care. Boston	Conceptual Theory	Fall safety tool kit	Questionnaires Participants/Spec ific Surveys	Organizations that implemented a project by utilizing a care bundle showed more successful and overall sustainability by the end of year one than did facilities who	A Patient Care Bundle is a structured way of improving the processes of care and patient outcomes: a small, straightforward set of evidence-based practices	Level 3

University School of Public Health ECRI Institute. 18(9). 11-23.			The quality care for this research was conducted at one hospital organization in Boston. Total number of participating units was 10.	implemented a project without a bundle method (Ganz, 2013).	— generally three to five — that, when performed collectively and reliably, have been proven to improve patient outcomes by decreasing the overall number of falls, decreasing the number of falls resulting in injury, and increasing staff and patients fall awareness (Ganz, 2013).	
Griffith-Perry, A. (2012). Clinical Nursing Skills & Techniques. The Journal of Clinical Nursing, 6 (45-56). Elsevier/Mosby.	Predictive Theory	Clinical nursing skills and techniques	Qualitative approach Content analysis Quality studies obtained from physicians. A total number of 25 physicians were included in this study.	In a study conducted in an acute care setting. 14 hospitals trialed a 5 part patient care bundle to prevent CAUTI's in patients. The facilities successfully implemented the bundles and showed an overall decrease in CAUTI's by 68% over two years.	A bundle that is composed of seven or less parts has a high success rate. The clinical skills for each topic go together to complete a well-rounded fall bundle prevention tool kit. Hospitals that utilize standardized tool kits that are based on the evidence, have a higher likelihood to see overall success.	Level 3
Grove, S. K., Burns, N., & Gray, J. R. (2013). The practice of nursing research: Appraisal, synthesis, and generation of evidence (7th Ed.). St. Louis, MO: Saunders Elsevier.	Middle Range Theory	The practice of standard work and nursing research	Quantitative approach. Specific participants Informal interviews Questionnaires This is a secondary source.	The utilization of standard work helps to ensure the overall success of the project because the work is consistent and is based on the evidence (Grove, 2013).	Standard work is a tool used for maintaining productivity, quality, and safety at a high level. Standard work can be defined as work in which the sequence of job elements has been efficiently organized, and is repeatedly followed by a team member.	Level 3
Halm, M. & Quigley, P. (2011). Reducing falls and fall related injury in acutely and critically ill patients. American Journal of Critical Care. 20(6), 480-484.	Descriptive Theory	Reducing falls and fall related injuries in the elderly	Qualitative Advanced research studies Content analysis. Analysis conducted in one hospital systems (7 hospitals) critical care units. Total of 7 units included.	The average increase in a hospital's operational costs for a serious fall-related injury is more than $13,000, and the patient's length of stay increases by an average of 6.27 days. Of those who fall, approximately 2/3 experience some sort of negative outcome. Falls are the leading cause of injury-related death among patients age 65 or older (Halm & Quigley, 2011).	Since falls are the leading cause of injury related death among patients 65 or older, the fall bundle tool kit will be utilized on inpatient units and will focus heavily on the geriatric population.	Level 3
Hertz, P. (2007). The society for the advancement of the Modeling and Role-Modeling theory. New	Middle Range Theory	Modeling and Role Modeling	Advanced research studies. Content analysis.	Based on nursing principles and its intended use is to focus on nursing practice, intervention, assessment, and	Modeling involves an assessment of a client's situation and role-modeling required both objective and artistic	Level 2

York, New York. New York Publishing Company.		Theory (MRM)	Use of secondary data.	implementation (Parker & Smith, 2010). Utilizing this theory for project implementation ensures the overall success because the nursing staff is directly involved.	actions to complete the MRM theory (Parker & Smith, 2010). The purpose of this model is that nurses and physicians should aim to make something happen when they interact with clients to help build trust, promote client's positive orientation, promote clients' control, affirm and promote client's strengths, and to set mutual goals that are health directed (Parker & Smith, 2010).	
Icoli, R. (2008). Prevention of falls; a health care protocol. The Journal of Institute for Clinical Systems Improvement. Bloomington, MN. 2(13-25).	Descriptive Theory	Prevention of falls by implementing a standard protocol	Qualitative Advanced research studies Review of acute care hospitals over a four year period.	Reviews of observational studies in acute care hospitals show that fall rates range from 1.3 to 8.9 falls/1,000 patient days and that higher rates occur in units that focus on eldercare, neurology and rehabilitation A four-year fall rate reduction of 63.9% to 1.3 falls/1,000 patient days with only two major injuries over four years has been reported by Staten Island University Hospital	The utilization of a standard protocol helps to ensure the overall success of the program because it allows each individual piece to be built specific to the need. The best guide to effective fall prevention strategies is effective adoption of the key common elements in better performing falls programs and hospitals. These strategies are then adapted and modified according to the characteristics and abilities of that hospital.	Level 3
Kettner, P. M., Moroney, R. M., & Martin, L. (2008). Designing and managing programs: An effectiveness-based approach. (3rd Ed.). Thousand Oaks, CA: Sage.	Predictive Theory Descriptive Theory	How to design and manage a program	Statistics Case studies Observation Participant study Data collection This is a secondary source.	The overall impact of a fall safety bundle based on the current research shows that the more consistent a patient safety measure is in a facility, the more effective the overall safety outcomes will be for the patients (Kettner et al., 2008).	The bundle implementation will impact overall nursing care and ultimately affect the patient's overall care and safety.	Level 3
McEwen, M., & Wills, E. M. (2014). Theoretical basis for nursing. (4th. Ed.). Philadelphia, PA: Wolters Kluwer Health.	Middle Range Theory	Nursing theories, Modeling and Role Modeling and Iowa Model	Qualitative Advanced research studies Content analysis	Intended to provide guidance for nurses and other direct patient care staff who are making decisions about practice that affects patient outcomes.	This framework begins with identification of the problem which has been identified as the total number of falls and the potential for fall related injuries or death and/or cost to the facility as a result of the falls (McEwen & Wills, 2014).	Level 3

			This is a secondary source.			
National Database for Nursing Quality Indicators (NDNQI). (2015). Patient falls/patient falls with injuries: Indications, definitions, and annual reports. Retrieved from www.nursingquality.org /NDNQI-QualityIndicators-Falls-FallswithInjury/2014Data	Practice Theory and Grand Theory Descriptive Theory	Statistical data and statistical impact	Advanced research studies. Content analysis. Use of secondary source. This data was collected from a multi-hospital organization. All inpatient units were included in the data analysis.	1,605 total number of falls in the health care organization in 2014	The total number of falls and fall related injuries in the healthcare organization equals 1.6% of the total number of patients.	Level 4
Parker, M., & Smith, M. (2010). Nursing theories and nursing practice (3rd Ed.). Philadelphia, PA: F.A. Davis.	Middle Range Theory	Nursing theories and how to put them into practice	Statistics Use of secondary source.	The modeling and role modeling (MRM) theory focuses on nursing practice, intervention, assessment, and implementation (Parker & Smith, 2010).	The understanding of the process allows the nursing staff to better assess their client's by understanding the way their client is thinking. MRM is based on the assumption that all humans want to interact with one another and that they want to carry out their selected roles in society.	Level 3
Perry, A. & Potter, P. (2009) Clinical nursing skills & techniques. (7th Ed.). St. Louis, MO: Elsevier/Mosby.	Descriptive Theory	Clinical nursing skills and techniques with projects. Use of Fall Prevention Identification Tool.	Statistics Case studies Observation Participant study Data collection This is secondary source.	Falls risk assessment is a foundational element of falls prevention programs. Many falls risk assessment tools have been developed to screen for risk factors most predictive of falls. Studies have found that these tools accurately identify patients who will fall or those who are at high risk of falling with a sensitivity and specificity of greater than 70%.	Falls prevention begins with screening for falls risk using a falls risk assessment tool. A large number of falls risk assessment tools have been created for use in hospitals. Clinical judgment alone can be equally valid in some settings. However, risk assessment tools offer the advantage of process standardization, a key to high reliability.	Level 3
Poe, S. (2005). An Evidence-based Approach to Fall Risk Assessment, Prevention, and Management: Lessons Learned. J Nurse Care Qual. Vol. 20, No. 2, pp. 107–116	Conceptual Theory	An evidence based approach to fall prevention. The John Hopkins Fall Risk Assessment	Qualitative Official Statistics This is a secondary source.	Injuries occur in 6-44% of inpatient falls; 2-8% lead to serious injury; <1% or 11,000 deaths/year. The utilization of a fall prevention assessment tool can reduce that number by ½.	The John Hopkins Falls Risk Assessment Tool (JHFRAT) and the ABCS risk assessment tool is utilized for sustainability and identification of fall risk assessment patients. To be conducted on admission.	Level 3

		Tool (JHFRAT)				
Polit, D. F., & Beck, C. T. (2010). Essentials of nursing research: Appraising evidence for nursing practice (7th Ed.). Philadelphia: Wolters Kluwer Health, Lippincott Williams & Wilkins	Middle Range Theory	How to implement a nursing/patient based program in a hospital setting	Quantitative data Participant Questionnaires This is a secondary source.	Evidence-based practice (EBP) is the conscientious and judicious use of current best evidence in conjunction with clinical expertise and patient values to guide health care decisions. Best evidence includes empirical evidence from randomized controlled trials; evidence from other scientific methods such as descriptive and qualitative research; as well as use of information from case reports, scientific principles, and expert opinion.	Project planning is a discipline for stating how to complete a project within a certain timeframe, usually with defined stages, and with designated resources. One view of project planning divides the activity into setting objectives (these should be measurable), identifying deliverables, planning the schedule, and making supporting plans. In conclusion, the utilization of an evidence based project in a hospital setting is proven to increase overall positive outcomes.	Level 3
Sutton, D. (2014). A care bundle approach to fall prevention: Nursing practice, innovation, and patient safety. 14 (5-14). Retrieved from www.nursingtimes.net	Descriptive Theory	A care bundle approach to fall prevention strategies	Questionnaires Participants/Specific Surveys This is a secondary source.	Fall Safe lead nurses were supported to inspire ward colleagues and multidisciplinary teams to introduce and sustain an evidence-based falls prevention care bundle. The project resulted in a measurable improvement in falls-related care and suggested a 25% reduction in falls.	A care bundle approach to falls prevention can be implemented with sustained effort and commitment from multidisciplinary ward teams that include nurses, doctors, therapist, pharmacists, catering and domestic staff. The more bundle elements can decrease the likelihood that the project will be successful in the end due to the complexity of the bundle work. When designing patient care bundles, is important to follow the listed guidelines. The goal of the bundle approach is to pull together a short list of interventions and project goals/requirements that are already proven effective which is very important to keep the bundle organized by selecting only a few key elements for the project.	Level 3
The American Geriatric Society 2012 Beers Criteria Update Expert Panel (2012). American Geriatrics Society Updated Beers Criteria for Potentially Inappropriate Medication Use in Older	Practice Theory and Grand Theory	Geriatric population focused research and assessments in relation to fall prevention	Qualitative approach Content analysis Evidence from a geriatric facility that was	On average, 74.3% of the elderly population see a decline in their overall health after a fall. The decline is related to the fear of falling and appetite changes (AGS, 2012).	Adverse social outcomes include an increased length of stay, fear of falling, loss of activity and strength due to fear of ambulation, poor appetite/diet control secondary to the fear of ambulation, depression	Level 3

Adults. Journal of the American Geriatrics Society 60(4)616-631.			conducted on approximately 150 geriatric patients over a three year span.		and anxiety as evidenced by the hospital length of stay, fear of falling, and/or poor appetite.	
The Joint Commission (TJC). (2014). The implementation guide for the NQF endorsed nursing-sensitive care performance measures, [Version 1.00, March 2013]. Oakbrook Terrace, Illinois. Oakland Publishing.	Practice Theory and Grand Theory	The implementation guide for the national quality data analysis	Quantitative data Participant Questionnaires	Since it began to monitor sentinel events in 1995 through the end of 2012, TJC has had 659 fall-related events, which resulted in death or permanent loss of function, voluntarily reported as a sentinel event. Falls resulting in injury occur in 30% to 51% of patients. Among those who fall, a major injury (fracture) occurs in 1% to 3%.	The Joint Commission (TJC) requires accredited hospitals to conduct fall risk assessments for hospitalized patients to identify each patient's risk for falls so that prevention measures can be implemented into the plan of care. In conclusion of this study, the total amount of falls and fall related injuries warrants a sustainable action plan.	Level 3
Williams, T., King, G., Hill, A., Rajagopal, M., Barnes, T., Basu, A., & Kidd, H. (2007). Evaluation of a falls prevention program in an acute tertiary care hospital. The Journal of Clinical Nursing, 16(2), 316-324.	Conceptual Theory	Evaluation of a fall prevention program in an acute care hospital facility	Questionnaires Participants/Specific Surveys This is a secondary source.	The use of a fall prevention program showed success over a facility that did not have a program. Those facilities showed a dramatic decrease over 3 years of falls and fall related injuries. 20%-35%.	The emotional harm to the patient can be just as damaging as the physical damage. The patient may become very afraid of ambulation and often times can develop a fear of falling. Fear can cause the patient to ambulate inappropriately (reaching out for items, hunching over, scooting their feet) which makes them more prone to falls (Williams, et al., 2007).	Level 4

Appendix F: Expert Evaluation of DNP Project/Outline/Content/Evidence

Baili Campbell DNP, RN

This expert evaluation is based on the project outline, content, and evidence. The table below represents the three experts' evaluation based on the review of the products listed below.

Products for Review: Curriculum Plan, Complete Curriculum Content, Literature Review Matrix.

Objective	Is the Answer in the Content?	Expectations Met	Expectations Not Met
1	Yes	Yes	N/A
2	Yes	Yes	N/A
3	Yes	Yes	N/A
4	Yes	Yes	N/A
5	Yes	Yes	N/A

Overall Comments:

Wonderful pre/post-test. The format was perfect and was very easy to read. The questions were appropriate and were applicable to the project and to the Fall Bundle work. Each question was supported by the evidence and was easily identified in the students Literature Review Matrix. Overall, great presentation of the material.

Recommendations include:

Providing consistent methodology to disseminate across the entire healthcare system. The experts wanted the fall safety bundle tool kit to be uploaded on the hospitals intranet page for ease of access for all staff.

Appendix G: Pre- & Posttest Fall Safety Bundle

Instructor: [Type your name]   Date: _____

Name: _____

Instructions

The following test is a post-test to determine your current knowledge of the systems fall statistics, fall prevention strategies, and patient safety once you have successfully completed the Fall Prevention training.

1) _____ **This hospital system had a total number of _____ falls in the health care system in 2014.**

    a.   100

    b.   1250

    c.   ==1605==

2) _____ **Which one of the following is an adverse social outcome that can be a result of a patient fall?**

    a.   Decreased hospital stay

    b.   ==Fear of falling==

    c.   Increase of activity and strength

3) _____ **One potential barrier for the implementation of the Fall Bundle Safety kit would be?**

    a.   Too many staff participants

    b.   ==Funding for the desired amount of equipment==

    c.   Over communication and preparation for the bundle launch

4) _____ **Which of the following is *NOT* a piece of the standard work fall safety bundle?**

    a.   ==Yellow fall socks on fall risk patients==

    b.   Gait belts in every room

    c.   Daily Safety Awareness Huddle

5) _____ **Who is responsible to ensure the safety of the fall risk patients on any given unit?**

    a.   The Primary Care RN

    b.   The Patient Support Staff (CNA, PCA, NT)

    c.   ==The entire patient care team is responsible.==

6) _____ **List the 7 pieces of the standard work Fall Bundle package.**

Standard Equipment

Daily Safety Huddle

Post Fall Huddle

Patient/Family Education

Toileting Standardization

Fall Risk Assessment

Communication Board

7) _____ **List two places where the Fall Bundle Package materials will be located once implemented.**

The Intranet/PULSE page

A hard copy will be placed on each unit

8) _____ **The Fall Safety Huddle will be completed *daily*.**

a. True

b. False

9) _____ **What units will be included in the Fall Bundle Package initiation?**

a. All Inpatient Nursing Units

b. All Outpatient Nursing Units

c. The ER Only

An assisted patient fall is an example of a *NON* reportable fall to The Joint

10) _____ **Commission.**

a. True

b. False

Appendix H: Pre/Post Test Fall Bundle Standard Work Content Validation

Baili D. Campbell DNP, RN

The content was reviewed by three key experts. The expectations for the DNP project were met and is evidence by the results listed below. The items listed below were evaluated utilizing a three point scale: 1-is not relevant, 2- is somewhat relevant, and 3- is quite relevant.

Test Question	Expert 1	Expert 2	Expert 3	Experts In Agreement	Item CVI
1	3	3	3	3	1.0
2	3	3	3	3	1.0
3	3	3	3	3	1.0
4	3	3	3	3	1.0
5	3	3	3	3	1.0
6	3	3	3	3	1.0
7	3	3	3	3	1.0
8	3	3	3	3	1.0
9	3	3	3	3	1.0
10	3	3	3	3	1.0
Proportion Relevant	1.0	1.0	1.0	1.0	Average CVI: 1.0

A CVI value can be computed for each item on a scale. To calculate an item-level CVI (I-CVI), experts are asked to rate the relevance of each item using a 3-point scale. 1-is not relevant, 2- is somewhat relevant, and 3-is quite relevant. Then, for each item the CVI is computed as the number of experts giving a rating divided by the number of experts (Polit & Beck, 2011).

Reference:

Polit, D.F., & Beck, C.T. (2011). The content validity index: Are you sure you know what's being reported? Critique and recommendations. *Research in Nursing & Health,* (29), 489–497.

Appendix I: Fall Safety Bundle Standard Work Tool Kit

Education Curriculum

Problem: The problem identified for this design only DNP project is the number of patient falls per year which have resulted in major and minor injuries or death and/or increased health care costs to the organization.

Purpose: The purpose of the DNP project is to develop an evidence-based fall prevention bundle for use by nursing staff and an education curriculum to increase staff awareness and knowledge for prevention of falls and fall related injuries.

Goal: The project goal is to prevent patient falls and fall related injuries in the healthcare system.

Objectives	Content Outline	Evidence	Method of Presenting	Method of Evaluation P/P Item

1. Individual will identify the main objectives for this educational curriculum plan in regards to the project significance, statistical overview, and proposed outcomes.	A. Introduction
	
	B. System Overview
	
	    a. Project Significance
	
	    b. Statistical Overview
	
	    c. Proposed Outcomes
	
	C. Purpose of Safety Bundle Kits
	
	D. Purpose of Standard Work
		Centers for Medicare and Medicaid Services (CMS)
		
		The Joint Commission (TJC)
		
		National Database for Nursing Quality Indicators (NDNQI)
			Oral Presentation and Power Point	Post Test

2. Individual will be able to describe the reasons "why" behind the implementation of the project.	E. Background A. Patient Care Bundles, Fall Safety Bundles	Sutton, D. The Implementation Guide for the NQF Endorsed Nursing-Sensitive Care Performance Measures Sutton, D. Halm, M. & Quigley, P. Griffith-Perry, A.	Oral Presentation and Power Point	Post Test

3. Individual will identify the seven pieces of standard work and will identify the ways in which each piece of standard work will be utilized.	Fall Bundle Tool Kit Components
	A. *Patient Communication Boards*
	
	  1. Detailed description of the patient communication board
	
	  2. Explaining the "why" behind the board
	
	  3. "I care about your safety"
	
	  4. Call, don't fall
	
	B. *Toileting*
	
	  1. Documentation of the patients toileting processes on the communication board
	
	  2. Toilet alarm
	
	    a. Use of, safety features, toileting schedule
	
	  3. Stay with patient while toileting
	
	C. *Patient/Family Communication Regarding Fall Risk*
	
	  4. Performing fall risk assessment on admission (John Hopkins Fall Risk Assessment Tool JFRHAT)
	
	  5. Utilizing Teach Back
	
	  6. Develop a fall prevention plan with the family
	
	  7. Ensure patient can verbalize fall risk in their own words
	
	  8. Documentation of fall risk and fall prevention instructions on the patient communication board.
	
	D. *Safe Handoff Communication Falls Risk Assessment*
	
	  a. ABCS (age, bones, coagulation, surgery)- Injury Risk Assessment
	
	  b. Fall Risk
	
	    i. Age
	
	    ii. History of falls
	
	    iii. Elimination needs
		Halm, M. & Quigley, P.
		
		Sutton, D.
		Halm, M. & Quigley, P.
		
		Icoli, R.
		Halm, M. & Quigley, P.
		
		Griffith-Perry, A.
		
		John Hopkins Fall Risk Assessment Tool, ABCS.
		
		Cerner Evidence Based Practice
		
		Williams, T., King, G., Hill, A., Rajagopal, M., Barnes, T., Basu, A., & Kidd, H.
		
		Poe, S. Perry, A. Potter, P.
		
		Griffith-Perry, A.
		
		John Hopkins Fall Risk Assessment Tool, ABCS.
			Oral Presentation and Power Point	Post Test

		iv. Medications	Cerner Evidence Based Practice		
		v. Patient care equipment			
		vi. Mobility			
		vii. Cognition			
		viii. Interventions in place and are they working	Williams, T., King, G., Hill, A., Rajagopal, M., Barnes, T., Basu, A., & Kidd, H.		
	E. *Equipment*				
		a. Gait belt			
		b. Chair alarms			
		c. Bed alarms	Poe, S. Perry, A. Potter, P.		
		d. Toileting alarms			
		e. Falling man icon for door signs			
	F. *Daily Safety Huddle*				
		a. Lead by team leader (or designee)			
		b. To be completed towards the beginning of the shift, twice daily			
		c. Used to identify at risk patients, interventions in place, interventions that need to be in place, safety goals for the shift.	Icoli, R. Kettner, P. M., Moroney, R. M., & Martin, L.		
		d. Review Safety Data			
		i. Fall risk patients			
		ii. CAUTI	Icoli, R.		
		iii. CLABSI			
		iv. DNR/Full Code			
		v. Etc.			
	G. *Post Fall Huddle*				
		a. Conducted as soon as possible after a fall			

		b. The entire team who is providing care for the patient is involved
		
		c. Activate escalation plan
		
		     i. Notification of the physician, family, department manager, risk manager, quality manager, administrator on call, in that order (or per hospital protocol)
		
		d. Reporting
		
		     i. Level of injury
		
		     ii. Classification of the fall
		
		e. Complete incident report			

4. Individual will identify current practices in the facility by role and will be able to properly identify how the fall bundle standards will be placed in to the standard of practice at their facility.	Implementation	Icoli, R.	Oral Presentation And Power Point	Post Test
	A. Department Manager			
	9. Daily Auditing of the Progress	Current practice at the proposed facility		
	a. Daily Auditing will be conducted based on the seven pieces of standard work.			
	b. Daily auditing will be conducted for three months, then every two weeks for two month, then monthly times one month.			
	B. House Supervisor/Charge RN			
	10. Daily Safety Huddles			
	11. Rounding with staff to identify barriers with implementation and sustainability.			
	C. Bedside RN			
	12. Daily Routine			
	a. Bedside shift report/safe hand off.			
	b. Complete/update communication board with safety updates, reminders, interventions, and toileting preferences.			
	c. John Hopkins Fall Risk Assessment Took completed with assessment.			
	d. Ensure all patient safety measures are in place as evidenced by the patients fall risk assessment.			
	e. Check all equipment in room to ensure it is working properly.			
	f. Complete hourly rounds to ensure equipment is still working properly, all interventions are in place, patient's safety is ensured.			

	D. Patient Care Technician/Nurse Technician
	
	1. Daily Routine
	
	    a. Bedside shift report/safe handoff.
	
	    b. Ensure all patient safety measures are in place as evidenced by the RN's assessment of the JHFRAT screening.
	
	    c. Check equipment in room to ensure it is adequately stocked and in working order.
	
	    d. Check to see that a gait belt is in every room.			

5. The individual summarize and identify the key points of the project and of the implementation.	F. Conclusion
	
	A. Emphasizing the Importance and the why behind the project
	
	      a. Impact that nursing has on overall patient safety
	
	      b. Project sustainability
		Ganz, D., A.	Oral Presentation And Power Point	Post Test

Appendix J: Fall Safety Bundle PICO Analysis of Research Topic

P: Patient or Population

I: Anticipated Intervention

C: Comparison group or Current standard

O: Outcome desired

P: Those influenced by this evidence-based project are nurses, nursing support staff, physicians, and patients on any inpatient unit.

I: The anticipated intervention is to provide extensive education to the hospitals key stakeholders while providing evidence and research to prove the multiple benefits for the hospital to implement the fall safety bundle tool lit on all inpatient units.

C: The hospitals current standard is to practice is to screen only suspected fall risk patients on admission. There is currently no standard practice regarding fall prevention on inpatient units.

O: Develop a fall safety bundle that will be utilized on all inpatient nursing units throughout the entire healthcare organization. The goal is to also develop an educational curriculum for the nurses and nursing support staff.

Reference:

Elkins, M. Y. (2010). Using PICO and the brief report to answer clinical questions. Nursing, *40*(4), 59–60. Retrieved from the Academic Search Complete database.

Appendix K: Poster Presentation