2020

The Promotion of Safety and Quality in Fall Prevention

Sheila J. Mercado
Walden University

Walden University

College of Health Sciences

This is to certify that the doctoral study by

Sheila Mercado

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

Review Committee
Dr. Margaret Harvey, Committee Chairperson, Nursing Faculty
Dr. Casey Cole, Committee Member, Nursing Faculty
Dr. Jonas Nguh, University Reviewer, Nursing Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2020

Abstract

The Promotion of Safety and Quality in Fall Prevention

by

Sheila J. Mercado Morales

MS, Antillean Adventist University, 2017

BS, University of Puerto Rico – Mayagüez Campus, 2004

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

August 2020

Abstract

Falls in a hospital setting are considered one of the most frequent, preventable adverse events that need to be addressed through the creation of safer environments. Nurses play a key element in the prevention and management of injuries related to falls. The focus question for this quality improvement initiative (QII) was whether an evidence-based QII program could reduce falls in the inpatient population. The objective of the project was to improve the practices related to fall prevention to reduce the number of inpatients falls. The change model of Kotter and the *Preventing Falls in Hospitals: A Toolkit for Improving Quality of Care* were used to implement the QII. The prevalence of falls from 1 month before the start of the project was compared to 1 month after the implementation of the falls program. The nurses were taught about the evidence-based interventions, the intentional hourly rounds, and the patients' educations as well as administered the Fall Knowledge Test (Tool 2E) pre- and postimplementation. The interventions were implemented and the findings of the prevalence 3 months later show a significant decrease in the number of falls with 0 cases reported in November and December. Compared to the previous analysis, 53% (n = 8) of nurses recognized that meeting patients' toileting needs decreases the risk for falls versus the pre-implementation result of 0% recognizing this action. The findings reinforce that a change in staff awareness was achieved, and the decrease in the incidence of falls reinforces the effectiveness of intentional hourly rounds and patient education. The results of this project may influence nursing administrators and other leaders to increase the application of fall prevention policies. The findings of this project promote a positive social change because the falls were reduced through the implementation of evidence-based interventions.

The Promotion of Safety and Quality in Fall Prevention

by

Sheila J. Mercado Morales

MS, Antillean Adventist University, 2017

BS, University of Puerto Rico – Mayagüez Campus, 2004

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

August 2020

Dedication

I dedicate this project to God because He guides my steps and my victories belong to him. This project is also dedicated to my whole family for their love and patience during these years.

Acknowledgments

I want to express my thanks to my husband, Pedro “Pito” Vargas, for your love and for supporting me to fulfill one of my biggest goals. Thank you for your patience during this period and for inspiring me to be a better person every day.

My thanks to my brothers, Cynthia, Wilfredo, and my soul sister, María Fernanda, for your support and to celebrate my victories with me.

I acknowledge and appreciate the efforts of my committee, but especially thanks to Dr. Margaret Harvey for her advice and help.

Thanks to my friends, family, colleagues, and all those who have contributed in some way to the success of this work (you know who you are) and for encouraging me to keep going.

May God bless you all!

Table of Contents

List of Tables

List of Figure

Section 1: Nature of the Project

Introduction

Falls in a hospital setting are considered one of the most frequent, healthcare-related adverse events. Annually, in the United States, between 700,000 and 1,000,000 people fall in hospitals (Agency for Healthcare Research and Quality [AHRQ], 2013). The Joint Commission (TJC; 2015) also reported that an approximately 30%– 50% of these patients have serious injuries. In 2008, the Centers for Medicare and Medicaid Services (CMS; 2018) classified the falls as hospital-acquired conditions and as completely preventable events; therefore, costs related to them are not covered. During 2015, the medical costs attributable to fatal and nonfatal falls in the U.S. population aged 65 years old or older was estimated at approximately $50 billion (Florence et al., 2018). Falls can result in fractures, reduced quality of life, loss of autonomy, confusion, immobilization, depression, and restrictions in daily activities (Nyman, Ballinger, Phillips, & Newton, 2013; Parry, Finch, & Deary, 2013).

Although different alternatives, approaches, and programs have been developed to reduce the incidence of falls, the number of cases in general has not been reduced. The data provided by different agencies, research, and resources have shown the need for a greater focus on falls by nursing staff and an improvement in surveillance systems to prevent and/or reduce the number of falls in the hospital environment (Quigley, 2015a). Nurses are fundamental in the care of patients and are the ones who perform the initial assessment of falls and injuries (Quigley, 2015b). Garrard et al. (2016) also reported that nurses play a key role in the prevention and treatment of injuries related to falling.

Kilpatrick (2017) stated that the prevention of falls is collaborative and multidisciplinary work and through the use of a proactive approach, a reduction in falls rate is possible to achieve. Fernández-Abinader, González-Colón, Feliciano, and Mosquera-Soler (2017) pointed out that in Puerto Rico it is necessary to develop programs, systems, and prevention structures that are multifaceted and backed by local and national reforms and policies.

Considering that falls are a global health concern, the World Health Organization (WHO; 2018) recommended the creation of safer environments and emphasized the need of effective policies to manage the problem. In order to improve the quality of nursing care and promote safer environments, this Doctor of Nursing Practice (DNP) project was a quality improvement initiative (QII). The goal was to improve the practices related to the prevention of falls of older adult inpatients in the selected organization. With the development of the project, I expected an increase in the awareness of the nursing staff through the promotion of safer environments. One action that helps reduce falls is hourly rounds (Hicks, 2015; Hutchings, Ward, & Bloodworth, 2013; Nuckols et al., 2017). Therefore, as a focus of the initiatives implemented in this project, I expected to increase the number of nursing rounds. Another measure that was expected to be implemented was the constant education provided to the patient and/or caregiver to reinforce their knowledge of the measures that help reduce falls and the importance of asking for help from the nursing staff. Fall prevention programs that influence patient education are effective and will help to reduce falls incidents (Lee, Pritchard, McDermott, & Haines, 2014).

Problem Statement

The concept of fall is defined by the WHO (2018) "as an event that results in a person resting inadvertently on the floor or on the ground or another lower level" (para. 1). This event can cause complications for inpatients, increase their medical costs, and prolong their stay in the hospital (Donna et al., 2017). According to Deandrea et al. (2013), most falls do not cause death, but between 5% to 10% percent result in serious injuries and are the cause of two thirds of death by injuries. The TJC (2015) reported that a 30%– 50% of patients who fall may be severely injured. The Summary Data of Sentinel Events Reviewed by TJC (2018) indicated that in 2017, falls represented 14% (n = 114) of the 805 sentinel events reported by U.S. hospitals.

Currently, in Puerto Rico, the statistics provided by the Department of Health (2016) show a natural negative growth and an increase in the elderly population (Perreira, Lallemand, Napoles, & Zuckerman, 2017). This fact established the urgency to study the needs of this population and to work with measures that guarantee safer environments with profitable interventions. According to Perreira et al. (2017), it is necessary to increase investments in prevention programs related to falls in the healthcare scenario in Puerto Rico. Moreover, a research study conducted at the Medical Center of Puerto Rico found that falls are one of the most common causes of traumatic brain injury in this population and that rates of morbidity and mortality oscillate from 6% to 18% (Fernández-Abinader et al., 2017). In Puerto Rico, falls are one of the most common unintentional injuries, and 21% of the falls involved people 65 years old or older (Pascual-Marrero et al., 2018).

Given that falls are a global event, it is necessary to address them by creating safer environments for the patients. This environment should seek to reduce risk factors and rates by the modification of those elements that contribute to the increase in the incidence of falls (WHO, 2018). The need for fall prevention measures is imperative; therefore, some agencies have created measures and recommendations to help reduce these in different settings and populations, including the CMS, the AHRQ, the National Center for Patient Safety, and the Institute for Healthcare Improvement. Even when different alternatives, approaches, and programs have been developed to reduce the numbers of falls, the incidence has not been decreased.

As healthcare professionals, the nursing staff must function as leaders and pursue actions to provide quality care to the patient. Nurses play a fundamental role in the healthcare scenario and act as a key element in the prevention and management of injuries related to falls (Garrard et al., 2016; Hicks, 2015; Quigley, 2015b). With the QII developed for this project, I aimed to identify the factors that contribute to the incidence of falls; improve health practices through evidence-based interventions; and eventually help to reduce falls of inpatients, especially the older adult population. This doctoral project is important to the field of nursing because it sought to improve the awareness of nurses about the need and value of safer environments to older adult inpatient population and their education related to the prevention of falls.

Purpose Statement

One of the main goals of nursing practice is to provide safer environments for patients and promote health behaviors in inpatients that decrease their stay in the hospital.

Unfortunately, although several agencies have worked collaboratively to reduce the incidence of falls, statistics show that there has not been a significant drop (Donna et al., 2017). This issue represents a serious problem for the patient because it increases their stay in the hospital and can result in serious complications to them (Hicks, 2015; TJC, 2015). Another problem represented by falls is that they tend to increase costs per patient for the institution and can lower its service quality indexes. For nursing practice, falls are a serious problem since a main function of this discipline is to provide patient safety (Quigley & White, 2013). Evidence-based interventions can contribute significantly to reducing falls and improving nursing practices (Quigley & White, 2013); therefore, it was imperative to create a sense of urgency and awareness in the nursing staff to implement interventions that promote patient safety and their engagement in evidence-based practices.

Nurses play a key role in the prevention of falls and have the opportunity to promote interventions that improve the outcomes and assist the patient during their hospital stay (Garrard et al., 2016). The objective of this DNP QII project was to improve the practices related to the prevention of falls in the selected organization. The aim of the QII was to identify those factors that contribute to the incidence of falls in the hospital setting, improve health practices through evidence-based interventions, and eventually help reduce falls in older adult inpatients. The focus question for this QII project was: Can an evidence-based intervention program reduce falls in the inpatient population?

Nature of the Doctoral Project

My objective with this DNP project was a QII that would improve the practices related to the prevention of falls in the selected organization. Moreover, the objective was to increase the awareness of the nursing staff through education on methods that promote safer environments for the patient.

The first step was to obtain information on the effectiveness of current interventions through the examination, analysis, and synthesis of data related to the prevalence of falls. I also analyzed the protocol used to address the current practices of the prevention of falls in the institution. As an indicator of project effectiveness, I compared the prevalence of falls from 1 month before the start of the project to 1 month after the implementation of the falls program. The next step was to determine the knowledge of the nursing staff related to universal measures of falls prevention. The Fall Knowledge Test (Tool 2E) of *Preventing Falls in Hospitals: A Toolkit for Improving Quality of Care* (AHRQ, 2013) was used to assess the nursing knowledge. Once identified, the areas of deficiency in nursing and the factors that mainly influence the falls of the older adult population in the selected hospital and the initiatives to improve quality were launched.

I first reported the findings and recommendations to the organizational leaders or stakeholders (i.e., the nursing director, general supervisor, shift supervisor, and team leader). As part of the initiatives, I expected the number of nursing rounds to increase. Hourly rounds are interventions that help reduce the incidence of falls (Hicks, 2015, Hutchings et al., 2013, Nuckols et al., 2017). Another measure that was implemented was

patient and caregiver education through constantly reinforcing their knowledge related to measures that help reduce falls and the importance of asking for help from the nursing staff. Fall prevention programs that influence patient education are effective and help reduce falls (Lee et al., 2014).

As a framework for the project, I used the Kotter model of change (i.e., eight steps to accelerate change), and all interventions were based on the evidence. Additionally, *Preventing Falls in Hospitals: A Toolkit for Improving Quality of Care* (AHRQ, 2013) was used. Once the project was completed, final recommendations were established to improve the effectiveness of the quality improvement plan. The QII will be disseminated in the benefit of older adult inpatient populations and to other hospitals in the area.

This doctoral project has the potential to effectively address the gap in practice for a variety of reasons. First, the QII used the *Preventing Falls in Hospitals: A Toolkit for Improving Quality of Care* as a guide, in which interventions are evidence-based and have been implemented successfully in several hospital institutions across the United States (AHRQ, 2013). The nursing staff plays a fundamental role in the prevention of falls and they are the ones who must provide mainly a safe environment for the patient (Garrard et al., 2016; Quigley, 2015b). For this reason, I developed the initiative to promote actions that are directly executed by nurses, such as the hourly rounds for patients. During this round, the nursing staff must educate the patient and their family, ensure a safe environment, and reassess the patient's condition. Several investigations related to falls prevention suggest the effectiveness of the hourly rounds (Hicks, 2015;

Hutchings et al., 2013; Nuckols et al., 2017) and about the education provided to the patient and their caregiver (Lee et al., 2014). QIIs are a collaborative and multidisciplinary work, and according to Kilpatrick (2017), this type of focus would help to significantly reduce the number of falls.

Significance

An improvement in quality and safety in hospital environments requires the participation of all employees and the patient to be successful. Quality improvements aim to improve health practices and provide quality care to patients (Joshi et al., 2014). For this QII project, the participation of hospital staff as an interested party was important. The participation of the different stakeholders that belong to the institutions do not only help to carry out the QII but also guarantee its commitment to offer high-quality health services and provide the patient with a safe environment.

One of the group of stakeholders I used as a resource for the QII were the senior managers of the hospital. According to Davis et al. (2014), the senior managers empower the staff to achieve the changes and be creative during the process of implementation of change. The director of nursing was also used as a resource since she knows all the processes and protocols performed by the nursing staff. The Quality Committee was another important resource since they work directly with various activities aimed at improving the quality of services and implementing planned measures. Another stakeholder that was expected to be of use was the nursing staff. The role of nurses is essential to provide a safe environment for the patient and quality services since they are

the ones that provide daily services to the patient and know the needs and deficiencies that affect the care.

One of the essential objectives of carrying out doctoral projects is to integrate critical thinking and evidence-based interventions to improve patient outcomes (American Association of Critical Care Nurses [AACN], 2006, p. 17). The use of planned interventions and the development of evidence-based projects provide high-quality actions that help improve nursing practices and contribute to the body of knowledge of the profession (AACN, 2006). According to Conn (2014), doctoral students can observe phenomena from a different perspective that provides new thought patterns. The application of evidence-based practice also helps to improve established nursing practices to determine those areas that require more attention and to reduce the gap between research and daily practice (Terry, 2015). Achieving the objectives of the QII project leads to the improvement of nursing performance, which contributes towards improving the standard of quality in practice. Moreover, the use of a model designed with evidence-based interventions that have been previously and successfully used contributes to improving nursing performance and providing quality care.

This QII could be implemented in other units in the institution, then disseminated to other hospitals. Because the initiative should eventually help reduce the costs associated with hospital falls, it should be disseminated to other hospitals. The QII could be disseminated to other similar practice areas because it addresses a current and global problem.

A positive social change is defined as those actions that modify or transform aspects of a society, according to its evolution and the historical moment in which it is found (Bilali, R., Vollhardt, J. R., & Rarick, 2017). Being able to identify the needs of a population and use evidence-based interventions to solve an issue will generate a culture of change that results in benefits for the patient. A well-founded project to improve the quality of the service offered is an invaluable tool to achieve positive changes and improve patient outcomes. As healthcare professionals, the nursing staff must remain active in their education as new discoveries, protocols, medications, treatments, and actions with which to provide quality care to the patient arise. Achieving success with this QII will contribute to improving the quality of patient care, could help reducing the costs associated with falls, and will promote a culture of safety. Currently, in Puerto Rico, the older adult population has been increasing, with a higher number reported in the western area (Department of Health, 2016); therefore, it is necessary to start raising awareness of the services needed for this population and promoting services tempered to their own needs. This project should help to promote a positive social change by improving the care of older adult patients.

Summary

In this section, I introduced the problem, the nature of the DNP doctoral project, and the potential positive social change implications of the doctoral project. The problem and how the QII would address it and the significance to the nursing practice were clarified. Finally, the impact of the project on nursing practice and its potential implications for positive social change were explained.

In summary, with this QII I aimed to identify factors that contribute to the incidence of falls; improve health practices through evidence-based interventions; and contribute to reducing the falls of inpatients, especially the older adult population. This initiative not only integrated evidence-based interventions, but it also promotes a collaborative and multidisciplinary work environment, which significantly helps reduce the number of falls. In the next section, I will explain the model that guided the project and the impact of the initiative on the nursing discipline.

Section 2: Background and Context

Introduction

Falls in the hospital setting are one of the most frequent, healthcare-related adverse events that need to be addressed with the creation of safer environments for patients. Although a variety of healthcare-related agencies have tried to reduce falls with the development of different alternatives, approaches, and programs, the incidence has not been reduced. According to Quigley (2015a), the data provided by different agencies, research, and resources show the need for a greater focus on falls by nurses to prevent and/or reduce falls in the hospital environment. Given that nurses play a key role in the prevention of falls (Garrard et al., 2016; Hicks, 2015; Quigley, 2015b), the aim of this QII was to identify those factors that contribute to the incidence of falls in the hospital setting, improve practices of health through evidence-based interventions, and eventually help reduce the falls of older adult inpatients. The focus question for this QII project was: Can an evidence-based intervention program reduce falls in the inpatient population?

In this section, I describe the model that directed this project and the guide that was used to direct the evidence-based practices in the QII. Additionally, the relevance of the project for nursing practice is discussed. The local background and the context of the problem are also explained. Finally, I discuss my role as the DNP student and the roles of the project team.

Concepts, Models, and Theories

The main goal of this QII was to generate an operational change that results in a decrease in the incidence of falls of older adult inpatients and increases the awareness of

nursing staff. Falls are a latent problem that result in a series of complications at a personal and institutional level, so it was necessary to reduce them. A series of changes and the implementation of evidence-based interventions were required to achieve this goal. According to Longenecker and Longenecker (2014), the successful implementation of changes in the health industry is necessary; otherwise, it can lead to financial losses. Given the importance of implementing interventions adequately and successfully, the model I used to guide this project was the change model of Kotter (2018). The model is useful in planning, implementing, and sustaining the change throughout eight steps. The use of this model is increasing in healthcare because it is easy to follow and provides structured guidance when attempting a practice change in a healthcare setting (Small et al., 2016).

As a guide for the evidence-based interventions, I used the *Preventing Falls in Hospitals: A Toolkit for Improving Quality of Care* (AHRQ, 2013). This evidence-based toolkit is focused specifically on the inpatient population and promotes sustainable changes (AHRQ, 2013). The toolkit also provides tools to monitor and evaluate structures, processes, and outcomes in the institution while implementing a fall prevention program (Quigley & White, 2013).

Kotter's (2018) change model is an eight-step process that includes the following stages:

1. Create urgency to overcome complacency,
2. Build a team of leaders and managers to drive the change,
3. Create an effective vision and strategy,

4. Tell everyone about the change vision,
5. Empower employees to apply the vision to work,
6. Present short-term benchmarks and wins,
7. Keep the momentum of change with more changes, and
8. Cultivate a culture of change.

This model is mostly used in business and industry, but its use is increasing in healthcare setting (Thomas & Galla, 2013). According to Small et al. (2016), the model is systematic, adaptable to any environment, and structured as well as an effective framework to achieve quality improvement in health institutions. The main objective of a QII is to achieve a change through improved performance and practices that lead to better quality (Joshi at al., 2014). I anticipated that by using the Kotter change model, the expected change would be achieved in a systematic and structured way with a sustainable result.

I used *Preventing Falls in Hospitals: A Toolkit for Improving Quality of Care* (AHRQ, 2013) as a guide for evidence-based interventions. This guide establishes that a systematic and multidisciplinary approach is necessary to achieve a high-quality change (AHRQ, 2013, p. 1). To create a culture of safety, it is necessary to have the right tools, including the education, the communication, and establishing the importance of commitment, to achieve a change in practices (Coppedge, 2016). The toolkit provides a variety of structured tools, and it is based on six main questions that are used to direct the effort to implement the prevention strategies (AHRQ, 2013).

I selected these models to guide the QII because both models are systematic, structured, and oriented towards the implementation of sustainable changes. The AHRQ (2013) toolkit was also used because it promotes the implementation of the intentional hourly rounds and patient education to address knowledge gaps. Kotter's model guided the implementation of the planned interventions. Both models promote teamwork and multidisciplinary collaboration.

The applicability of the research results was affected by not having aligned or standardized definitions (Mitchell, Lavenberg, Trotta, & Umscheid, 2014). According to the researchers, the term *patient fall* can be defined and interpreted in various ways, and according to the context, where it occurs Another term that was also defined in several ways is the variations in the frequency of rounding. For the purposes of this project, the term patient falls and hourly rounds was defined according to the toolkit of the AHRQ (2013). The term patient falls is defined as "an unplanned descent to the floor with or without injury to the patient" (AHRQ, 2013, p. 1). The term hourly round was defined as "hourly visits between 6 a.m. and 10 p.m. and visits every 2 hours between 10 p.m. and 6 a.m." (AHRQ, 2013, p. 31).

Relevance to Nursing Practice

Nursing is defined by the American Nursing Association (2018) as a practice that involves protecting the patient and improving their health. Based on this definition, nursing roles and responsibilities require the ability to carry out a variety of functions that guarantee the quality of care and the proper functioning of these professionals. Within these functions and roles, patient safety is fundamental since it is what determines the

quality of the care offered by nurses (Hicks, 2015, p. 1). Evidence-based interventions are helpful to promote safer environments, improve the quality of care provided, and eventually reduce the incidence of falls (Florence et al., 2018, p. 5; Quigley & White, 2013, p. 6). This doctoral project was a QII that aimed to improve the quality of the service provided by and increase the awareness of nurses regarding falls of inpatients over 65 years old in the hospital setting.

Falls are preventable events with a high incidence and adverse results to the patient, the nursing discipline, and the healthcare institution (Chu, 2017; Hicks, 2015, p. 1; Quigley & White, 2013). Given that nurses have more interaction with patients than other healthcare professionals and are the health workforce with the highest number in the hospital setting, their role in prevention is of the utmost importance (Quigley & White, 2013). To help reduce the incidence of falls and in order to provide safer environments to patients, TJC (2017) recommended having a fall prevention program for all hospital institutions with defined functions for each discipline. Within these programs, nursing professionals play a fundamental role (Quigley & White, 2013). Nurses are those who perform the initial and continuous assessment of patients and are the first to intervene when the fall has already occurred (Hicks, 2015).

Fall prevention is a defined function for the nursing discipline; furthermore, the patient fall rate is considered a nursing indicator (Hicks, 2015). This phenomenon has led to the development of research within the discipline to try to contribute to the reduction of rates and improve the quality of interventions. The fact that an increase in the incidence of falls is expected has also led to an increase in interest in improving

interventions associated with falls. It is expected that by 2020 more than 4 million Americans over 65 years old will have a fall and that associated costs will increase at an equivalent total of more than $47 billion (Florence et al., 2018; Hicks, 2015; Opsahl et al., 2017). These data, added to other factors mentioned in the literature, have led the health community to look for solutions, strategies, and evidence to help solve this problem. According to Huang et al. (2018), the results of meta-analyses show that one way to reduce the incidence is through intervention programs.

To see the current status of nursing practice in the area of research, I conducted a search to identify the current recommendations, standard strategies, and the practices that had been used previously to address this gap in practice. Quigley and White (2013) stated that the American Nursing Association affirms that nurses' responsibilities are varied and include evaluating the risk of patients, designing and implementing care plans, and evaluating the effectiveness of clinical programs for the prevention of falls. Given the multiplicity of factors and roles in this discipline, the approaches and researches are many. In this project, intentional hourly rounds and patient education were the interventions implemented to identify their impact on the reduction of patient falls.

I carried out a review of the literature to find research studies that supported the hourly rounds and the education of the patient on the prevention of falls. The databases used in this search included ProQuest, Nursing & Allied Health, PubMed, OVID, Medline, Cochrane, and CINAHL. The keywords used were *patients falls, falls of elderly patients, fall prevention program, hourly rounds, education on falls prevention, patient safety*, and *nursing awareness*. I also reviewed governmental and professional

organizations' reports and research, including those of the WHO, Centers for Disease Control and Prevention AHRQ, CMS, Puerto Rico Department of Health, TJC, and National Quality Forum. The inclusion criteria for this review of the literature included peer-reviewed articles published between 2012 and 2018 concerning falls of inpatients 65 years old or more, the protocol of prevention of falls, hourly rounds, and education of the patient. The exclusion criteria included literature concerning patients younger than 65 years old and outside the hospital setting.

Recently, Huang et al. (2018) completed a meta-analysis of 33 research papers with the aim of studying the effects of fall prevention programs on fall-related injuries. After a data analysis, they concluded that fall prevention programs had a small but significant effect in preventing fall-related injuries. In another meta-analysis carried out by Hill-Westmoreland, Soeken, and Spellbing (2002), the effects of fall prevention programs on the older adult population was also studied. Their meta-analysis included 12 studies after applying the inclusion and exclusion criteria. After the analysis, they concluded that there was a 4% decrease in fall rate within the population that received several fall prevention interventions and that there is a need for more studies (p. 7). Recently, Cameron et al. (2018) conducted a systematic review with the objective of evaluating the effects of interventions designed to reduce the incidence of falls of the older adult in care centers and hospitals. They included 95 randomized controlled trials, and the key results indicated that although the evidence was minimal, the use of multifactorial interventions, like patient education, can reduce the rate of falls in a subacute environment (Cameron et al., 2018). Other researchers supported that

multifactorial interventions address the risk factors for falls and can help decrease the incidence of falls (Opsahl et al., 2017, p. 2; Quigley & White, 2013, p. 1).

However, although the literature points out to a series of interventions and strategies aimed to reducing falls, for this doctoral project one of the interventions used was the hourly rounds. According to an integrative research review conducted by Hicks (2015), the studies showed the positive effects of rounding in decreasing patient fall rates (p. 6). This researcher adds that this action is an autonomous nursing intervention that may have other benefits such as decreasing patient anxiety and increasing the perception in patients about nursing care. This intervention was implemented in the "Caring around the clock" program at the Nottingham University Hospitals NHS Trust (Hutchings et al., 2013). They implemented the intentional hourly rounds and the project was introduced across 79 wards over 14 months. Nuckol et al. (2017), conducted a research in two hospitals with the aim of evaluating the clinical effectiveness and incremental net cost of hourly rounding. These researchers found that in one of the hospitals this action was associated with a decline in falls. Mitchell, Lavenberg, Trotta, and Umscheid (2014), in their systematic review, concluded that there is also moderate-strength evidence that this intervention reduces patient falls and improves patient satisfaction scores (p. 471). Another systematic review by Toole, Meluskey, and Hall (2016) supports the fact that hourly rounding has shown a decrease in fall rates, even when some barriers in the implementation and sustaining process were found. It is important to add that at present it has been emphasized that the hourly rounds should be intentional and purposeful. Christiansen et al. (2018) indicated that when the intentional rounds are carried out,

nurses have the opportunity to verify that the basic needs of patient care are met. They concluded, through their systematic review of mixed methods for 21 studies, that after the introduction of intentional hourly round, six studies reported a reduction in the number of falls, and five other studies reported a reduction in the use of call bell uses (p 1789).

According to Cameron et al. (2018), patient education is one of the multifactorial interventions that can help reduce the rate of falls. Educating the patient has always been pointed out as one of the main roles of the nursing discipline. Patient education about falls risk and causes, preventive strategies, and goal settings and reviews are a few of the recommendations of the TJC (2015) to reduce the risk of falls and subsequently the incidence. Chu (2017) adds that providing information in writing and educating patients and families about the prevention of falls also helps the success of preventive measures to reduce falls (p. 6). Prevention programs that include the patient's health education component can be effective and help decrease the proportion of patients who fell in the hospital setting (Lee et al., 2014). This data were the conclusion of a meta-analysis carried out with the objective of “assessing the effectiveness of patient education in reducing falls, promoting behavioral change and the uptake of prevention activities in older adults during and after hospitalization” (p. 531). For the analysis, the data of 26 studies were used. Another systematic review with the purpose of evaluating the effectiveness of interventions focused on the falls of patients in acute care settings and evaluated the data of five randomized control trials. After the analysis, the researchers concluded that patient-centered interventions in conjunction with their personalized

education can be effective in reducing fall rates in acute care hospitals (Donna et al., 2017, p. 3007).

Contribution of the doctoral project to advances nursing practice

As previously argued, the role of nursing is fundamental to decrease the rates of falls of inpatients over 65 years old. The roles and functions associated with this discipline include a wide range of tasks that have an impact on different factors, environments, and/or problems. Bearing in mind that future previsions indicate that the population of older people is increasing, the development of interventions that seek the reduction of risks for this population is imperative. This project was aimed to reduce the incidence of falls in this population through nursing interventions based on evidence. The interventions were supported by previous studies as interventions that can be effective and should help reduce the rates of falls. Recently, research supports the implementation of intentional hourly rounds, multifactorial interventions and patient education. Another way in which this project provides advanced nursing practices is that the planned interventions are based on evidence and seek to reduce the gap between literature and practice. Regarding to intentional hourly rounds, this intervention does not only reduce the incidence of falls, but also helps to decrease the anxiety in the patient, increase their satisfaction and the fundamental care needs are met (Christiansen et al., 2018; Toole et al, 2016). According to several studies, another important factor that needs to be reinforced is patient education. Through education to the patient, their knowledge about falls and awareness of prevention strategies is increased (Lee at al., 2014).

This project contributes in several aspects for improving the advanced nursing practices and should help reduce the gap in the practice of the hourly round since these were intentional. However, it should be added that the literature indicated that these interventions are related to nursing and are cost-effective measures. These interventions reduce expenses associated with falls without the need to invest in expensive equipment. According to Nuckol et al. (2017), the savings from these simple interventions can be from $ 0.8 million to $ 1.9 million per year per hospital (p. 579).

Local Background and Context

Falls of inpatients are the most common adverse event that occur in the hospital setting. The literature reports that between 30% and 50% of falls result in serious injuries and others can cause death (TJC, 2015). The effects of falls include physical, mental, social and emotional damage in the patients. Falls can result in fractures, lacerations, subdural hematomas, excessive bleeding, reduced quality of life, loss of autonomy, confusion, immobilization, depression, and restrictions in daily activities, among other complications (Nyman, Ballinger, Phillips, & Newton, 2013; Parry et al., 2013). Another adverse effect that patient falls produce is that it affects the institution in which the fall occurred. This event represents a financial burden for hospitals, and it translates into a decrease in quality of care. According to Donna et al. (2017) the costs can increase by 61% since the stay lasts an average of 12.3 more days. The cost attributable to falls in the US population 65 years old or older was estimated at approximately in $50 million (Florence et al., 2015). Although the problem of falls of inpatients is a global problem and has been treated under different measures, the rates are not reduced and, on the

contrary, it is expected to increase considerably. There are a variety of reasons that led to the proposal of the following doctoral project, but the aim is to help improve nursing interventions through the implementation of evidence-based actions such as intentional hourly rounds and patient education.

The identified setting to carry out the project was a local hospital in Mayagüez, Puerto Rico. This hospital was categorized as a short-term acute care hospital, which is owned by a voluntary non-profit church. It currently has 183 certified beds with more than 200 nurses' workforce, including LPN, BSN and MSN. The hospital is in a rural area but at less than 10 minutes from the downtown. It has been operating successfully for 61 years and offering its services to more than 30,000 patients annually. Some services offered include: Cardiovascular Department, Emergency Department, Orthopedic, Hemodialysis, Obstetrics, Radiology, Oncology, Nuclear Medicine and Imaging, Intensive Care Unit, Rehabilitation Center, Surgery and Wound Care.

The hospital was feasible to carry out the doctoral project since it offers services to all types of populations at risk of falls, especially to the older adult population. The mission of the hospital includes providing high-quality health services and facilities to patients within an environment of operational excellence, through a competent staff. It was expected that the project resulted in a fall prevention program that generates a change in the protocol for managing falls prevention in the hospital. Eventually, it is hoped that this guide can be disseminated and implemented in other hospitals in the area, which offers services to the elderly population.

Definitions of terms

For purposes of the proposed project, the term patient falls, and hourly round were defined according to the toolkit of the AHRQ (2013):

Patient falls was defined as "an unplanned descent to the floor with or without injury to the patient" (p. 1).

Hourly round was defined as "hourly visits between 6 a.m. and 10 p.m. and visits every 2 hours between 10 p.m. and 6 a.m." (p. 31).

Role of the DNP Student

Currently I work as a professor in a large university in Puerto Rico. This role allows me to see more broadly the depth of the problems that may affect the patient and what that may represent for them, for the institutions and the repercussions that may cause in the quality of the service offered by nursing. My responsibility in forming and developing professionals includes serving as a model, demonstrating my students the commitment to lifelong learning and teaching and promoting practices to improve patient quality and safety. Therefore, my interest in this project goes beyond fulfilling a requirement and has a genuine interest in contributing to improving nursing practices and the use of evidence-based practices. As a future DNP, my responsibility is even greater, since high performance is expected from us such that we remain aware of the responsibility of the leadership role and the ability to translate research into actions (AACN, 2006, p. 5).

My role in this project was as director and facilitator. Currently, the only contact I have with the selected institution is that it is the clinical area that I visit as a professor.

This has allowed me to identify the need to improve a clinical practice that is of global concern but that can be prevented. In addition to this, there was a selected area to perform the practicum. Since I do not have any contractual or economic relationship with the institution, I don't have any biases.

My interest with the project was to contribute, through the development of an improvement in quality, with the decrease in the incidence of falls older adult (aged 65 or more) inpatients. This interest arose because it is a situation that leads the patient to a series of complications and can even cause death. Also, we must improve our practice and offer services that promote the safety of the older adult, as the population is increasing in our community. Another reason that motivated my interest in the development of this project was the need to improve nursing practice, with cost-effective measures that promote safety and quality of services. These interventions allow a better contact with the patient, identify their needs, and subsequently satisfy their needs through nursing interventions. Nursing professionals have a series of roles that allow them to intervene in different ways and in different scenarios. Through the interventions, the nursing professionals are allowed to put into practice their roles not only as caregivers but also as educators, leaders, and communicators.

Role of the Project Team

The stakeholders (nursing director, general supervisor, shift supervisor, and team leader) were used during the different phases of the QII project development. According to the phase that was implemented or worked, and their position and function, they were used. In concordance with the Kotter (2018) model and the AHRC (2013) toolkit, to

achieve the desired sustainable change, these must work as a team by aligning and integrating interests. The nursing staff in contact with the patient also played a fundamental role since they were the ones who should perform the intentional hourly rounds and patient education.

Summary

In this section the different reasons why the Kotter (2018) model and the AHRQ (2013) toolkit were selected to guide the proposed project were discussed. Also discussed was the contribution to the nursing practice and evidence from the literature that supports the interventions. Additionally, concepts of falls and hourly rounds were defined since they are relevant to the project and have a series of definitions in the literature. Finally, the role of the DNP student and the project team were discussed. In the section that follows, Section 3, I discussed the processes that was used for the collection and analysis of data to address the practice-focus question.

Section 3: Collection and Analysis of Evidence

Introduction

Falls in the hospital settings are considered one of the most frequent, healthcare-related adverse events. Because nurses are fundamental in the care of patients and falls affect the quality of care offered (Quigley, 2015b), the objective of this DNP project was a QII. I expected this QII to improve the practices related to the prevention of falls in the selected institution. Moreover, the objective was to increase the awareness of the nursing staff through education on methods to promote a safe environment for the patient. In this section, I describe the design, the procedure to achieve the QII, and how the data analysis was performed.

Practice-Focused Question

The fall of inpatients can cause fatal complications, increase medical costs, and prolong the length of hospital stays (Chu, 2017; Hicks, 2015; Quigley & White, 2013). Although inpatients falling is a global problem and has been treated with different measures, the rates have not reduced and, on the contrary, it is expected that this will increase considerably (Florence et al., 2018; Hicks, 2015; Opsahl et al., 2017). These issues led to this doctoral project and the formulation of the following practice-focused question:

Can an evidence-based intervention program reduce falls in the inpatient population?

I developed this QII with a goal of identifying the factors that contribute to the incidence of falls; improving health practices through evidence-based interventions; and

eventually helping reduce the falls of inpatients, especially the older adult population. My aim was to help improve nursing interventions through the implementation of evidence-based actions, such as intentional hourly rounds (see Hicks, 2015; Hutchings et al., 2013; Nuckols et al., 2017) and patient education (see Cameron et al., 2018; Chu, 2017; Lee et al., 2014).

Sources of Evidence

This DNP project was a QII with the objective of improving the practices related to the prevention in the selected institution. The main aim was to increase the awareness of the nursing staff of a safer patient environment and to include the patient through constant education. Through the use of evidence-based interventions, safer environments are promoted, and inpatient falls are prevented (Florence et al., 2018, p. 5; Quigley & White, 2013, p. 6). I used *Preventing Falls in Hospitals: A Toolkit for Improving Quality of Care* (AHRQ, 2013) to provide evidence-based interventions that should be sustainable (p. 2). Programs that promote evidence-based interventions have shown a decrease in the incidence of falls (Huang et al., 2018, p. 176). As a framework, the Kotter's model of change (i.e., eight steps to accelerate change; see Figure 1) was used to guide the implementation of the all interventions.

The first step I took to obtain sources of evidence for the project was to assess information about the effectiveness of current interventions through the examination, analysis, and synthesis of data related to the prevalence of falls. According to the AHRQ (2013), it is fundamental to know what the current fall prevention practices are to then promote the proposed change (p. 23). The data obtained from the prevalence of falls from

1 month before the start of the project was compared to 1 month after the implementation of evidence-based interventions and were used as an indicator of project effectiveness. Kotter (2018) added that becoming more effective or efficient is a fundamental goal of the process of change. In the change model, Kotter proposed that through the identification of opportunities, urgency can be mobilized to initiate a change. Identifying the factors that affect the fall prevention practices is an effective way to create urgency. Creating a sense of urgency is a strategy used by the AHRQ Toolkit and is the root as well as the first step proposed by Kotter in the model for change.

The data were originally collected by the healthcare organization under study each month by the Quality Management Department. The incidence of monthly falls is used as an indicator of quality. With the data obtained monthly, they generate quarterly reports that are discussed with the nursing and administration leaders. The data for the project were provided by the director of quality improvement.

The next source of evidence for the project was screening the existing knowledge of the nursing staff about the universal measures of falls prevention. I used The Fall Knowledge Test (Tool 2E) of *Preventing Falls in Hospitals: A Toolkit for Improving Quality of Care* (AHRQ, 2013), prepared for Agency for Healthcare Research and Quality (AHRQ) for this. Liu, Shen, and Xiao (2012) added that improvements in nurses' knowledge about fall prevention can prevent falls of hospitalized older adult people. The evaluation of nursing staff knowledge was critical to address knowledge gaps through education and allowed me to assess the barriers that impede the changes that need to be addressed (see AHRQ, 2013).

Participants

The participants in this project were the nurses of the unit identified to implement the evidence-based QII program. According to AHRQ (2013), the change should initially be implemented in those units where the number of falls is greater and then spread to other areas. Kotter (2018) stated that short-term goals give little room for failure and gradually lead to a long-term goal. The participants included nurses who worked in several shifts, with a wide range of experience and educational background. Within this group, I recruited 24 participants for this project. According to Kotter, the success results in a sustainable change in the organizational culture.

Procedures

The education was initiated after I analyzed the hospital falls' statistics and identified the nurses' areas of deficiency. These educations included how to properly conduct the intentional hourly rounds, what factors contribute to the falls of patients in general and in the selected institutions, and what was the need education to patients. Evidence-based nursing interventions, such as intentional hourly rounds, help reduce the incidence of elderly inpatient falls (Hicks, 2015; Hutchings et al., 2013; Nuckols et al., 2017). Patient education is another nursing intervention that researchers have suggested helps reduce the incidence of falls (Cameron et al. 2018; Chu, 2017: Lee et al., 2013). The nurses' supervisor taught them how to document the hourly round in the electronic medical records (see Appendix A).

Once I identified the needs, barriers, and/or gaps and addressed them through the educational process, the intentional hourly rounds were implemented (i.e., the

intervention based on evidence). This intervention was intentional because it included actions, such as assessing the patient's level of pain, providing analgesics if necessary, offering help (e.g., going to the bathroom, hydration or nutrition, among others), positioning the patient, ensuring that the essential needs of patients are within easy reach, and asking them to use the call light for help (AHRQ, 2013). To sustain actions that allow the interventions to be intentional, I provided an ID card (see Figure 1) all the staff and placed one at every computer. A wall with fall prevention information was also prepared (see Appendix B) as was a poster, which was placed in strategic places where nurses and the patient could see it (see Appendix C).

FALL PREVENTION
Assess patient pain levels
Medication
Toileting assistance
Correct footwear
Bed is in locked
Bed in low position /repositioned comfortable.
Call light/call bell button
Personal belonging within reach
Bedside table next to the bed
Prior to leaving the room, ask?

(a) *(b)*

Figure 1. ID card: (a) front and (b) back.

Another measure implemented as part of the QII was to reinforce patient education regarding their knowledge of fall prevention measures and the importance of asking for help from the nursing staff. Fall prevention programs that influence patient

education are effective and help reduce falls (Lee et al., 2014). The education provided to the patient/caregiver as part of the QII oriented them in each round on the universal security measures (i.e., use of call light or how to keep a safe environment). A sticker in Spanish was designed to reinforce this intervention and was placed in an area near the patients and their caregivers that was easy to see (see Appendix D). An informative paper with information related to falls was also created as part of the QII (see Appendix E).

During the development of the project, I first reported all findings and recommendations to the organization's leaders and interested parties (i.e., the director of nursing, quality management director, and nurse manager of the unit). According to AHRQ (2013) and Kotter (2018), it was necessary that these parties receive information, so they could support the needed change. Kotter stated that it is necessary to have a varied team of influential people or leaders who really want the change to be made. The AHRQ, for its part, added that changing processes or routine procedures can be a significant challenge; therefore, it is necessary to train a diverse support team that includes people who understand fall prevention from multiple perspectives and who can integrate hands-on knowledge and their expertise into the prevention efforts. A second education related to the benefits of the hourly round was provided to the staff before the project was finally implemented (see Appendix F).

After the implementation of the evidence-based QII program, I administered the Fall Knowledge Test (Tool 2E) again to evaluate the effectiveness of the educational process and identify which deficiencies or gaps still needed to be addressed. Then, the number of falls was compared and analyzed to answer whether the interventions

implemented addressed the practice-centered question. Once the project was ended, final recommendations were developed to improve the effectiveness of the QII and presented to the nurses' leaders.

Figure 2 shows how the conceptual framework used (i.e., Kotter's change model) and planned interventions were merged. Strategic planning leads to a successful, organized, and structured program (Johi et al., 2014).

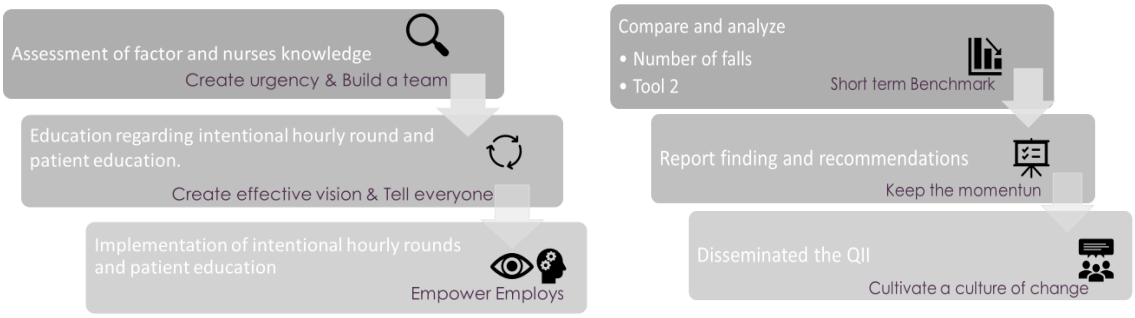


Figure 2. Framework and programmed interventions.

Protections

To protect the well-being of the participants, I first obtained approval from the project facility and Walden University Institutional Review Board (IRB) approval number 08-28-19-0736651. In the project, I provided protection to human subjects and did not include interventions that generated potential ethical problems. The project did not cause damage but maximized the benefits for the participants. The right to self-determination was always respected, which establishes that participants were treated as autonomous agents, made their own decisions, and were able to control their actions. Participants were allowed to ask questions, refuse to give information, and withdraw from the study at any time. I treated subjects who declined to participate in the study

fairly and equally. Although the project required data and the implementation of interventions, the privacy of the participants was continuously maintained. I maintained confidentiality and did not use identifiers during data collection because the questionnaires were answered anonymously. Participant information was kept secure and access was restricted to only me as the researcher.

The data offered to the interested parties were only those relevant to results (e.g., when carrying out the screening of knowledge of the nursing staff). Once the project was finished, I filed the data in a sealed box that will remain in my custody for 1 year and then be destroyed to protect the subjects involved in the project.

Analysis and Synthesis

I compared the prevalence of falls from 1 month before the start of the project to 1 month after the implementation of the evidence-based interventions. Based on the data obtained, the effectiveness of the interventions was analyzed and compared with the findings of other studies in which the same actions were carried out. To analyze the knowledge of the nursing staff in relation to universal fall prevention measures, I used the Fall Knowledge Test (Tool 2E) of *Fall Prevention in Hospitals: A Toolkit to Improve the Quality of Care* (AHRQ, 2013). For the analysis of the resulting data from this instrument, Microsoft Excel and the updated version of Statistical Program for Social Sciences (SPSS) were used. I displayed the findings through tabulations, graphs, percentages, rates, and a written analysis. Finally, I also evaluated the teaching evaluation tool to identify trends and patterns in nursing practice. The findings were explained and compared with the results of previously conducted studies on the topic in the literature.

Summary

The falls of older adult patients in the hospital environment have increased despite the development of several measures and the use of assessment tools. This problem generates a series of difficulties that affect the patient, the nurses, the institution, and even the quality of the health services. Through the development of this QII project, I expected to reduce the incidence of falls and increase the awareness of nurses and patients. I also expected to achieve the planned goal through the programmed evidence-based interventions.

Section 4: Findings and Recommendations

Introduction

Falls in hospital settings are considered one of the most frequent, preventable, healthcare-related adverse events. The problem of falls can cause complications for inpatients, increase their medical costs, and prolong their stay in the hospital (Donna et al., 2017). The incidences of falls are more frequent in the population aged 65 years old and older, and the medical costs attributable to fatal and nonfatal falls were estimated at approximately $50 billion (Florence et al., 2018). Moreover, it was expected that by 2020 more than 4 million Americans aged over 65 years old will have a fall and that medical costs will increase (Florence et al., 2018; Hicks, 2015; Opsahl et al., 2017).

In Puerto Rico, 21% of falls in a hospital occurred to individuals aged 65 years old or older (Pascual-Marrero et al., 2018) and are one of the most common causes of traumatic brain injury in this population (Fernández-Abinader et al., 2017). Currently in Puerto Rico, the statistics show a natural negative growth and an increase in the older adult population (Department of Health, 2016; Perreira et al., 2017); therefore, there is urgency to study the needs of this population and develop measures that guarantee safer environments with profitable interventions. According to Perreira et al. (2017), it is necessary to increase investments in prevention programs directed to provide safer environments to the older adult population. Given that it is anticipated that the population of older people is increasing, the development of interventions that seek to reduce risks for this population is imperative.

Although different alternatives, approaches, and programs have been developed to reduce falls, the incidence of them has not been reduced. There is need for a greater focus on falls by nursing staff and an improvement in surveillance systems to prevent and/or reduce falls in the hospital environment (Quigley, 2015a). As healthcare professionals, the nursing staff must function as leaders, play a key role in the healthcare scenario, and pursue actions to provide quality care to the patient. Moreover, nurses are key elements in the prevention and management of injuries related to falls (Garrard et al., 2016; Hicks, 2015; Quigley, 2015b).

For this QII project the focus question was: Can an evidence-based interventions program reduce falls in the inpatient population? The objective of this DNP project was to improve the practices related to the fall prevention in the selected institution. The main aim was to increase the awareness of the nursing staff of a safer environment and include the patient through constant education. The adoptions of evidence-based interventions are helpful and invaluable to promote safer environments, to improve the quality of care provided through the nursing staff, and eventually reduce the incidence (Florence et al., 2018, p.5; Quigley & White, 2013, p. 6). For the purposes of this project, the evidence-based interventions that were implemented were the intentional hourly rounds and constant patient education. The hourly rounds are an intervention that helps reduce the incidence of falls (Hicks, 2015, Hutchings et al., 2013, Nuckols et al., 2017). According to Lee et al. (2014), fall prevention programs that influence patient education are effective and help reduce falls.

Findings and Implications

Findings

The project practice setting was a short-term, acute care hospital with 183 certified beds. Before the implementation, the statistics of falls was analyzed and was found that the major incidents of falls were reported in the medical surgical unit compared with other units in the hospital. The fall report showed that, as of August 2019, 43 falls were reported, of which 27.9% (*n* = 12) occurred in the medical surgical unit. Of the total reported falls, 37.2% (*n* = 16) of patients had minor or moderate damage. When comparing this finding with those in the literature, I found that TJC (2015) previously stated that approximately 30%–50% of these patients suffer serious damage. Other interesting findings were that 69.7% (*n* = 30) of those patients who fell were over 61 years old and 37.2% (*n* = 16) were male. These findings aligned with global trends that established that the majority of falls occur with patients over 65 years of age (see Florence et al., 2018; Pascual-Marrero et al., 2018).

In the medical surgical unit in the month of August, there were four falls, which represented 33% of the total falls (*n* = 12) in the hospital for this month. Table 1 shows the number of falls per month in the unit and the rate.

Table 1

Falls Report During 2019

Month	Number of falls	Rate
January	2	2.89

February	2	3.29
March	1	1.30
April	1	1.47
May	0	0.00
June	1	1.62
July	1	1.80
August	4	6.78
September	1	1.48
October	1	1.28
November	0	0.00
December	0	0.00

An interesting fact observed through the analysis of the statistics is that after an increase in the incidence, the number was reduced but eventually increased (see Figure 3). This result supported the lack of an intervention to maintain continuity and the need to generate a sustainable change. This finding also supports the argument presented in previous research studies that there is a need for multifactorial interventions to address the problem of the falls (see Cameron et al.,2018; Hill-Westmoreland et al., 2002; Opsahl et al., 2017; Quigley & White, 2013).

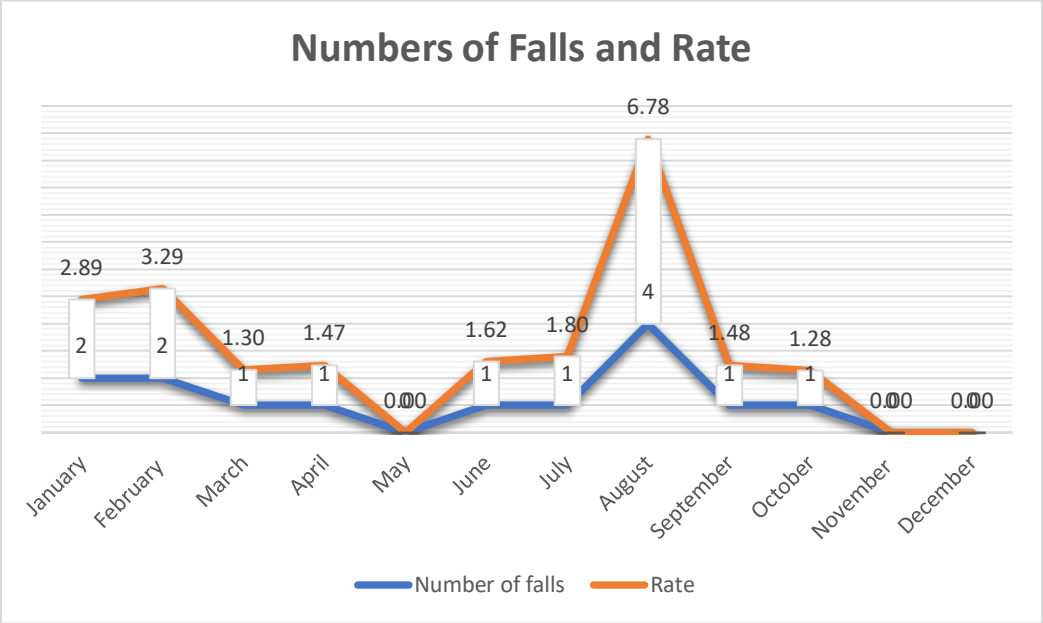


Figure 3. Number of falls and rate.

I presented the statistical analysis to the nursing leaders and other department leaders with the purpose of creating a sense of urgency, following the Kotter model. According to AHRQ (2013,) it is necessary to create a sense of urgency since the implementation of quality improvements require the support of leaders and stakeholders. I also presented the QII, which was its purpose and the evidence that supported the interventions. After the presentation, the director of quality management and the supervisor of the selected unit voluntarily joined the project as stakeholders to contribute to the implementation of the QII. According to Kotter (2018), after creating a sense of urgency, coalitions must be created to form a collaborative and proactive teamwork.

The next step was to evaluate the practices related to the prevention of falls in the unit through the revision of the protocol. I discovered that patients received written education upon admission and that they received ongoing education according to the

level of risk in which it was classified (see Appendix A). I also identified that although there was an hourly round in high-risk patients, the action was documented in each shift and not after the hourly round.

I then evaluated the knowledge of the staff on the universal measures of fall prevention through the administration of the questionnaire. The unit consisted of 29 nurses, and of these, 83% (n = 24) answered the preintervention questionnaire. Through the analysis of the questionnaire, I found that the participants had a knowledge of universal practices; however, most did not recognize that providing a safe environment for the patient is essential to reduce falls. These findings were evidenced by their answers to Question Number 2 and Number 4 of the questionnaire, in which only 13% (n = 3) and 38% (n = 9), respectively, recognized that providing a safe environment reduces falls. Another interesting finding was that the participants did not recognize that attending to the patient's toileting needs would lessen the risk of falling (i.e., 0% correct in Question Number 1). The analysis of the questionnaire helped me to reinforce and improve the education that would be offered to the staff before the implementation of the intentional hourly rounds and patient education. There was not a control group in this project because all the nursing staff received the educational material, even when it was their decision to answer or not answer the questionnaire.

The education about the QII was offered in the unit to the nurse staff at different times and by group, and the ID card was given to all the staff to reinforce what the intentional hourly rounds implied. The same card was placed on all the computer screens in the nurse station to reinforce the intervention of documenting these. I recorded the

education provided in PDF format and saved it on the desktop of one of the computers in the nursing station, with the intention that the staff had access to it at any time. The unit supervisor was responsible to ensure that all unit staff received the education and the ID Card. After this action, the unit supervisor directed the staff on the correct way to how to document the intentional hourly round, every hour from 6 a.m. to 10 p.m. and at night every 2 hours (i.e., 10 p.m. to 6 a.m.). During the weeks following the implementation of the evidence-based intervention, weekly monitoring occurred, and I obtained feedback from the supervisor about the implementation process. In a final meeting with the supervisor, final recommendations and information about the process of implementing the intentional hourly rounds and patient education were obtained.

Other strategies that were used to reinforce the interventions were the creation of informative posters and the placement of information concerning falls and preventive measures on a wall near the nursing station. Strategically, this information could also be seen by patients and family members. Handouts were also included for patient education with information on preventive measures. Providing information in writing and educating patients and families about the prevention of falls helps the success of preventive measures to reduce falls (Chu, 2017, p. 6). To reinforce the education offered to the patient by the staff, I created a sticker to place in an area that it is easy for the patient to see. The sticker reinforces the idea of calling the nursing staff for help. According to the report offered by the unit nurse manager, the vast majority of the staff documented the intentional hourly round, including the actions of educating the patients.

In the change model, Kotter (2018) stated that during the change process, the employee must be empowered. Based on this and prior to obtaining December statistics, education was provided to the nursing staff. I offered the second education orally and in writing to a limited group, and only in writing to another group in the unit. The AHRQ Tool 2E questionnaire was also applied again. The number of questionnaires answered postimplementation was 15, which was 52% of those that completed the preimplementation questionnaire.

The findings from the questionnaires pre- and postimplementation showed that the nurses' awareness of fall prevention strategies increased. Compared to the previous analysis, now 53% (n = 8) of nurses recognized that meeting patient's toileting needs decreases the risk for falls versus the preimplementation result of 0% recognizing this action. In addition, 87% (n = 13) postimplementation versus 13% (n = 3) preimplementation recognized that a safe environment helps reduce risk. The assessment of the environment was one of the interventions of the intentional hourly rounds.

The project implementation began in September; therefore, the statistics obtained to compare the effectiveness of evidence-based interventions were from December. The report provided by quality management indicated a decrease in falls with zero falls reported in the months of November (see Table 1) and December (see Figure 3). Prior to implementation in August, four falls had been reported, representing a rate of 6.78. However, after the implementation of the intentional hourly rounds, which included educating the patient, only one fall was reported in the months of September and October and zero in the following 2 months (i.e., November and December; see Figure 4). I

presented the results of the implementation of the QII and the strategies used to the nursing leaders and other areas related to patient quality.

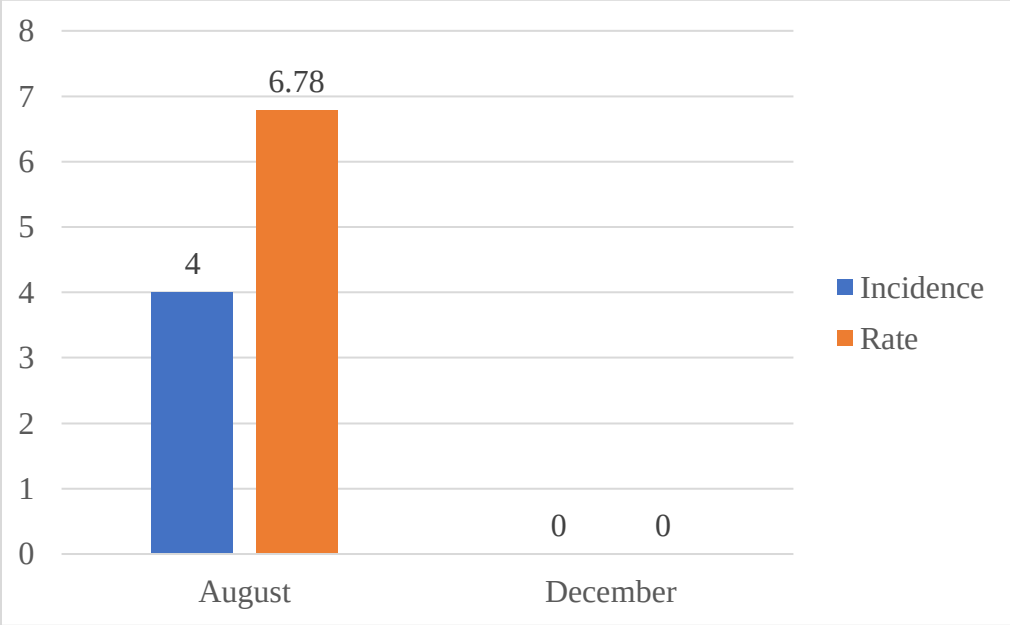


Figure 4. Pre- and postimplementation fall incidences and rates.

Unanticipated Limitations

The unintended limitation for the project was that the institution made changes in its administration, so the participation of the unit manager in the last education was limited. In addition, the number of personnel in the unit that answered the questionnaire was less since the census decreased in the institution and staff from other units were located in the medical-surgical unit. Although all the staff including the other units' staff received the education, they did not answer the questionnaire offered.

Implications

The decrease in the incidence of falls reinforces the effectiveness of intentional hourly rounds and patient education. The findings reinforce that a change in staff

awareness was achieved by attending the specific needs of the patients and the documentation of the actions every hour. Although the adult learning theory was not used in the conceptual framework, it establishes that adults learn differently, thus using different approaches can encourage learning (AHRQ, 2013). Also, the decrease in the number of falls reported gave support to the argument that nurses have a key role in the fall prevention programs (Garrard et al., 2016; Hicks, 2015; Quigley, 2015b; Quigley & White, 2013).

The findings of this quality initiative can benefit the community since a safe and quality environment was promoted. In addition, the intentional hourly round provides other benefits to the patients and improves patient satisfaction scores. The evidence-based interventions used helped reduce the costs associated with falls and decreased the incidence of injuries due to falls.

The results of this project may influence nursing administrators and other leaders in the hospital to increase the application of fall prevention policies and others QII. Having leaders as part of the teamwork facilitated the implementation of evidence-based practice and communication with direct care staff. According to Kotter (2018), it is important to sustain the momentum to generate a culture of change.

Implications to positive social changes

The findings of this project promote a positive social change since the falls were reduced through the implementation of evidence-based interventions. The use of evidence-based interventions and advanced knowledge positively impacts society and produces change that reduces the incidence of falls. A positive social change is achieved

through actions that improve human conditions such as providing safe environments and quality care to the patient. The findings suggested that it was possible to sustain the proposed change and generate a culture of change.

Recommendations

The results of this project support that the use of intentional hourly rounds and patient education have a significant impact on decreasing the incidence of patient falls. It was evident that the use of several measures together helps to reduce the incidence of falls. Also, it has been shown that the reinforcement of verbal and written information is an effective measure in fall prevention programs. Another recommendation is that having the support of the leaders and organized approaches, to meet the patient's needs, is fundamental for the success of any QII.

The adoption of new practices takes time as the staff adopts the changes and understands how new interventions improve patient outcomes. The education to the staff about fall prevention measures and proper management once the patient falls should be strengthened as equal with the importance of the documentation of prevention measures. Future hourly rounding projects should be implemented focused in supporting the use of intentional hourly rounds, as a daily practice with the identified high-risk population.

Contribution of the Doctoral Project Team

The project team was formed by the director of nursing, the director of quality management, the nursing staff of the medical-surgical unit and the nurses' manager of the unit. The director of nursing was a key piece since with her support the initiative was presented to the nursing leaders and they were motivated to be participants in this. The

nursing staff of the unit was fundamental since they were responsible for carrying out the intentional hourly rounds and educating the patient about the fall prevention measures. The unit's nurse manager was responsible for the nursing team to participate in the different implementation strategies throughout the project. Her leadership capacity and active participation in the QII was a key element in the reduction of falls since she followed the intentional hourly round and the education provided to the patient were documented in the clinical record. The participation of the director of quality management was very helpful since it was she who provided the statistics of falls and the analysis of the these. Additionally, she provided other tools that were used to design the education provided to the staff. The support of the team was exceptional, and it was part of the success of implementation, as they were engaged in the QII

At the end of the project, there was no established plan to extend this. However, it can be extended further, with the implementation of intentional rounds per hour in other units of the institution and a change in the fall risk protocol.

Strengths and Limitations of the Project

The strength of this project was that the interventions implemented were profitable without any investment of money. Another strength was the active collaboration of stakeholders during the implementation of the project. The use of different strategies to empower and involve nursing staff could be considered a strength. The adoption of the intentional hourly round as a daily practice in the unit reinforces its commitment to provide high-quality care to patients. Finally, the use of the AHRQ

(2013) guide and the Kotter (2018) model, allowed for a structured and organized implementation.

There were several limitations to this project. First, the project included only the medical-surgical unit and may have not reflected the practice of other units. The barriers identified for this unit may not be generalizable to other units in the hospital because nursing workflows and patient populations differ in each unit. Another limitation was the short period of time. Three months are short to evaluate a change in the workflow of nursing or the cultural adoption of the intervention for sustainability. An additional limitation is that the questionnaire was used only to reinforce education about the intentional time round and the universal fall prevention measure. The questionnaire could have been used as an indicator of the effectiveness of education and to establish a direct correlation between nursing knowledge and its attachment to evidence-based interventions.

Summary

In this section I provided the results of the data before and after the test to the questionnaire offered and the data of the analysis of the statistics of falls. Additionally, the implication of the results was evaluated, and the limitations and strengths of the project were established. The contribution of the team members and the recommendations according to the findings and the result were also established. In the following section, plan for disseminating the project was presented and an analysis of self.

Section 5: The Dissemination Plan

In Essential III of their Essentials of Doctorate Education, the AACN (2016) stated that "scholarship and research are the hallmark of a doctoral education" (pp. 11). Therefore, the key activities of DNP graduates involve the translation of research into practice and the dissemination of new knowledge. Through the implementation of evidence-based interventions, the creation of policies, and educating nurses of best practices, DNP nurses positively impact the healthcare system and the health of the population (Trautman, Idzik, Hammersla, & Rosseter, 2018). Bearing this in mind, my plan to disseminate this project is encompassing.

The dissemination plan for this project involved sharing recommendations in written and oral format with the administrators and the leaders of the hospital. The recommendations will include the dissemination of this project to other units in the hospital and the revisions of the Fall Prevention Protocol. I also expected to disseminate the project to other local hospitals for the benefits of older adult patients through oral presentations to nurses' leaders. My plan to make the project available to the general public will be carried out through written publications in selected journals and conferences of professional organizations. As an active member of the research committee of the Epsilon Lambda chapter of the Sigma Theta Tau International, I hope to present the project in the next Research Day to other members. Another plan is the development of continuum educations regarding fall prevention, the intentional hourly rounds, and the education to patients.

Analysis of Self

Implementing this project allowed me to grow as a doctorate student and successfully achieve the learning outcomes of the program. Through the implementation of the intentional hourly rounds and patient education, it was possible to translate research findings to direct evidence-based nursing practice. It was even possible to implement an organizational change through the QII in the institution. The development of the project also helped me to improve my leadership capacity. This project allowed me to work collaboratively with an interdisciplinary team focused on providing a safer environment for patients and improving nursing practices. I believe that the objective of reducing falls in the hospital scenario greatly contributes to improving older adult population health outcomes.

My experience of implementing this project was enriching and allowed me to understand the importance of perseverance, organization, and assertive communication. In addition, I learned that considering the barriers to be faced and the needs of the target population beforehand help determine measurable and attainable goals. I even gained an understanding of planning and implementation guided by models or theories result in successful and structured projects that generate changes. I believe that my goal to achieve the acquisition of solid bases has led me to contribute to a positive social change through the promotion of safe practices and an increase in nursing awareness.

As a lifelong learner, the project makes me reflect on how important it is to stay updated and the need to promote this competence in colleagues. As a nurse, my goal has always been to provide quality care to the patient that is focused on their particular needs

as well as an environment that promotes patient safety. Additionally, the Essentials of Doctoral Education by the AACN (2006) lay out the expectation that doctorate nurses must be able to integrate research and critical thinking into the design, delivery, and evaluation of evidence-based care to improve patients; outcomes (p. 17). Through this QII project, both my personal objectives and those expected by the AACN were met because implementing the intentional hourly rounds achieves a series of benefits beyond the prevention of falls. In the nursing profession, the use of tools, such as evidence-based practice, allows viable solutions to the problems to be identified.

Undertaking and completing the project was a path full of personal and professional satisfaction; however, it was not an easy task during the development of the project, situations, such as a Category 5 hurricane, a new professional role of greater importance, and various earthquakes, impacted my progress. All the factors together allowed me to externalize my resilience and stand firm in my intention to grow as a professional, be a change agent, and promote a positive social change.

Summary

The results of this project show that programs with evidence-based interventions employing multiple, but structured approaches focused on sustaining change can help reduce the incidence of falls. The effectiveness of the intentional hourly rounds is an accurate way to reduce the falls of older patients admitted to hospital institutions. This project also gives weight to the statement that nurses have a fundamental role in preventing falls and promoting safe environments. The reduction in the incidence of falls in the unit demonstrates that proactive approaches, such as the intentional hourly rounds,

are of benefit to the patient and the institution. Through the implementation of actions that promote patient quality and safety, I obtained project results that helped provide high-quality and cost-effective care. The intentional hourly rounds must be integrated into the daily practice of hospital institutions that provide care for patients considered at high risk and the older adult population. In conclusion, evidence-based interventions help reduce the incidence of inpatient falls.

References

Agency for Healthcare Research and Quality. (2013.) *Preventing falls in hospitals: A toolkit for improving quality of care.* Rockville, MD: Author. Retrieved from http://www.ahrq.gov/professionals/systems/hospital/fallpxtoolkit/index.html

American Association of Colleges of Nursing. (2006). *The essentials of doctoral education for advanced nursing practice*. Washington, DC: Author. Retrieved from http://www.aacn.nche.edu/DNP/pdf/Essentials.pdf

American Nursing Association. (2018). What is nursing? Retrieved from https://www.nursingworld.org/practice-policy/workforce/what-is-nursing/

Cameron I. D., Dyer, S. M., Panagoda, C. E., Murray, G. R., Hill, K. D., Cumming, R. G. & Kerse, N. (2018). Interventions for preventing falls in older people in care facilities and hospitals. *Cochrane Database of Systematic Reviews, 9*. doi:10.1002/14651858.CD005465.pub4.

Centers for Medicare & Medicaid Services. (2015). Hospital-acquired conditions. Baltimore, MD: Author. Retrieved from https://www.cms.gov/medicare/medicare-fee-for-service-payment/hospitalacqcond/hospital-acquired_conditions.html

Centers for Medicare & Medicaid Services. (2018). Resources: Injuries and falls from immobility. Retrieved from https://partnershipforpatients.cms.gov/p4p_resources/tsp-injuriesandfallsfromimmobility/toolinjuriesandfallsfromimmobility.html

Christiansen, A., Coventry, L., Graham, R., Jacob, E., Twigg, D., & Whitehead, L. (2017). Intentional rounding in acute adult healthcare settings: A systematic mixed-method review. *Journal of Clinical Nursing*, *27*(9–10), 1759–1792. doi:10.1111/jocn.14370

Chu, R. Z. (2017). Preventing in-patient falls: The nurse's pivotal role. *Nursing, 3*. 24. Retrieved from https://www.nursingcenter.com/pdfjournal?AID=4017689&an=00152193-201703000-00008&Journal_ID=54016&Issue_ID=4017657

Conn, V. S. (2014). Prepare to launch: Optimizing doctoral education to ensure career success. *Western Journal of Nursing Research, 36*(1), 3-5. doi:10.1177/0193945913492652

Coppedge, N. (2016). Using a standardized fall prevention tool decreases fall rates. *Nursing, 46*(3), 64–67. doi:10.1097/01.NURSE.0000480616.85167.05

Davis, M. V., Mahanna, E., Joly, B., Zelek, M., Riley, W., Verma, P., & Fisher, J. S. (2014). Creating quality improvement culture in public health agencies. *American Journal of Public Health, 104*(1), E98-E104. Retrieved from https://uprm.idm.oclc.org/docview/1477881538?accountid=28498

Deandrea, S., Bravi, F., Turati, F., Lucenteforte, E., La Vecchia, C., & Negri, E. (2013). Review: Risk factors for falls in older people in nursing homes and hospitals. A systematic review and meta-analysis. *Archives of Gerontology and Geriatrics, 56*, 407-415. doi: 10.1016/j.archger.2012.12.006

Department of Health. (2016). *Resumen general de la salud en Puerto Rico.* San Juan, Puerto Rico: Author.

Donna, A., Dawn, C., Contreras, T., Yeogyeong, L., & Fitzpatrick, A. (2017). Effectiveness of patient-centered interventions on falls in the acute care setting compared to usual care: A systematic review. *JBI Database of Systematic Reviews and Implementation Reports, 12,* 3006. doi:10.11124/JBISRIR-2016-003331

Fernández-Abinader, J. A., González-Colón, K., Feliciano C. E., & Mosquera-Soler, A. M. (2017). Traumatic brain injury profile of an elderly population in Puerto Rico. *Puerto Rico Health Science Journal, 36*(4), 237-239.

Florence C. S., Bergen G., Atherly A., Burns E., Stevens J., & Drake C. (2018) Medical costs of fatal and nonfatal falls in older adults. *Journal of the American Geriatrics Society, 66*(4), 693-698. doi:10.1111/jgs.15304.

Garrard, L., Boyle, D. K., Simon, M., Dunton, N., & Gajewski, B. (2016). Reliability and validity of the NDNQI® Injury Falls Measure. *Western Journal of Nursing Research*, *38*(1), 111-128. doi:10.1177/0193945914542851

Hicks, D. (2015). Can rounding reduce patient falls in acute care? An integrative literature review. *MEDSURG Nursing, 24*(1), 51.

Hill-Westmoreland, E. E., Soeken, K., & Spellbring, A. M (2012). A meta-analysis of fall prevention programs: How effective are they? *Nursing Research, 51*(1), 1-8.

Huang, S.F., Yang, T.T., Chen, S.F., Lu,L.T. & Liao, J.Y. (2018). Effects of fall prevention programs for older adults on fall-related injuries: A systematic review

and meta-analysis. *Journal of Research in Education Sciences, 63*(2), 163-186. doi:10.6209/JORIES.201806pass:[_]63(2).0007

Hutchings, M., Ward, P., & Bloodworth, K. (2013). 'Caring around the clock': A new approach to intentional rounding. *Nursing Management - UK, 20*(5), 24-30.

Joint Commission International. (2017). *6th edition in depth: Preventing falls in inpatient and outpatient settings.* General News, 6th Edition Communication Center. Retrieved from https://www.jointcommissioninternational.org/6th-edition-in-depth-preventing-falls-in-inpatient-and-outpatient-settings/?CategoryId=17

Joshi, M.S., Ransom, E.R., Nash, D.B., & Ransom, S.B., (Eds.). (2014). *The Healthcare Quality Book, 3rd ed.* Chicago, IL: Health Administration Press.

Kilpatrick, P. (2017). Zero falls? It's possible. *The Joint Commission.* Retrieved from: https://www.jointcommission.org/zero_falls_it%E2%80%99s_possible/

Kotter, J. (2018). 8 steps to accelerate change. Retrieved from https://www.kotterinc.com/wp-content/uploads/2018/05/8-Steps-eBook-Kotter-2018.pdf

Lee, D. A., Pritchard, E., McDermott, F., & Haines, T. P. (2014). Falls prevention education for older adults during and after hospitalization: A systematic review and meta-analysis. *Health Education Journal*, *73*(5), 530-544.

Liu, H., Shen, J., & Xiao, L. D. (2012). Effectiveness of an educational intervention on improving knowledge level of Chinese registered nurses on prevention of falls in hospitalized older people—A randomized controlled trial. *Nurse Education Today, 32,* 695–702. doi:10.1016/j.nedt.2011.09.009

Longenecker, C. O., & Longenecker, P. D. (2014). Why hospital improvement efforts fail: A view from the front line. *Journal of Healthcare Management, 59*(2), 147–157.

Mitchell, M. D., Lavenberg, J. G., Trotta, R. L. & Umscheid, C.A. (2014) Hourly rounding to improve nursing responsiveness: A systematic review. *Journal of Nursing Administration, 44*(9), 462-472.

Nuckols, T. K., Needleman, J., Grogan, T. R., Liang, L., Worobel-Luk, P., Anderson, L.,... Walsh, C. M. (2017). Clinical effectiveness and cost of a hospital-based fall prevention intervention: The importance of time nurses spend on the front line of implementation. *Journal of Nursing Administration, 47*(11), 571-580. doi:10.1097/NNA.0000000000000545

Nyman, S. R., Ballinger, C., Phillips, J. E., & Newton, R. (2013). Characteristics of outdoor falls among older people: A qualitative study. *BMC Geriatrics, 13*. doi:10.1186/1471-2318-13-125

Opsahl, A. G., Ebright, P., Cangany, M., Lowder, M., Scott, D., & Shaner, T. (2017). Outcomes of adding patient and family engagement education to fall prevention bundled interventions. *Journal of Nursing Care Quality, 32*(3), 252-258. doi:10.1097/NCQ.0000000000000232

Parry, S. W., Finch, T., & Deary, V. (2013). How should we manage fear of falling in older adults living in the community? *British Medical Journal, 346*. doi:10.1136/bmj.f2933

Pascual-Marrero, A., Ramos-Melendez, E. O., Garcia-Rodriguez, O., Morales-Quinones, J. E., & Rodriguez-Ortiz, P. (2018). Trauma epidemiology in Puerto Rico: In-hospital morbidity and mortality from 2002 to 2011. *International Journal of Injury Control and Safety Promotion*, *25*(1), 14–22. doi:10.1080/17457300.2017.1310738

Perreira, K., Lallemand, N., Napoles, A. & Zuckerman, S. (2017). *Puerto Rico Health Care Infrastructure Assessment.* Urban Institute. Retrieved from https://www.urban.org/sites/default/files/publication/87011/2001050-puerto-rico-health-care-infratructure-assessment-site-visit-report_1.pdf

Quigley, P. (2015a). Taking appropriate precautions against falls: Learn about key fall precautions for patients in acute or long-term settings. *American Nurse Today, 10*(7), 32-33. Retrieved from https://www.americannursetoday.com/wp-content/uploads/2015/07/ant7-Falls-630_FULL.pdf

Quigley, P. (2015b). We've made gains in preventing falls, but more work remains: It takes a team to make a difference in falls prevention. *American Nurse Today, 10*(7), 28. Retrieved from https://www.americannursetoday.com/wp-content/uploads/2015/07/ant7-Falls-630_FULL.pdf

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

Small, A., Gist, D., Souza, D., Dalton, J., Magny-Normilus, C., & David, D. (2016). Using Kotter's change model for implementing bedside handoff: A quality

improvement project. *Journal of Nursing Care Quality, 31*(4), 304–309. doi:10.1097/NCQ.0000000000000212

The Joint Commission. (2015). Sentinel event alert. Retrieved from https://www.jointcommission.org/assets/1/18/SEA_55.pdf

The Joint Commission. (2018). Summary data of sentinel events reviewed by The Joint Commission. Retrieved from https://www.jointcommission.org/assets/1/18/Summary_4Q_2017.pdf

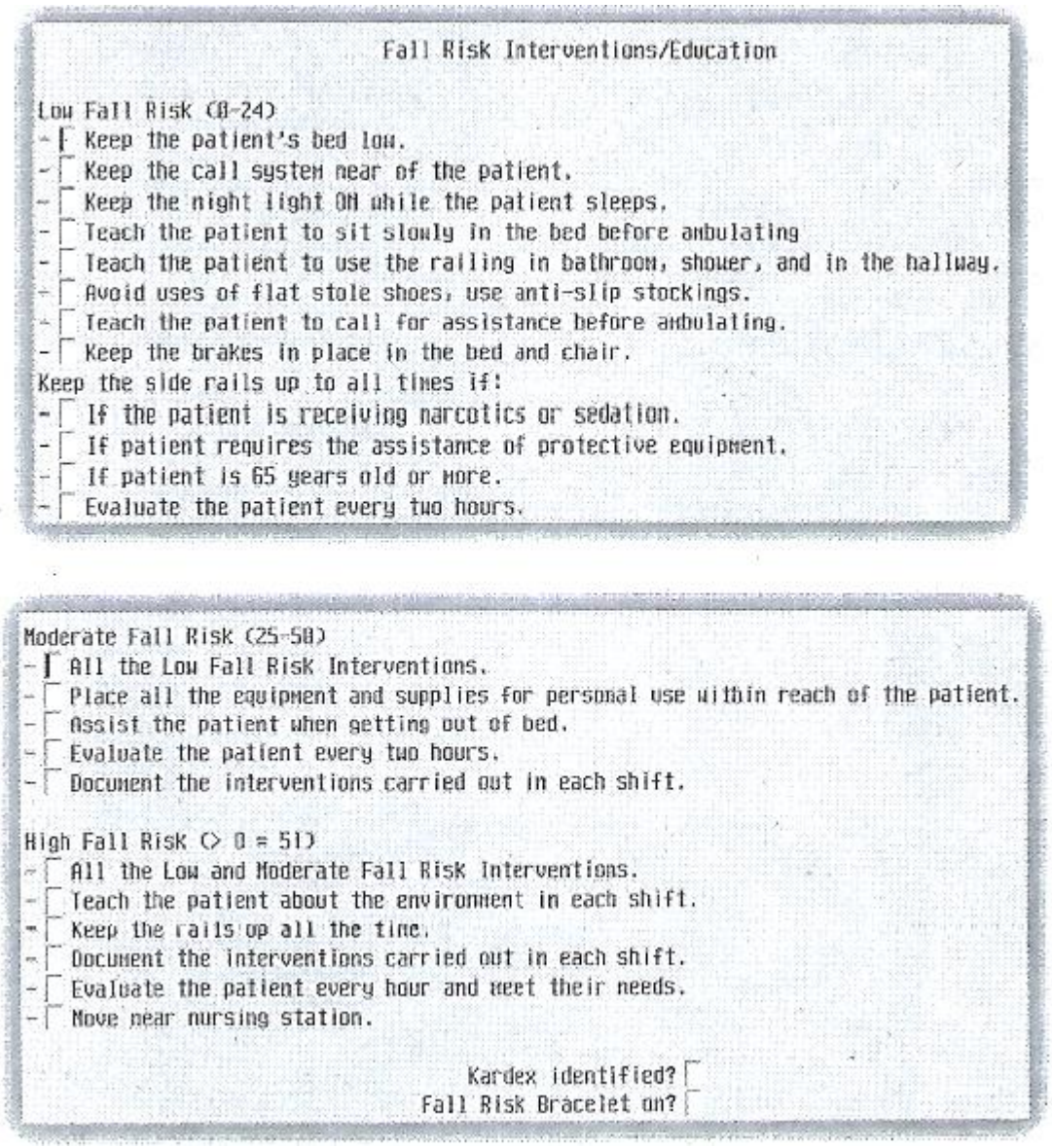
Thomas, L., & Galla, C. (2013). Building a culture of safety through team training and engagement. *Quality and Safety in Health Care, 5*, 425. doi:10.1136/bmjqs-2012-001011

Toole, N., Meluskey, T., & Hall, N. (2016). A systematic review: Barriers to hourly rounding. *Journal of Nursing Management*, *24*(3), 283–290. doi:10.1111/jonm.12332

Trautman, D. E., Idzik, S., Hammersla, M., & Rosseter, R. (2018). Advancing scholarship through translational research: The role of PhD and DNP prepared nurses. *Online Journal of Issues in Nursing, 23*(2), 1. doi:10.3912/OJIN.Vol23No02Man02

World Health Organization. (2018) Fall. Retrieved from http://www.who.int/news-room/fact-sheets/detail/falls

Appendix A: Fall Risk Intervention/Education



Fall Risk Interventions/Education

Low Fall Risk (0-24)
- ☐ Keep the patient's bed low.
- ☐ Keep the call system near of the patient.
- ☐ Keep the night light ON while the patient sleeps.
- ☐ Teach the patient to sit slowly in the bed before ambulating
- ☐ Teach the patient to use the railing in bathroom, shower, and in the hallway.
- ☐ Avoid uses of flat stole shoes, use anti-slip stockings.
- ☐ Teach the patient to call for assistance before ambulating.
- ☐ Keep the brakes in place in the bed and chair.

Keep the side rails up to all times if:
- ☐ If the patient is receiving narcotics or sedation.
- ☐ If patient requires the assistance of protective equipment.
- ☐ If patient is 65 years old or more.
- ☐ Evaluate the patient every two hours.

Moderate Fall Risk (25-50)
- ☐ All the Low Fall Risk Interventions.
- ☐ Place all the equipment and supplies for personal use within reach of the patient.
- ☐ Assist the patient when getting out of bed.
- ☐ Evaluate the patient every two hours.
- ☐ Document the interventions carried out in each shift.

High Fall Risk (> 0 = 51)
- ☐ All the Low and Moderate Fall Risk Interventions.
- ☐ Teach the patient about the environment in each shift.
- ☐ Keep the rails up all the time.
- ☐ Document the interventions carried out in each shift.
- ☐ Evaluate the patient every hour and meet their needs.
- ☐ Move near nursing station.

Kardex identified? ☐
Fall Risk Bracelet on? ☐

Appendix B: Prepared Wall

Appendix C: Poster

PREVENCIÓN DE CAÍDAS

FACTORES DE RIESGO

> 65 años • Reducción de la movilidad. • Algunos medicamentos • Enfermedades neurológicas Enfermedades músculo-esqueléticas • Alteraciones nivel de conciencia • Alteraciones cognitivas

RONDA POR HORA INTENCIONADA

- ⇒ Evalua el nivel de dolor
- ⇒ Medicamentos
- ⇒ Asistencia al baño
- ⇒ Zapatos correctos o medias
- ⇒ Cama (frenos , barrandas y posición)
- ⇒ Timbre
- ⇒ Pertenencias personales
- ⇒ Antes de abandonar el cuarto pregunte al paciente si necesita algo más....

MISIÓN

Reducir la incidencia de caídas.

"DE UN 30 A UN 50% DE LAS CAÍDAS RESULTAN EN DAÑOS AL PACIENTE"

MEDICAMENTOS:

- Antidepresivos
- Anti-hipertensivos
- Antipsicóticos
- Beta-bloqueadores
- Benzodiacepinas
- Diuréticos
- Hipnóticos
- Narcóticos
- Neurolépticos
- NSAID
- Sedativos

EDUCA AL PACIENTE:

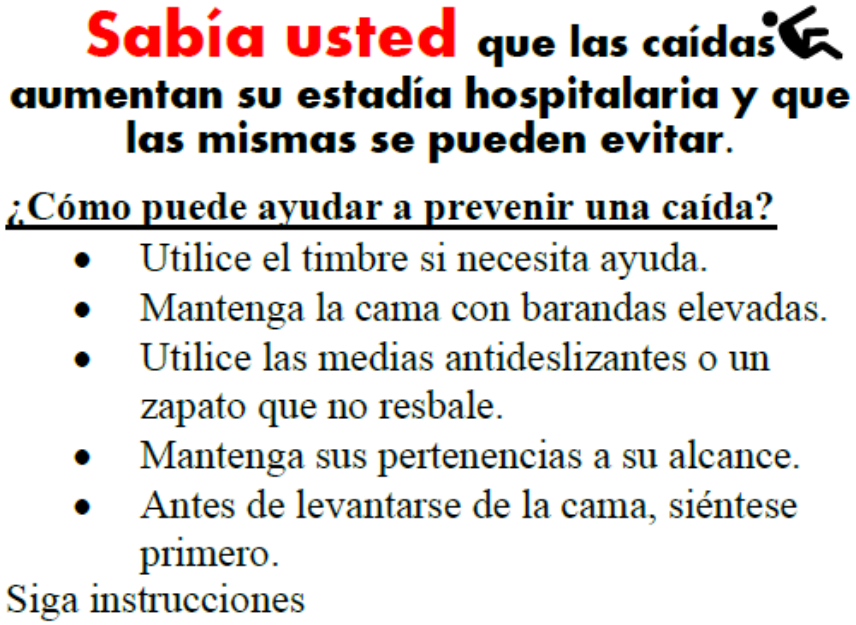
- Uso adecuado del timbre
- Medidas preventivas

Appendix D: Sticker

Don't fall (No te caígas)

Call for help (Llama por ayuda)

Appendix E: Patients/Family Handout



Translation:

Did you know that falls increase your hospital stay and that they can be avoided.

How can you help prevent a fall?

• Use the bell if you need help.

• Keep the bed with raised rails.

• Wear non-slip socks or non-slip shoes.

• Keep your belongings at your fingertips.

• Before getting out of bed, sit down first.

Follow instructions

Appendix F: Second Education

PREVENCIÓN

Diciembre, 2019

RONDA POR HORA INTENCIONADA

Las caídas de los pacientes son relativamente frecuentes en la mayoría de los hospitales del mundo y generan daños como lesiones serias, incapacidad y en algunos casos la muerte.

El cuidado profesional de Enfermería tiene como finalidad atender integralmente al ser humano y proveerle un ambiente seguro que propicie su recuperación. Una medida de seguridad que, de acuerdo con la literatura, promueve un ambiente seguro es las rondas por horas intencionadas. Esta medida proactiva ayuda a disminuir la incidencia de las caídas y provee otros beneficios como:

- Reducir el uso del timbre de llamada.
- Se satisfacen las necesidades del paciente.
- Mejora la impresión de los pacientes sobre los servicios recibidos.
- Ayuda a disminuir la incidencia de ulceras por presión (HAPU's).
- Disminución del dolor y ansiedad.
- Mejora la comunicación.

Otras barreras que se deben considerar al implementar, la ronda por hora intencionada y su documentación, es la percepción del personal que la documentación es una pérdida de tiempo y que la rondas no deben hacerse formales sino basadas en el estimado y la necesidad del paciente. Entre otros factores que afecta la literatura recalca que la falta de educación al personal conlleva que estos no reconocen el propósito, pasos y los beneficios tanto de la ronda por hora intencionada como la adecuada documentación de esta medida. Desde un punto de vista práctico puede ser difícil implementarlo en la práctica al tratar de atender a cinco o seis pacientes cada hora.

Precauciones *Universales*

Las precauciones universales pueden aplicarse a todos los pacientes e incluye las siguientes intervenciones:

- Familiarizar al paciente con el ambiente
- Pida al paciente que demuestre el uso del timbre de llamada
- Mantenga el timbre al alcance
- Mantenga las posesiones del paciente al alcance
- Pasamanos en los baños, cuartos y pasillos
- Cama baja con barandas elevadas y frenos.
- Sillas de ruedas con frenos
- Zapatos o medias no deslizantes apropiadas
- Pisos secos
- Iluminación

Documentación: Ronda por hora intencionada

Las rondas por hora pueden ser vista como una sobrecarga de trabajo por el personal de enfermería y encontrarse con una serie de barreras al implementarse. Si embargo es importante entender que más allá de ser una barrera, los beneficios de la ronda por hora intencionada y su a documentación son de beneficio para el personal y la institución. La documentación desempeña un papel fundamental en los servicios de salud y es necesaria para identificar las intervenciones de enfermería y evidenciar el progreso del paciente durante la hospitalización. Es necesario señalar que una documentación completa, precisa y actualizada protegerá al profesional de enfermería en un tribunal de justicia. Adicional la documentación detallada demuestra el cumplimiento de las políticas y procedimientos, la evaluación e intervenciones de enfermería, y la educación provista al paciente. De acuerdo con la literatura durante un proceso legal la documentación escrita es vista de manera más objetiva y puede **ser la mejor defensa** en una demanda potencial.

Se reporta…

Que hay una reducción del 10% en las caídas de pacientes hospitalizados cuando el personal realiza preguntas específicas al paciente sobre la comodidad y sus necesidades básicas.

Que hay una reducción cuando se educa al paciente sobre las precauciones universales y a llamar por ayuda cuando es necesario.

Preparado: Sheila Mercado, DNP(c), MSN, RN