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Frequent Fall Risk Assessment Reduces Fall Rates in Elderly Patients in Long-Term Care

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This is to certify that the doctoral study by

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Project Submitted in Partial Fulfillment

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Abstract

Falls are a serious issue for the elderly living in long-term care facilities, as falls contribute to significant health problems such as increased dependence, loss of autonomy, confusion, immobilization, depression, restriction in daily activities, and, in some cases, death. An estimated 424,000 fatal falls in elderly patients residing in long-term facilities occur annually in the United States costing $34 billion in direct medical costs. One way to reduce falls among elderly patients in long-term care is to assess for fall risk frequently and implement evidence-based strategies to prevent falls. Patients in this project site facility had been assessed for fall risk via the Briggs Fall Risk Assessment Tool with implementation of fall risk iinterventions only upon admission or when there was a fall. The purpose of this project was to assess whether changing to weekly use of the Briggs Fall Risk Assessment Tool with implementation of fall risk interventions by nursing staff could decrease fall rates in the elderly in long-term care in Harris County, Texas. The model of prevention served as the conceptual framework for this project. Thirty participants (20 females and 10 males) between the ages of 65-115 participated in the program. Pre-implementation data were collected for 1 month and post-implementation data were collected for 1 month. The total number of falls reported weekly was counted before and after the weekly implementation of the Briggs Fall Risk Assessment Tool. The number of falls decreased from 12(70.6%) before the implementation of the assessment tool to 5(29.4%) falls afterwards. A fall prevention program in long-term care may affect social change positively by reducing fall risk in long term care by reinforcing the importance of increased awareness of risk of falls to implement fall prevention strategies

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Dedication

This project is dedicated to my late father, Humphrey Inoghie. His love, encouragement, and support brought me to this stage. This project is also dedicated to my late mother-in-law Asabi Veronica Aliu who was a wonderful mother to every child in the family. May their souls rest in peace.

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Section 1: Overview of the Evidence-Based Project

Introduction

According to the Centers for Disease Control and Prevention (CDC, 2013a), about 1,800 people living in nursing homes die each year from falls. Falls are a serious issue for the elderly living in long-term care facilities and contribute to a significant portion of health problems in long-term care. Fall prevention programs have resulted in major improvements in patient care, including a reduction in the incidence of falls and an increased awareness by staff, patients, and families of the importance of monitoring patients at risk for falls. Boye et al. (2013) stated that falls are a major problem in the long-term care community, and fall injuries such as fractures can result in a decreased quality of life and increased cost of health care. One way to reduce falls in elderly patients in long-term care is to evaluate whether weekly use of the Briggs Fall Risk Assessment Tool reduces fall rates compared to the use of the Briggs Fall Risk Assessment Tool upon admission or when falls occur. This project addressed the problem of falls in the elderly in long-term settings by examining broader use of the evidence-based Briggs Fall Risk Assessment Tool .

Present practice in the project site facility is for the staff to use the Briggs Fall Risk Assessment Tool only upon admission or when there is a fall. The fall risk tool produced by Briggs Healthcare is commonly used in nursing homes to prevent falls ("Evaluating the Risk for Falls," 2014). The evidence-based fall prevention program may

provide more frequent fall assessment and include strategies that can result in reduced rehospitalization of elderly patients, improved fall outcomes, and decreased hospital admission referrals from the long-term care facility (Briggs Healthcare, 2009). In this program, the frequency of use of the Briggs Fall Assessment Tool was modified so that it could be used weekly in long-term care instead of only during admission and when a fall occurs. More frequent assessment of the long-term patient's clinical condition and fall risk status may reduce fall incidents.

Fall prevention in long-term care is often involved with social change, as reflected in this fall prevention program by changes in patient care, staff attitudes, behavior, and elderly association in the community. Considering the growing population of older adults and their increased risk of falls and falls injuries, the cost of falls is expected to grow in terms of human suffering and financial cost. In 2013, direct medical costs for falls (what patients and insurance companies pay) totaled $34 billion (CDC, 2015a). This project may bring about changes in nurses' behavior regarding fall risk assessment and fall prevention. These changes may result in fewer fall incidents resulting from more frequent assessment of fall risk and more frequent interventions to prevent falls. Implications for social change include reducing fall rates in elderly patients in long-term care and raising awareness of the benefits of weekly use of the Briggs Fall Risk Assessment Tool in long-term care.

According to Reeler (2007), project interventions introduce the change stimuli and processes that matter and are the vehicles that can deliver development. I used the Briggs Fall Risk Assessment Tool to compare pre- and post-fall rates to determine whether the weekly use of this tool in long-term care could help reduce fall incidents in elderly patients. This evidence-based fall prevention program provides nurses with the tools that can result in the reduction of hospitalizations, improved fall outcomes, and increased hospital referrals (Briggs Healthcare, 2009).

Background

Falls among the elderly place demands on health care systems and increase social costs (Boye et al., 2013). Falls among elderly patients in long-term care tend to occur from a multifactorial etiology including illness, medications, environment, and staff errors. Moncada (2011) stated that there are many risk factors for falls, some of which are modifiable including balance impairment, environmental hazards, medications, cognitive impairment, and muscle weakness. Injuries from falls can permanently alter a patient's quality of life, making it hard to get around and live independently, and can increase the risk of early death (Holly, 2012).

A variety of interventions can be incorporated into a fall prevention program. For example, interventions that have been shown to reduce fall rates include weekly review of patient medications, engaging the patient in a progressive exercise program, having the call light within reach of the patient, and nurses performing frequent rounds on each

patient. Additional interventions for fall prevention include frequent physical assessment and use of assistive devices for ambulation (Campbell & Robertson, 2013). Moncada (2011) stated that the history of falls should include circumstances, frequency, associated symptoms, injuries, medication review (prescribed and over the counter). Progressive exercise programs are specifically designed or adapted for older adults to improve mobility, strength, and balance. Balance retraining and muscle strengthening exercises reduce falls in the elderly compared to other interventions (Gillespie et al., 2012). Having the call light within patients' reach allows them to ask for assistance instead of trying to get up by themselves, which may reduce fall rates. Frequent rounds place nursing staff in front of the patient each time to routinely assess fall risks and allow nursing staff to be proactive in preventing falls, as opposed to reactive after a fall occurs.

Use of assistive devices such as canes, walkers, and reachers can prevent falls. These devices may help patients feel more stable when they are standing or walking and may help patients take lightweight items from high shelves and other places and pick up objects from the floor so they do not have to bend over. Bradley and Hernandez (2011) stated that assistive devices such as canes, crutches, and walkers can be used to increase a patient's base of support and improve balance. Research has indicated vitamin D deficiency as one of the risk factors for falls (CDC, 2015b). The use of a vitamin D supplement can help elderly patients with muscle strength; stronger muscles could mean less likelihood of falling. Other measures to prevent falls in the elderly include proper

management of patient health conditions. For example, vision exams, vision improvement, and treatment of correctable visual impairments can prevent falls (World Health Organization [WHO], 2012).

Fall prevention programs in which a variety of single and multicomponent fall-preventive interventions have been initiated and reviewed have been shown to be effective at decreasing fall rate (Karlsson, Magnusson, Von Schewelov, & Rosengren, 2013). Nurses should be familiar with these fall prevention interventions. Nurses also need to be educated on fall prevention in elderly patients so that they can effectively use fall risk assessment tools and implement risk reduction interventions for patients at risk. Nurses should integrate fall risk reduction programs into their day-to-day practice. Proper management of patient health conditions and use of fall interventions will help to prevent falls in elderly patients. Advancing measurement and improvement around falls prevention is important as falls are a nurse sensitive measure and nurses play a key role in this component of patient care (Quigley & White, 2013).

There is a need for fall prevention programs in long-term care. I addressed this problem by investigating weekly use of the evidence-based Briggs Fall Risk Assessment Tool for elderly patients in long-term care. The Briggs Fall Risk Assessment Tool provides an easy-to-use checklist assessment for fall risk for all newly admitted long-term care patients and for evaluating patients after any fall. The Briggs Fall Assessments Tool is used to assesse the patient in a variety of fall risk areas including mental status, history

of falls, ambulation and elimination status, vision status, gait and balance, medications, and predisposing disease (Briggs Healthcare, 2009). These assessments provide guidance about implementing fall prevention strategies in long-term care. The goal of this program was to reduce fall rates. I evaluated this outcome by assessing fall rates 1 month before and 1 month after program intervention.

Problem Statement

The major health problem in long-term care patients is falls despite the preventive measures known to reduce fall risk (Huey-Ming, Chang-Yi, Allison & Atul, 2013). About one third of community-dwelling elderly persons and up to 60% of nursing home residents fall each year; one half of these fallers have multiple episodes. An estimated 424,000 fatal falls in elderly patients residing in long-term facilities occur annually in the United States (Alamgir, Muazzam, & Nasrullah, 2012). Each year 2.5 million nonfatal falls among older adults are treated in emergency departments in the United States; more than 700,000 of these patients are hospitalized because of fall injury (CDC, 2015a). Those who fall experience greater functional decline in activities of daily living (ADLs) and in physical and social activities and are at greater risk for subsequent incidence of falls.

Falls continue to be an important area in health care systems because of increased length of stay and higher cost of treating fall injuries. In 2013, direct medical costs for falls (what patients and insurance companies pay) totaled $34 billion (CDC, 2015b). To

address this problem, I initiated a fall prevention program that incorporated weekly use of the Briggs Fall Risk Assessment Tool to identify patients at risk for falls and implement appropriate fall prevention strategies before the patient has a fall. The goal was to decrease the fall rate in long-term care. Williams, Young, Williams, and Schindel (2011) stated that improved staff awareness and compliance with fall prevention strategies resulted in a 62% fall reduction rate over 1 year in six acute care units. Incorporating weekly use of the Briggs Fall Risk Assessment Tool may help nurses be proactive in dealing with fall prevention and may decrease risk and incidence of falls in the elderly population.

Purpose

Evidence-based researchers have refined nurses' ability to identify the clinical interventions that can reduce falls and fall-related injuries (Clancy, 2012). The purpose of this project was to assess whether weekly use of the Briggs Fall Risk Assessment Tool decreased fall rates in the elderly in long-term care. This assessment tool may also allow evidence-based interventions to be added to patient care. Changing the frequency of assessment from admission and when a fall occurs to weekly use may help identify patients at risk for falls. I assessed patient fall rates before and after implementation of the weekly use of the Briggs Fall Risk Assessment Tool to determine whether fall rates decreased.

Project Question, Goal, and Objective

The project question asked whether weekly fall risk assessments using the Briggs Fall Risk Assessment Tool could decrease incidence of falls in the elderly in long-term care. The project goal was to decrease fall rates with a fall prevention program that included weekly use of the Briggs Fall Risk Assessment Tool. The objective of this project was to provide an evidence-based fall prevention program in elderly patients in a long-term care setting by the weekly use of the Briggs Fall Risk Assessment Tool as a proactive measure to prevent elderly patients from falls in long-term care.

Framework for the Project

The theoretical model that was used to guide this project was the prevention model developed by Leavell and Clark in the 1940s (Davidson, 2011). This model is based on a model of primary prevention, which is preventing a condition from occurring; secondary prevention, which is early identification of a condition; and tertiary prevention, which occurs after a condition has presented and the recovery process has begun. This prevention model focuses on developing interventions to increase wellness activity and inspires scholars to look at integrative variables that have been shown to influence health needs. The model of primary prevention was used as a focus in this project. Primary prevention was significant to this project because it emphasizes that action needs to be taken prior to a disease or a fall to maintain a healthy state by reducing the burden of mortality or morbidity from falls in elderly patients in long-term care and through the

weekly use of the Briggs Fall Risk Assessment Tool. The weekly use of Briggs Fall Risk Assessment Tool was a proactive measure taken to prevent elderly patients from falls in long-term care. This model is based on the principle that prevention may be seen as an event and as a process and part of the continuum of data-driven intervention measures for falls.

Nature of the Project

The approach that was used to address fall incident reduction in elderly patients in long-term care was a quality improvement program (QIP). QIPs can enhance quality, reduce cost, increase output, eliminate delays in responding to patients' needs, and improve patient outcomes (Cheung & Duan, 2013). To improve the quality of care for long-term care patients, I implemented a fall prevention program in which the nursing staff used the Briggs Fall Risk Assessment Tool weekly. Before implementation, I educated the nursing staff on how to use the tool weekly and obtained pre-intervention data. The weekly use of Briggs Fall Risk Assessment Tool was implemented for 3 months. After the third month of implementation, I collected and analyzed data and evaluated the effectiveness of the weekly use of the tool. I held weekly small group meetings with the nursing staff to discuss fall incident reports and the progress of the program. I conducted monthly work group meetings with the nursing department to evaluate the progress of the program. This program for fall prevention included tracking and analysis of falls and identifying and monitoring patients at high risk of falls. I tracked

evidence-based interventions by comparing fall incidents report data collected before implementation of weekly use of Briggs Fall Risk Assessment Tool and fall incidents report data collected after implementation of weekly use of the Briggs Fall Risk Assessment Tool.

Definitions

Assistive devices: Tools, products, or equipment used to help perform tasks and activities. Devices help patients move around, see, communicate, eat, or get dressed (MedlinePlus, 2011).

Briggs Fall Risk Assessment Tool: A tool used to identify the level of risk for a patient having a debilitating fall. (Briggs Healthcare, 2009).

Evidence-based practice (EBP): A method to use critically appraised and scientifically proven evidence for delivering quality health care to a specific population (Majid et al., 2011).

Elderly patients: Individuals over 59 years of age under the care of a physician or a nurse in a home environment or a facility.

Fall: An accidental event in which a person's center of gravity is lost and no effort is made to restore balance or the effort is ineffective and the person touches the ground. Falls can cause moderate to severe injuries such as hip fractures and head trauma, and can increase the risk of early death due to serious injury (CDC, 2013a).

Fall-risk assessment: A technique to identify a patient's risk for falling to correct the problems and ultimately prevent falls from occurring (Nurses Improving Care for Healthsystem Elders, 2014).

Geriatrics care: A specialty that focuses on health care of elderly people. The main goals of this field are to promote the health of the elderly and to prevent and treat diseases they may encounter (Health in Aging, 2012)

Long-term care: A range of services to meet medical and nonmedical needs of people with chronic illnesses or disabilities for a long period of time. Most long-term care services are not medical needs, but rather assistance with ADLs, the basic tasks of everyday life (U.S. Department of Health and Human Services, 2014).

Medication review: A critical review of all prescribed, over-the-counter, and complementary medications to optimize therapy and minimize medication-related problems. Medication reviews may be undertaken during surgery or at home or in an institution (Australian Government Department of Veterans Affairs, 2014)

Quality improvement (QI): Systematic and continuous actions that lead to measurable improvement in health care services and the health status of targeted patient groups (Health Resources and Services Administration, 2014).

Rounding: Nurses' visits to patients assigned to the nurse at random or at a scheduled time to carry out scheduled checks. Hourly patient rounding occurs every 1 to

2 hours, with specific attention to the patient's needs for pain medication, positioning in bed, toileting needs, and presence (Woodard, 2009).

Assumptions

I assumed that an evidence-based program that includes weekly use of the Briggs Fall Risk Assessment Tool and implementation of evidence-based fall prevention strategies would have a direct influence on fall injury reduction in elderly patients. I also assumed that nurses would use the Briggs Fall Risk Assessment Tool correctly to reduce falls in elderly patients in long-term care. Another assumption was that the tool was reliable because it has been used in different health care settings to reduce falls. Finally, I assumed the fall interventions implemented based on the results of the Briggs Fall Risk Assessment Tool would be effective at decreasing falls in long-term care.

Scope and Delimitations

The scope of this project was limited to fall prevention in elderly patients in long-term care. The sample for this project was all elderly patients in long-term care residing in a facility in Texas. Ways in which this project could have been delimited were to include other facilities within the organization in the implementation and evaluation of the fall risk assessment program so that different leadership and staffing systems would be considered.

Limitations

Limitations of this project were that the program was implemented and evaluated in one facility within an organization. Nursing staff have limited time to use the tool because nurses allocate their time to other tasks such as direct care of patients, individual tasks, and engagement with other health care providers. The time nurses spend in direct care activities has been identified as a determinant of better patient outcomes and fewer errors (Westbrook, Duffield, & Crestwick, 2011). Another limitation was that the population was limited to elderly patients in long-term care.

Despite my employment in the facility, I avoided possible bias during data collection and project implementation by using collaborating techniques with power of attorney (POA), family members, and nursing staff in long-term care to make sure that all long-term care patients were included in the project. Data were collected from patients or their POA, pre implementation data was collected from the facility quality messure data base and post implementation data were collected from the weekly use of Briggs Fall Risk Assessment Tool by triangulation. Creswell (2008) explained that data validation involves triangulation, the process of collecting evidence from different individuals in a setting, different types of data, and different methods of data collection.

Significance

The number one cause of accidental injury, hospitalization, rehospitalization, and death among 65 years and older is fall (Healthy People 2020, 2014). Falls among older

adults are a serious issue; falls accounted for 24% of visits to emergency departments (EDs) by the elderly in the United States (CDC, 2013b).. However, researchers have shown that many fall risks can be reduced by fall prevention programs. Because of the growing population of older adults and their increased risk of falls and fall injuries as they age, the cost of falls is expected to increase in terms of human suffering and financial cost to individuals and society. Medical costs for falls treated in EDs in 2005 in people 65 years and older totaled $6.3 billion, including $451 million for patients who were treated and released, and $5.8 billion for patients who were subsequently hospitalized (CDC, 2013b). A fall prevention program in long-term care often involves social change in the health care system by revealing successful fall interventions, including behavioral changes of the community regarding fall and fall prevention in elderly patients. An important measure of quality is the extent to which patients' needs and expectations are met. Services that are designed to meet the needs and expectations of patients and promote changes in social structure, social behavior, or the social relations must include care provision that are evidence based (Health Resources and Services Administration, 2014). Implication for social change in this project include reinforcing the importance of evidence-based practices in fall prevention programs. An evidence-based educational fall-risk self-assessment acceptable to older adults can build on existing knowledge of fall risks and perception that falls are a relevant problem. The results of this project may be used to increase awareness about fall risk factors and ways

to reduce fall incidents in older adults with the weekly use of the evidence-based Briggs Fall Risk Assessment Tool. Vivrette, Rubenstein, Martin, Josephson, and Kramer (2011) concluded that an evidence-based fall-risk assessment acceptable to older adults can build on existing knowledge about fall risks and perception that falls are a relevant problem. This project was needed to reduce incidents of falls in elderly patients in long-term care and to help older adults live better and longer lives.

Summary

The impact of falls and fall-related injuries in elderly patients, the demands on health care, and the costs for society are a major problem. Introduction of a fall prevention program to nursing staff in a long-term care facility may play a role in reducing fall incidents. In Section 1, I provided an overview of falls and the impact of fall-related injuries in elderly patients in long-term care. I included the problem statement, purpose of the study, project question goals and objectives, framework of the project, nature of the project, and definition of terms. I also discussed the limitations, delimitations, scope, assumptions, significance of the study, and implications for social change. Section 2 includes an overview of literature related to the weekly use of the Briggs Fall Risk Assessment Tool to prevent fall incidents in long-term care.

Section 2: Review of Scholarly Evidence

The leading cause of death among elderly population is falls (Healthy People 2020, 2014). The rate of emergency department visits from falls among adults age 65 and over increased 31.7% between 2007 and 2011 from 5,235.1 to 6,893.5 per 100,000 (Healthy People 2020, 2014). Elderly nursing home patients fall frequently because of difficulty walking, difficulty with activities of daily living, chronic health conditions, thought or memory problems, and medications that increase the risk of falls and fall-related injuries. Falls in elderly patients are becoming a major health problem in long-term facilities despite preventive measures known to reduce fall risks (Huey-Ming, 2012). An estimated 424,000 fatal falls occur annually in elderly patients residing in long-term facilities in the United States, and 37.3 million falls in elderly patients occur globally that require medical attention (Alamgir et al., 2012).

Deaths and injuries can be prevented by addressing risk factors (Healthy People 2020, 2014). Every facility should have a fall prevention program that includes the following three elements: (a) assessing residents for risk of falling, (b) identifying and implementing interventions to minimize risk of falling, and (c) implementing interventions to minimize risk of injury from a fall. Weekly use of a fall assessment such as the Briggs Fall Risk Assessment Tool can be helpful in reducing fall risks and incidents. In this project, I explored fall prevention by implementing a fall prevention program that included the evidence-based Briggs Fall Risk Assessment Tool in a weekly

program for elderly patients in long-term care and examined whether the weekly use of this tool reduced fall risk and fall incidents.

Literature Search Strategy

In this project, I used several search tools to identify pertinent literature, including online databases of Cumulative Index of Nursing and Allied Health Literature (CINAHL) and MEDLINE. I also used the Bing and Google Scholar search engines. I used the following terms and combinations to search for related articles: *quality improvement program*, *falls prevention*, *nursing staff*, *elderly patients*, *Briggs Fall Risk Assessment Tool*, *pre and post intervention*, *evidence-based practice*, *social change*, *long-term care*, *implementation*, *weekly fall assessment*, *health care*, and *medication review.* The literature review yielded 200 articles, and I selected 80. I categorized these articles based on research method, conceptual and theoretical framework, intervention, implementation, and outcome measures. I gathered the articles from current peer-reviewed journals and books.

This review contains specific literature related to a fall prevention program that is based on weekly use of the Briggs Fall Risk Assessment Tool in elderly patients in long-term care. I discussed literature related to my theoretical framework, methodology, concepts, model for this project, and model of prevention. I also review general literature related to the fall prevention program and how community and policymakers influence fall prevention programs.

Concepts, Models, and Theories

To identify a patient's risk for falling and to correct the problem or problems and ultimately prevent falls in long-term care, a fall prevention program is needed. Efforts applied in the area of fall prevention have been effective in reducing the incidence of falls and increasing awareness of staff, patients, and families of the importance of monitoring patients at risk for falls (Barker, O'Brien, Carey, & Weissman, 1993). The model underlying this project was a model of prevention by Leavell and Clark. The terms primary, secondary, and tertiary prevention were first documented in the late 1940s by Leavell and Clark (Davidson, 2011).

The prevention model focuses on developing interventions to increase wellness activity, and it inspires scholars to look at integrative variables that have been shown to influence health needs. The model of prevention was significant to this project because it promotes fall prevention in elderly patients in long-term care through the weekly use of evidence-based Briggs Fall Risk Assessment Tool. The integration of theory into nursing practice provided a guide to achieve nursing's disciplinary goals of promoting health and preventing illness across the globe (McCurry, Revell, & Roy, 2010).

Frameworks

Nursing practice is based on philosophy and theories to achieve the disciplinary goals. Nursing knowledge focuses on the wholeness of human life and transformation (Smith & Liehr, 2008). The need for research about fall prevention in elderly patients by

nursing professionals continues to grow, and the prevention model is a guide for practice and research. In addition, the clear understanding of these concepts in health care delivery is that this is a model that specifies nursing's focus on prevention, which can sometimes bring about EB practices that are not only useful to nursing but to other health care professionals.

My role in this project was as project director. I am an employee of the facility where project data were collected and implemented. Having the knowledge about the topic was important for me to minimize bias during the course of data collection based on the tactical, moral, and privacy issues of research procedures. Project directors must explicitly identify biases, values, and personal characteristics such as gender, history, culture, and socioeconomic status that may affect the ways they interpret the results of their project (Locke, Spirduso, & Silverman, 2007). Because of my personal ties to the project, I had to identify potential biases.

The prevention model addresses nursing practice, elderly patients, and the health care environment with specific concrete actions on fall prevention. This practice generates project questions and research that help in the understanding of theory and practice. The prevention model focuses on concepts that thoughtful nurses want to explore. These behaviors should result in patients' improved health, enhanced functional ability, and better quality of life. Health care professionals such as nurses constitute a part of the interpersonal environment that exerts influence on people during their life span.

The integration of theory into nursing practice provides a guide to achieve nursing's disciplinary goals of promoting health and preventing illness across the globe (McCurry et al., 2010). The prevention model has been used to identify nursing as a helping profession with interrelated concepts about health and nursing problems, such as falls prevention in elderly patients in long-term care. "It involves identifying a clinical problem, searching the literature, critically evaluating the research evidence, and determining appropriate intervention" (McEwen & Wills, 2011, p. 383). Williams et al. (2011) stated that improved staff awareness and compliance with fall prevention strategies resulted in a 62% fall reduction rate over 1 year in six units. McCarthy, Adedokun, and Fairchild (2010) stated that to apply the different fall interventions to patient care, nursing staff need to know that these intervention are available to them. According to Karlsson et al. (2013), fall prevention programs such as a call light within reach, bed in position, medication review, eye exams, and rounding every 2 hours are evidence-based practices in which a variety of single and multicomponent fall preventive interventions have been initiated. McCarthy et al. (2010) stated that falls pose a serious risk for the elderly living in long-term care facilities causing serious injuries and accidental death. Haines, Bennell, Osborne, and Hill (2004) stated that a significant portion of the burden and impact of fall-related injury occurs in acute and residential care facilities.

Vu, Weintraub, and Rubenstein (2006) concluded that an effective multifaceted fall prevention program for nursing home residents should include risk factor assessment and modification, staff education, gait assessment and intervention, exercise, assistive device assessment and optimization, and environmental assessment and modification.

Alamgir et al. (2012) emphasized the seriousness of falls in elderly patients in long-term care and found that an estimated 424,000 fatal falls in elderly patients residing in long-term facilities occur in the United States annually, and 37.3 million falls in elderly patients require medical attention globally. Falls and injuries are among the leading causes of mortality and morbidity in older adults (Huang et al., 2012). According to Healthy People 2020 (2014), falls are the leading cause of death from unintentional injury among older adults; deaths and injuries can be prevented by addressing risk factors. According to the CDC (2013), about 1,800 people living in nursing homes die each year from falls. Falls represent an important source of preventable morbidity and mortality in older adults, the fastest growing segment of the U.S. population (Michael et al., 2010).

Literature Review Related to Method

Al-Aama (2011) noted that falls can be prevented through evidence-based interventions such as a call light with reach, exercises, and medication review, which can be either single or multicomponent interventions. Today's quality improvement efforts and risk management in the health care industries are based on patient safety, and

organizations are working together to ensure that they delivere patient quality care that is more effective and efficient (ECRI Institute, 2009). The results of a quality improvement study supported the effectiveness of a multifactorial fall prevention program in the care setting for adult patients (Trepanier & Hilsenbeck, 2014). Quigley et al. (2010) stated that risk factors for falls are multifactorial and interacting, and providers require guidance on the components, intensity, dose, and duration for an effective fall injury prevention program. Weekly utilization of the evidence-based Briggs Fall Risk Assessment Tool may produce improvements by reducing fall rates.

In this project, I explored the weekly use of the Briggs Fall Risk Assessment Tool to prevent falls in the elderly in long-term care. This evidence-based fall prevention program provides the tool that can result in reduced hospitalizations, improved fall outcomes, and increased referrals (Briggs Healthcare, 2009). To achieve the fall prevention outcome, there was a commitment to a plan of action, which was the weekly use of Briggs Fall Risk Assessment Tool and identification of a planned strategy that leads to implementation of this fall prevention program. Previous studies confirmed that nurses can identify patients at risk and that a preventive program can reduce the rate of falls, but few studies have been conducted over time. Evidence shows that effective interventions to prevent falls benefit patient health outcomes (Cameron et al., 2012). Stemmons, Zimmerman, Schrodt, Palmer, and Samuels (2012) stated that not all falls have serious consequences; falls with minor or no injury can cause anxiety and distress to

patients and their families. A fall prevention program for elderly patients in long-term care may help to reduce anxiety and distress in elderly patients and families.

Most fall risk assessment tools that have been tested for validity have been evaluated within the same patient population for which the tools were designed, so the accuracy of the tools has not been validated across different care settings with different patient populations (Feil & Gardner, 2012). To apply effective fall interventions to patient care, an EB fall risk tool is imperative for nursing staff in long-term care (McCarthy et al., 2010). The question was whether weekly fall risk assessments using the Briggs Fall Risk Assessment Tool enabled evidence-based fall prevention interventions to decrease incidence of falls in the elderly in long-term care. Implementing effective intervention strategies could decrease the incidence and health care costs of these injuries. Fall prevention may produce major economic benefits, and it is important to assess the economic costs and benefits of different methods of fall prevention to identify the most suitable methods to be employed.

Medical costs for falls treated in EDs in 2005 in people 65 years and older totaled $6.3 billion, including $451 million for patients who were treated and released and $5.8 billion for patients who were subsequently hospitalized (CDC, 2013). Developing a plan to put the program in place and make it successful is a crucial part of health planning and health promotion strategies (Hodges & Videto, 2001).

Background and Context

Assessment and management of falls are currently receiving attention nationally in measuring quality outcomes in the elderly because older people are receiving more evidence-based quality care when living in long-term care facilities. According to Duff (2013), clinical practice is being standardized using evidence-based practice and research. Nursing staff play a critical role in reducing falls by focusing not only on primary prevention but also ensuring that protocols are efficiently and effectively followed.

Policymakers, judges, or healthcare professionals and members of the society are interested in providing effective falls prevent interventions in elderly in long-term care. Texas Human Resources Code Ann. §161.351-3 establishes "Fall Prevention Awareness Week" that allows the state's department of aging and disability services to develop recommendations to raise public awareness about fall prevention; educate older adults and individuals who provide care to older adults about best practices to reduce the incidence and risk of falls among older adults; encourage state and local governments and the private sector to promote policies and programs that help reduce the incidence and risk of falls among older adults; encourage area agencies on aging to include fall prevention education in their services; develop a system for reporting falls to improve available information on falls (National Conference of State Legislatures, 2014). The results of a quality improvement study aimed to identify the effectiveness of a

multifactorial fall prevention program in the care setting for adult patients (Trepanier & Hilsenbeck, 2014).

The Administration on Aging, a program division within the Administration for Community Living (ACL), awarded a grant totaling over $4.8 million and funded by the 2014 Prevention and Public Health Fund to advance the implementation and dissemination of evidence-based falls prevention programs and strategies across the nation (ACL, 2014). The Texas Fall Prevention Coalition was established in 2007 to "promote, implement and evaluate evidence-based programs and policies that help reduce risk factors of falls and injuries in older adults; provide education and resources to increase public awareness, mobilize communities and affect policy change for a falls-free Texas. Within the fall prevention outcome, there is a commitment to a plan of action, which is the weekly use of Briggs Fall Risk Assessment Tool and identification of a planned strategy that leads to implementation of this quality improvement project. Developing a plan to put the program in place and make it successful is a crucial part of health planning and health promotion strategies (Hodges & Videto, 2001). Flynn et al. (2007) noted that the task of training, adjusting and continuous employee's performance monitoring that is relative to safety, standard of care and quality of care are critical requisition for programming and planning.

My role in this project is as project director and I am a staff of the long-term care facility that data were collected, implemented and evaluated. Based on the facility clinical

indicator report, the rate of falls in elderly patients in the facility has increased despite the facility use of Briggs Fall Risk Assessment on admission and after a fall incidents. I implemented the Briggs Fall Risk Assessment Tool on a weekly basis to reduce fall incidents in the long-term care facility. According to Locke, Spirduso, and Silverman (2007), researchers do give meaning to a research based on their experience with participants in the study. Because of this personal tie to the project, Locke et al., (2007) further stated that the project director must identify biases, values, and personal background such as gender, history, culture, and socioeconomic status that may affect the interpretation of the results of their study.

Summary

Much research has been done on fall prevention in elderly in long-term care. Despite the acknowledgement that the Briggs Fall Risk Assessment Tool is a valuable tool for fall prevention in elderly patients in long-term care, much research still needs to be done about the Briggs Fall Risk Assessment Tool and its effectiveness in falls prevention. A thorough history of the fall event is essential to determine the mechanism of falling, specific risk factors for falls, impairments that contribute to falls and the appropriate intervention. Since the incidence of falls among elderly population in long-term care is high, the question remains whether additional strategies are needed to decrease fall incidents among the elderly in long-term facilities. Fuller (2000) stated that falls are the leading cause of injury-related visits to emergency departments in the United

States and the primary etiology of accidental deaths in persons over the age of 65 years. Data were collected and implemented in my place of employment and my relationship to the project is as a project director. This project's focus was to evaluate whether more frequent assessment by using the Briggs Fall Risk Assessment Tool weekly would prevent falls in elderly patients in long-term care. In Section 3, I addressed the methodology, role of the researcher, restatement of the research questions, sample size, data collection ethical protection of participants, reliability and validity.

Section 3: Approach

Falls in elderly patients are becoming a major health problem in long-term facilities. An estimated 424,000 fatal falls occur annually in elderly patients residing in long-term facilities in the United States; 37.3 million falls in elderly patients occur globally that require medical attention (Alamgir et al., 2012). To apply effective fall interventions to patient care, an evidence-based fall risk tool is needed for elderly patients in long-term care to decrease their incidence of falls (McCarthy et al., 2010).

The purpose of this project was to implement a fall prevention program that included weekly use of the Briggs Fall Risk Assessment Tool in a long-term care facility to determine whether fall incidents in elderly patients in this setting could be decreased. In Section 3, I provide an overview of the project design and methods. I also discuss the target population and the process of data collection. I outline the plan for evaluating weekly fall risk assessment using the Briggs Fall Risk Assessment Tool.

Approach and Rationale

A before-and-after design was used to answer the project question in this quality improvement project. The project question was whether weekly use of the Briggs Fall Risk Assessment Tool would decrease incidence of falls in the elderly in the long-term care facility where the project took place. An impact evaluation is used to assess the changes in the well-being of individuals, which can be attributed to a particular project, program, or policy (Gertler, Martinez, Premand, Rawlings, & Vermeersch, 2011). The

project goal was to decrease fall rates. Data were collected from participants to assess whether implementation of a fall prevention program that incorporated weekly use of the Briggs Fall Risk Assessment Tool was effective in decreasing fall incidents in elderly patients in long-term care. This assessment tool allowed evidence-based interventions to be added to patient care. Falls in the elderly population are becoming a major health problem in long-term facilities. The CDC reported in 2015 that each year 2.5 million older people are treated in emergency departments for fall injuries. Therefore, it was important to evaluate whether more frequent fall assessments using the Briggs Fall Risk Assessment Tool reduced the fall rate.

Population and Sampling

The population for this project included male and female elderly patients age 65 to 100 years in a long-term care term unit in Texas. The average daily census is approximately 55 patients. This community is composed of 40% rehabilitation patients and 60% long-term care patients. Fall assessment is done with the Briggs Fall Risk Assessment Tool only on admission or when a fall occurs. This fall prevention strategy reduces fall incidence to 8%, which is greater than the overall facility average of 6%. The target population was long-term care patients because they are at high risk for falls due to comorbidities, polypharmacy, and muscle weakness. The total population of long-term patients is 30. I invited the entire long-term care population to participate in the project,

which provided all patients in long-term care an equal chance of participation and avoided selection bias.

I used convenience sampling of participants in the long-term care unit to ensure the target population was represented. Convenience sampling allows investigators to take advantage of potentially large sample sizes (Owen et al., 2014). The factors that influenced my decision to use convenience sampling were that data collection was in the same facility to ensure consistency and accuracy of the data collected. This selection also allowed all elderly patients in long-term care an equal opportunity to participate to reduce sampling bias. Participation in this project was voluntary and did not pose any known risk to the participants.

Data Collection

Approvals

I obtained project approval before beginning project-related activities. To protect the well-being of the participants, I first obtained approval from the project facility. After obtaining Walden University Institutional Review Board (IRB) approval number 06-27-16-0246515, I began the project by screening subjects for participation.

Subject Screening and Consenting

All long-term care patients at the project facility were given the opportunity to participate in the project. I met with each patient in his or her room to discuss the project. I administered a mini mental exam which is a way to observe and describe a patient's

psychological functioning at a given point of time, to all prospective participants. Patients who did not pass the exam were not able to give consent; therefore, I contacted the patients' power of attorney (POA) in person or by phone for consent to participate and to schedule a face-to-face meeting at a convenient time and place within the facility, such as the patient's room or the TV room, for privacy. I informed patients or family members about the program and explained that participation was voluntary and could be withdrawn at any time. I asked participants to sign a consent form giving their permission, either in person or via mail. I obtained written informed consent prior to including patients in the project. I then explained to the patient or the POA that I was a staff at the facility and conducting a fall rate reduction project that would include weekly use of the Briggs Fall Risk Assessment Tool to determine whether this would decrease incidence of falls in elderly patients in long-term care. I explained to patients or their POA their rights relative to agreeing to participate in the program, their rights to withdraw from the project, and confidentiality of collected data. I also provided details about the project and answered all questions.

Pre-Intervention Data Collection

I used a pre-post design for this project. I collected pre-intervention data from the Quality Assurance and Performance Improvement (QAPI) facility database related to incidence of falls for 1 month prior to the start of the program. Pre-intervention data were

compared to post-intervention data. Evaluation of pre-and post-fall rates enabled me to determine whether a decrease in fall rates occurred in the fall prevention program.

Education of Nursing Staff

The nurses on the project unit were experienced using the Briggs Fall Risk Assessment Tool at admission. I educated nursing staff on the weekly use of the tool. I conducted training three times a week for 2 weeks to review the entire program and nurses' role in the project. The training took place in the unit conference room and each training session took approximately 20 minutes. All nurses were invited to participate, and no nurse was required to participate. After the selection process, I trained the nursing staff, who are registered nurses (RNs) and licensed vocational nurses (LVNs), and emphasized how they could use the information provided by this tool to tailor interventions to prevent falls in elderly patients.

I met with each nursing staff member and gave each a copy of the Briggs Fall Risk Assessment Tool and a handout on how to use the tool weekly. I explained to the nursing staff that the project would last for 3 months. Pre-implementation data were collected for 1 month before the project was implemented. Post-implementation data were collected for 1 month. I collected data about the weekly use of Briggs Fall Risk Assessment Tool data from the nursing staff at the end of the shift every Tuesday for 1 month. I recorded the data as soon as possible to avoid losing data getting.

I conducted training of the nursing staff on the areas of fall risk identified by the weekly use of Briggs Fall Risk Assessment Tool and how to assign and calculate scores to each area. These areas included mental status, history of fall for the past 3 months, elimination status (continent or incontinent), vision status, gait or ambulation and balance status, and how to take systolic blood pressure in both lying and standing positions. I also trained nursing staff on the different medications and predisposed diseases that can cause falls. Weekly assessments were done every Tuesday for 1 month. I also trained nursing staff on how to use the Briggs Fall Risk Assessment Tool to plan interventions to prevent patients from falling by communicating the tailored fall prevention plan to the care team (i.e., nurses, nursing assistants, physical therapists, physicians, patients, and their family members). After the training, I provided the nursing staff with my contact information in case they had any questions going forward. The nurses signed an in-service sheet at completion of the training. After 2 weeks of training, I implemented the weekly use of the Briggs Fall Risk Assessment Tool for patients who consented to participate in the program. After 1 month of implementation, I collected fall rate data from the QAPI facility database. Pre- and post-fall rates were compared to answer the project question.

Outcome Data

I measured pre-and post-fall rates based on the weekly use of the Briggs Fall Risk Assessment Tool. I collected fall rate data from the QAPI facility database 1 month before intervention. The implementation phase began with my giving the nursing staff the

Briggs Fall Risk Assessment Tool form to assess patient fall risk weekly. I then collected the Briggs Fall Risk Assessment Tool forms completed by the nursing staff at the end of the shift every Tuesday. The implementation of the weekly use of Briggs Fall Risk Assessment Tool in this project may help to prevent falls. The facility usually does fall risk assessment upon admission and when a fall occurs. If fall rates are shown to decrease with weekly use of the Briggs Fall Risk Assessment Tool, fall assessment may be performed more frequently in similar facilities to prevent falls. I collected post-intervention data related to incidence of falls for 1 month after the end of project training. I compared pre-intervention data with post-intervention data using percentage change to determine whether a decrease in fall rates occurred as a result of the fall prevention program.

Protection of Human Subjects

A program that involves human participants needs careful planning and procedures to protect participants' rights to privacy and to make sure that the project is conducted ethically. Ensuring the privacy and confidentiality of the project participants was one of the most important aspects of this project (Seppälä, Nykänen, & Ruotsalainem, 2014). A POA document is a legal written document used when someone wants another adult to handle their matters (Minnesota Judicial Branch, 2015). I explained the informed consent form to patients or their POA (for patients who did not pass the mini mental exam) because the POA is legally authorized to represent or act on

behalf of the patient when the patient cannot make his or her own decisions. I explained that signing the informed consent indicated patients' agreement to participate in the program, that they could withdraw from the project at any time, and that I would maintain confidentiality of the collected data .

I protected participants' confidentiality by obtaining de-identified participant data. I assigned patients numbers (PA1, PA2, etc.) for de-identification. To protect the data collected, I used a locked cabinet and a password-protected computer with a password only known to me, which contained consent forms signed by patients or the POA, pre-fall rate data from the facility database, completed Brigg Fall Risk Assessment Tool forms from the nursing staff, and post-fall rate data on the weekly use of Briggs Fall Risk Assessment Tool. I will keep documents associated with the project for 5 years and then discard. I am the only person who has access to the electronic and paper copies of the consent forms and data. HIPAA privacy rules protect the privacy of individually identifiable health information, while at the same time ensuring that project directors continue to have access to medical information necessary to conduct vital research (U.S. Department of Health and Human Services, 2013).

Instruments

I used the Briggs Fall Risk Assessment Tool (Appendix A) to measure the pre- and post-fall rate in elderly patients. I also used a self-developed demographic survey to

assess the project outcome and enhance the quality of the project. I expected completion of the instrument (assessment tool) to take less than 5 minutes.

Briggs Fall Risk Assessment Tool

The Briggs Fall Risk Assessment Tool has eight clinical condition parameters (mental status, history of fall, ambulation/elimination status, vision status, gait/ balance and ambulation, systolic blood pressure, medications, and predisposed disease). The scores were used to assess the patients' status in the eight clinical conditions by assigning correspondence scores (1-4) that best describe the patients. Following is a detailed description of the eight clinical condition parameters:

Mental status: A patient's mental status was assigned 0 if the patient is oriented to person, place and time; 1 was assigned if the patient is disoriented to one category but oriented to two; 2 was assigned if the patient is disoriented to two categories but oriented to one; 4 was assigned if the patient is disoriented to three categories and the patient is also wandering.

History: This parameter determines if there was a fall incident in the past 3 months. Patients were assigned 0 if there were no incidents of falls; 1 was assigned if there is one to two incidents of falls; 4 was assigned to patients if there were three or more fall incidents.

Ambulation/elimination status: Patients were assigned 0 if they are regularly continent to bowel and bladder; 2 was assigned if they require regular assistance with elimination, and 4 was assigned if they are regularly incontinent.

Vision status: Patients were assigned 0 if there is adequate and they are not using glasses; 2 was assigned if their vision is poor and they are either using glasses or not using glasses; 4 was assigned if they are legally blind.

Gait/ balance and ambulation: Patients were assigned 0 if their gait and balance is within normal range; 1 was assigned if they have a balance problem while standing or walking; 1 was assigned to patients if there is decrease in muscular coordination or there is a jerking movement; 1 was assigned if there is a change in gait pattern when walking, for example, shuffling; 1 was assigned to patients if they require the use of assistive devices such as a walker, cane, or wheel chair.

Systolic blood pressure (SBP): This refers to the SDP reading while standing and lying. Patients were assigned 0 if there is no noted drop in their SBP while standing or lying; 2 was assigned if SDP drops less than 20mm/Hg; 4 was assigned if SBP drops more than 20mm/hg.

Medications: Response is based on the following types of medications, such as antihypertensive, hypoglycemic, diuretics, narcotics, sedatives/hypnotics, antiseizure, benzodiazepines, antihistamines, cathartics, anesthetics, and psychoatives. Patients were assigned 0 when none of these medications is currently taken or taken within the last 7

days; 2 was assigned when 1 to 2 of these medications is currently taken or within the last 7 days; 4 was assigned when 3 to 4 of these medications is currently taken or within the last 7 days; 1 was assigned to patients if a patient has had a change of medication or dosage in the past 5 days.

Predisposing disease: Response is based on the following predisposing conditions such as hypotension, Cerebral Vascular Accident (CVA), seizures, osteoporosis, fracture, vertigo, Parkinson's disease, loss of limb(s), multiple sclerosis and arthritis. Patients were assigned 0 when none of these diseases is currently present; 2 when 1 to 2 of these diseases is currently present; 4 when 3 or more of these diseases are currently present.

If the total score is 10 or greater, the patient is considered a high risk for falls. Immediate interventions per facility protocol, such as bed in low position, medication review, frequent toileting, call light within reach and frequent checking, are needed to prevent falls. Therefore, the scores 10 or above will trigger implementation of EB interventions as outlined in this project.

Demographic Survey

The extent to which falls in elderly patients can be prevented requires a demographic survey. A comparable survey instrument that could be applied to this project does not exist; therefore, to protect against bias and add to clarity, reliability and interpretation, I used a self-developed de-identified survey. The items in the survey instrument included demographic data of patients' gender, age, and number of years in

long-term care. Gender was coded as 1 for male and 2 for female. Age was coded as 1 for ages 65-74; 2 for ages 75- 84 years; 3 for ages 85-94 years and 4 for ages 95-115 years. Number of years in long-term care was coded as 1 for 1-5 years, 2 for 6-10 years, 3 for 11-15 years, and 4 for 16-20 years (Appendix C).

Program Evaluation Plan

The program evaluation plan was to collect data from the facility database on the weekly use of Briggs Fall Risk Assessment Tool for elderly patients in a long-term care for 3 months before and after this project and compare the pre-fall incident reports to post-fall incident reports to determine if fall rates were reduced. I collected data from the facility database with the approval of the QAPI Department. I displayed the results in a table and graph using percentages to show whether fall rates had decreased.

Impact Evaluation

An impact evaluation assesses the changes in the well-being of individuals that can be attributed to a particular project, program, or policy (Gertler et al., 2011). The purpose of this project was to implement a fall prevention program that uses the evidence-based Briggs Fall Risk Assessment Tool weekly. I used an impact evaluation to assess whether the fall rate decreased with implementation of this tool. I assessed the impact by comparing the percentage of difference between pre- and post-program implementation fall rates.

Summative Evaluation

Summative evaluation enables determination of whether the intervention's overall goals, objectives, and long-term outcomes were achieved (Kettner, Moroney, & Martin, 2013). I conducted a summative program evaluation to evaluate whether the overall effectiveness of the project and whether this model is a sustainable model for decreasing fall rates. Summative evaluations also generated feedback on effectiveness of the weekly use of Briggs Fall Risk Assessment Tool.

Summary

In Section 3, I identified the methods used to undertake the project and justified the rationale for the method chosen. Elderly patients in a long-term care facility were the target population of this project. I also discussed protection of their privacy. This section also included a discussion of the processes for data collection and program evaluation, and the importance of the project evaluation plan to draw relevant inferences related to the project question and the validity of the project. In Section 4, the evaluation, presentation of the findings, the implications, and strengths and limitations of the project is presented.

Section 4: Findings

The purpose of this project was to assess whether weekly use of the Briggs Fall Risk Assessment Tool could decrease fall rates in the elderly in long-term care. This assessment tool also allowed evidence-based interventions to be added to patient care. Changing the frequency of use of this assessment tool was evaluated to determine whether it could decrease risk for falls. I measured patient fall rates before and after implementation of the weekly use of Briggs Fall Risk Assessment Tool to determine whether fall rates decreased. Falls among elderly patients are a serious issue because falls accounted for 24% of elderly visits to the emergency departments in the United States; however, researchers have shown that many fall risks can be reduced by fall prevention tools. Falls are the number one cause of unintentional injury hospitalization, rehospitalization, and death among people age 65 and older (Healthy People 2020, 2014). The aim of this project was to increase awareness of the risk of falls in elderly patients in long-term care and to provide an evidence-based prevention program to decrease fall rates. The goal of this project was to implement weekly use of the Briggs Fall Risk Assessment Tool to decrease incidence of falls in elderly patients in long-term care. I measured fall rates before and after weekly use of this fall risk tool. As the number of elderly adults increases over the next few decades, number of falls in elderly patients may also increase. Falls not only affect this population but also the society as whole. Therefore, the project question was whether weekly fall risk assessments using the Briggs

Fall Risk Assessment Tool could decrease incidence of falls in the elderly patients in long-term care.

I evaluated the use of Briggs Fall Risk Assessment Tool weekly with elderly patients in long-term care as participants because the participants were best situated based on their age, environment, medications, mental history, and physical history. I obtained results of the responses provided by 30 elderly patients in long-term care because they were the only ones who could participate in this project to ensure credibility of the results. A self-developed survey was used to collect demographic data of patients. The items in the survey included gender, age, and number of years in long-term care. Gender was coded as 1 for male and 2 for female. Age was coded as 1 for ages 65-74, 2 for ages 75-84, 3 for ages 85-94, and 4 for ages 95-100. Number of years in long-term care was coded as 1 for 1-5 years, 2 for 6-10 years, 3 for 11-15 years, and 4 for 16-20 years. The findings of this project showed a decrease in the fall rate with the weekly use of Briggs Fall Risk Assessment Tool.

Evaluation of Findings and Discussion

This project goal was to examine the weekly use of the Briggs Fall Risk Assessment Tool in elderly patients in long-term care to assess whether this led to decreased fall rates. The sample size included 30 long-term male and female elderly patients 65 to 100 years old in a long-term care term unit. There were 20 females and 10 males who completed the project. Most (10) subjects were between the ages of 75 and 84

years, while 5 were between the ages of 95 and 115 years. Most (63%) participants were residents of the facility between 1 and 5 years, and only one was a patient in the facility for 11-15 years. Participants were categorized based on their age, gender, and the number of years in the long-term care facility, as indicated in Tables 1-3 below.

Table 1

Demographic Data

Demographic data	Participants	Years	Frequency	Percentage
Age	30	65-74	7	23%
		75 – 84	10	33%
		85 - 94	8	27%
		95 - 115	5	17%

Table 2

Number of Years in the Facility

Demographic data	Participants	Years	Frequency	Percentage
Number of years in the facility	30	1 – 5	19	63%
		6 – 10	10	33%
		11 – 15	1	3%
		15 – 20	0	0%

Table 3

GenderDemographic

Demographic data	Participants		Frequency	Percentage
		Gender		
Gender	30	Male	10	33%
		Female	20	67%

The data collection tool used in this project was the Briggs Fall Risk Assessment Tool. The Briggs Fall Risk Assessment Tool is an evidence-based fall prevention program with eight clinical conditions that may provide more frequent fall assessment and use strategies that can result in fall reduction in elderly patients. Nursing staff in the past had used these eight clinical conditions from the Briggs Fall Risk Assessment Tool to evaluate patients at risk for fall and develop interventions to reduce fall rates. Pre-implementation fall rate data were collected from the QAPI facility database prior to the implementation of the weekly use of the Briggs Fall Risk Assessment Tool by the nursing staff. Pre-implementation data were compared to post-intervention data after 1 month of implementing the weekly use of the Briggs Fall Risk Assessment Tool. Results indicated that the weekly use of the Briggs Fall Risk Assessment Tool decreased fall rates by 29.4%. The project outcome showed that the weekly use of the Briggs Fall Risk Assessment Tool decreased fall rates in elderly patients in long-term care.

Evaluation of Findings with Supported Evidence

The project question was whether weekly fall risk assessments using the Briggs Fall Risk Assessment Tool could decrease incidence of falls in the elderly in long-term care. To answer this question, I monitored the number of falls in elderly patients in long-term care for 1 month with the weekly use of Briggs Fall risk Assessment Tool. Data were obtained from each of the 30 long-term care patients and a total number of falls was

calculated by adding and averaging the fall scores. The data are presented according to 1-month pre-implementation and 1 month post-implementation.

The total number of falls before the implementation of the weekly use of Briggs Falls Risk Assessment Tool was 12 (70.6%). After the implementation of the weekly use of Briggs Fall Risk Assessment Tool, fall rate decrease to 5 falls (29.4%). Figure 1 shows the data on pre- and post- implementation.

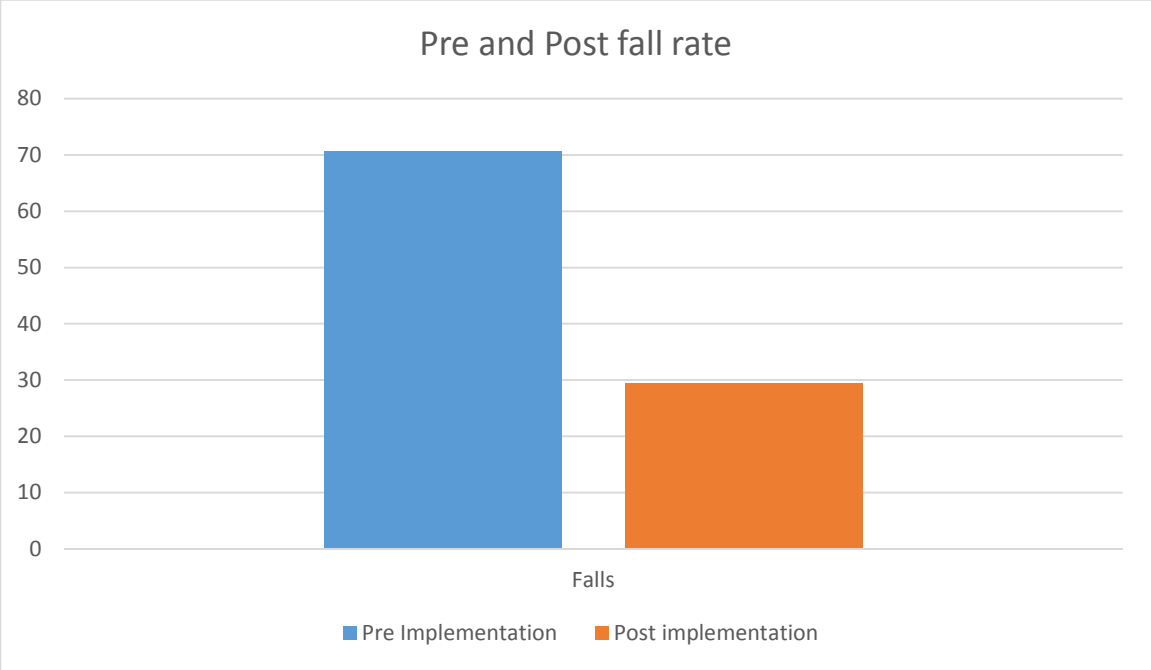

Figure 1. Pre and post fall rates.

The Briggs Fall Risk Assessment Tool is an effective tool because it helps reduce falls and hospitalization when used on a weekly basis. This evidence-based fall prevention program provides the means to reduce hospitalizations, improve fall outcomes, and increase referrals (Briggs Healthcare, 2009). Previous studies confirmed that nurses can identify patients at risk and that a preventive program can reduce the rate of falls, but few studies had been conducted over time. Evidence shows that effective interventions to prevent falls are important to benefit patient health outcomes (Cameron et al., 2012).

The model underlying this project was the model of prevention. This model focuses on developing interventions to increase wellness activity and inspires scholars to look at integrative variables that have been shown to influence health needs. The model of prevention was significant to this project because it can be used to promote fall prevention in elderly patients in long-term care through the weekly use of evidence-based Briggs Fall Risk Assessment Tool. The integration of theory into nursing practice provides a guide to achieve nursing's disciplinary goals of promoting health and preventing illness across the globe (McCurry et al., 2010).

The policy development for fall prevention requires accurate and timely data. Many fall prevention efforts have failed because of limited development. The weekly use of the Briggs Fall Risk Assessment Tool may continue to cycle within the health care system to the extent that data are routinely collected and analyzed, as was done in this

project. The recommendation is for long-term care units to start using the Briggs Fall Risk Assessment Tool weekly instead of upon admission or when a fall occurs. As demonstrated in this project, using the Briggs Fall Risk Assessment Tool upon admission or when a fall occur remains limited because it is not a proactive measure. The weekly use of Briggs Fall Risk Assessment Tool may improve patient outcomes.

The weekly use of Briggs Fall Risk Assessment Tool may help professional health practitioners, especially nursing staff, to gain more knowledge on falls in elderly patients and on proactive fall prevention. Weekly use of the Briggs Fall Risk Assessment Tool may allow nurses to adopt proactive intervention strategies and improve fall prevention practices. The results of this project also showed that falls in elderly patients are a principal concern in the health care setting across the United States.

Implications

Policy

Weekly use of the Briggs Fall Risk Assessment Tool on elderly patients in long care continues to promote Fall Prevention Awareness Week. Fall Prevention Awareness Week is an endeavor that allows the state's department of aging and disability services to develop recommendations to raise public awareness about fall prevention, educate older adults and individuals who provide care to older adults about best practices to reduce the incidence and risk of falls among older adults, encourage state and local governments and the private sector to promote policies and programs that help reduce the incidence and

risk of falls among older adults, encourage area agencies on aging to include fall prevention education in their services, and develop a system for reporting falls to improve available information on falls (National Conference of State Legislatures, 2014). The Texas Fall Prevention Coalition was established in 2007 to promote, implement and evaluate evidence-based programs and policies that help reduce risk factors of falls and injuries in older adults; provide education and resources to increase public awareness, mobilize communities and affect policy change for a falls-free Texas.

Practice

An evidence-based, Fall-Risk Self-Assessment Tool help to increase awareness about fall risk factors, ways to reduce fall incidents in older adults and to build on existing lay knowledge about fall risks and perception that falls are a relevant problem and can about their specific risks and how to minimize them Vivrette et al (2011). Weekly use of the Briggs Fall Risk Assessment Tool may change the current way that fall risk assessment is done on admission or when a fall occurs. Proactive nursing care requires the nursing staff to assess a patient for falls weekly and can thereby reduce fall incidents and prevent falls from occurring.

Research

This project may serve as a foundational framework for other nursing researchers to build upon to examine the benefits of weekly use of the Briggs Fall Risk Assessment Tool. Growing evidence supports the weekly use of Briggs Fall Risk Assessment Tool

(Briggs Healthcare, 2009). Nursing researchers need to be more aggressive in rigorous and larger scale evidence-based studies to examine weekly use of Briggs Fall Risk Assessment Tool. Developing a plan to put the program in place and make it successful is a crucial part of health planning and health promotion strategies. For future studies, researchers may want to develop a plan to put a fall prevention program in place and make it a successful health planning and health promotion strategy.

Social Change

A fall prevention program in long-term care often involves social change in the healthcare system by revealing successful fall interventions. This can also involve behavioral changes of the community towards falls and fall prevention in elderly patients. An important measure of quality is the extent to which patients' needs and expectations are met. Services that are designed to meet the needs and expectations of patients and changes in social structure, social behavior, or the social relations of a society must include care provision that is evidence-based (Health Resources and Services Administration, 2014). Most of the notable social changes from weekly use of the Briggs Fall Risk Assessment Tool on elderly patients in long-term care is that it decreases fall rates. The weekly use of Briggs Fall Risk Assessment Tools also demonstrated positive social change in helping to increase awareness about fall risk factors, ways to reduce fall incidents in older adults, and to build on existing lay knowledge about fall risks and perception that falls are a relevant problem. The implication for social change is that the

results of this project reinforced the importance of the use of an evidence-based tool and the weekly use of the Briggs Fall Risk Assessment Tool for elderly patients in long-term care that decreases fall rates.

Strength and Limitations of the Project

Strengths

The project used a pre-post design. I collected pre-intervention data related to incidence of falls for 1 month prior to start of the program implementation from the QAPI facility database. I collected post-implementation data for 1 month. I then compared pre-intervention data to post-intervention data. Evaluation of pre-and post-fall rates helped me to determine whether there was a decrease in fall rates. The strengths of this project is that the sample size for this project covered the entire elderly patients residing in the long-term care facility, which gave all patients an equal opportunity to participate and also minimized bias in data collection. Another strength of this project is that the Briggs Fall Risk Assessment Tool included the use of the eight clinical condition parameters, which highlighted the specific areas of elderly patients at risk for falls.

Limitations

The project results were limited to one facility within an organization; other facilities within the organization were not included in the implementation and evaluation of the fall risk assessment program so that different leadership and staffing systems in other facilities within the organization could be considered. Furthermore, the 1-month

pre- and post-implementation were not sufficient for accurate data representation. Nursing staff had limited time to use the tool because nurses distribute their time to other tasks such as direct care with patients, individual tasks, and engagement with other health care providers. A similar project could include a longer time period of pre- and post-implementation, such as 6 months pre- and 6 months post-, to allow nursing staff more time for their assessment.

Analysis of Self

As Scholar

Evidence-based practice (EBP) involves the use of best research evidence to support clinical decisions in practice" (Grove, Burns, & Gray, 2013, p. 28). Application of evidence -based practice to develop my DNP project has helped me to focus on advanced nursing practice because advanced nursing practice involves the identification of a problem and provide an intervention for that problem through research findings and the best evidence present. As a DNP scholar, research into issues like the weekly use of the Briggs Fall Risk Assessment Tool in elderly patients in long-term care increased my knowledge on the importance of fall prevention in elderly patients. The outcome of my project can open the door for other scholars to build upon.

The National Academy of Sciences (2009) stated that there are three sets of obligations that encourage researchers to follow their professional standards. First, researchers have an obligation to honor the trust that their colleagues have in them,

because irresponsible conduct in research can make it impossible to achieve a goal regardless of the type of research that is being carried out. Second, researchers who follow professional standards build personal integrity in their research careers. Finally, scientific results greatly influence society, and researchers have an obligation to act in ways that serve the public. Some scientific results directly affect the health and well-being of individuals. Policymakers are also known to have used research on a number of occasions for issues that will affect an entire community. My DNP project has allowed me to grow as researcher, leader, and nursing educator. According to Grossman and Valiga (2009), leaders in nursing have the responsibility to prepare today for tomorrow's challenge. They are responsible through their vision, creativity, ability to facilitate change, and ability to manage and survive chaos and for articulating a preferred future for the profession and its practitioners.

Williams et al. (2011) stated that improved staff awareness and compliance with the continuous influx of new knowledge in rapidly changing healthcare systems demonstrated nursing continue education process. My DNP scholarly journey also helped me to expand my knowledge in financial management. Finkler, Kovner, and Jones (2009) stated that financial management aids in the preparation of a budget for the coming year helps to control results throughout the year, and helps to evaluate the performance of and manage each department.

As Practitioner

As a director of nursing in skilled nursing facility, I have grown in strengths in the area of leadership and management skills. My DNP journey also provided me the vision, creativity, ability to facilitate change, ability to manage and survive chaos, and articulate a preferred future for the profession and its practitioners, whether in clinical, administrative, educational, research, and health policy. According to Grossman and Valiga (2009), leaders in nursing have the responsibility to prepare today for tomorrow's challenge.

As Project Manager

As the project director and manager, my role is to evaluate whether the weekly use of Briggs Fall Assessment Tool can decrease falls in elderly patients in long-term care. This leadership role has influenced my leadership style and generated positive changes in sustaining improvement efforts. In this role not only was I involved in the process, but I also focused on helping every member of the team succeed. Thompson (2011) pointed out that the transformational leader encourages problem solving and empowers followers to do what is best for the organization. The leadership role evolves throughout the quality improvement journey from been a facilitator to a follower, a motivator, manager of conflict, an active performer of task and back to a leader. This project expanded my confidence and knowledge in research in which I learned a lot about data collection.

Project Contribution to Professional Development

This outcome of this project provided the tool that can decrease falls in elderly, which can result in reduced hospitalizations, improved fall outcomes, and increased referrals. The project's contribution to my professional development is that it can be developed into a standardized procedure that is applicable to all long-term care facilities. The standardized procedure can decrease adverse outcomes and improve total quality of care. Implementing effective intervention strategies could appreciably decrease the incidence and healthcare costs. The proactive nature of this project may change fall intervention for nurses. This project opened doors for interdepartmental collaboration within the healthcare industry.

Summary

One way to reduce falls in elderly patients in long-term care is to frequently assess for fall risk and implement evidence-based strategies to prevent falls. Therefore, weekly use of Briggs Fall Risk Assessment Tool as implemented in this project has addressed the problem of falls in the elderly in long-term settings. The result of the weekly use of Briggs Fall Risk Assessment Tool, as assessed pre- and post-implementation forn falls with injuries and falls without injuries, showed a decrease in fall rates. After the implementation of the weekly use of Briggs Fall Risk Assessment Tool, fall rate decreased to five falls (29.4%) compared to12 falls (70.6%) post-implementation. Evaluating whether the weekly use of the Briggs Fall Risk Assessment

Tool reduces fall rates in elderly patients in long-term compared to the use of Briggs Fall Risk Assessment Tool upon admission or when fall occurs showed that weekly use of Briggs Fall Risk Assessment Tool significantly decreased fall rates.

Section 5: Scholarly Product

Frequent Fall Risk Assessment to Reduce Fall Rates in Elderly Patients in Long-Term

Manuscript for Publication

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Abstract

Purpose- The purpose of this project was to assess whether weekly use of the Briggs Fall Risk Assessment Tool can decrease fall rates in long-term care. One way to reduce falls in elderly patients in long-term care is to frequently assess for fall risk and implement evidence-based strategies to prevent falls.

Methods- Pre-implementation fall rate data were collected from the Quality Assurance & Performance Improvement (QAPI) facility database prior to the implementation of the weekly used the Briggs Fall Risk Assessment Tool by the nursing staff. Pre-implementation data were compared to post-implementation data. After 1 month of implementing the weekly use of the Briggs Fall Risk Assessment Tool, fall rate data were then collected from the QAPI facility database. Using percentage from pre- and post-fall rates, the result indicated that there was a decrease in fall rates using the Briggs Fall Risk Assessment Tool weekly.

Findings - The result of the total number of falls for pre-implementation of the weekly Briggs Fall Risk Assessment Tool were then broken down into pre- and post-implementation. The total number of falls before the weekly implementation of the Briggs Falls Risk Assessment Tool was 12 (70.6%) fall. After the weekly implementation of the Briggs Fall Risk Assessment Tool, fall rates decreased to 5 (29.4%) fall.

Conclusions- This project outcome showed that the weekly use of Briggs Fall Risk Assessment Tool for long-term care elderly patients decreased fall rates. This evidence-based fall prevention program provided the tool that resulted in reduced hospitalizations, improved fall outcomes.

Background

Falls among the elderly place demands on health care systems and increase social costs (Boye et al., 2013). Falls among elderly patients in long-term care tend to occur from a multifactorial etiology including illness, medications, environment, and staff errors. Moncada (2011) stated that there are many risk factors for falls, some of which are modifiable including balance impairment, environmental hazards, medications, cognitive impairment, and muscle weakness. Injuries from falls can permanently alter a patient's quality of life and cause difficulty in mobility, independent living, and can increase the risk of early death (Holly, 2012).

A variety of interventions can be incorporated into a fall prevention program. For example, interventions that have been shown to reduce fall rates include weekly review

of patient medications, engaging the patient in a progressive exercise program, having the call light within reach of the patient, and nurses performing frequent rounds on each patient. Additional interventions for fall prevention including frequent physical assessment and use of assistive devices for ambulation (Campbell & Robertson, 2013). Moncada (2011) stated that the history of falls should include circumstances, frequency, associated symptoms, injuries, medication review (prescribed and over-the-counter). Progressive exercise programs are specifically designed or adapted for older adults to improve mobility, strength, and balance. Balance retraining and muscle strengthening exercises reduce falls in elderly compared to other interventions (Gillespie et al., 2012). Having the call light within patients' reach allows them to ask for assistance instead of trying to get up by themselves, which may reduce fall rates. Frequent rounds place nursing staff in front of the patient each time to routinely assess any fall risks and allows nursing staff to be proactive in preventing falls, as opposed to reactive after a fall occurs.

Use of assistive devices such as canes, walkers, and reachers can prevent falls. These devices may help patients feel more stable, balanced when they are standing or walking and help patients take lightweight items from high shelves and other places and pick up objects from the floor so they do not have to bend over. Bradley and Hernandez (2011) stated that assistive devices such as canes, crutches, and walkers can be used to increase a patient's base of support and improve balance. Researchers have identified Vitamin D deficiency as one of the risk factor for fall (CDC, 2015b). The use of a

vitamin D supplement can help elderly patients with muscle strength; stronger muscles could mean less likelihood of falling. Other measures to prevent falls in the elderly include proper management of patient health conditions. For example, vision exams, vision improvement, and treatment of correctable visual impairments can prevent falls (World Health Organization [WHO], 2012).

Fall prevention programs where a variety of single and multicomponent fall-preventive interventions have been initiated and reviewed and have been shown to be effective at decreasing fall rate (Karlsson, Magnusson, Von Schewelov, & Rosengren, 2013). Nurses should be familiar with these fall prevention interventions. Nurses also need to be educated on fall prevention in elderly patients so that they can effectively use fall risk assessment tools and implement risk reduction interventions for patients at risk. Nurses should integrate fall risk reduction programs into their day-to-day practice. Proper management of patient health conditions and use of fall interventions will help to prevent falls in elderly patients.

There is a need for fall prevention programs in long-term care. Therefore, a fall prevention program for elderly patients in long-term care that uses the evidence-based Briggs Fall Risk Assessment Tool weekly addressed this problem. The Briggs Fall Risk Assessment Tool provided an easy-to-use checklist assessment for fall risk for all newly admitted long-term care patients and for evaluating patients after any fall. The Briggs Fall Assessments Tool assesses the patient in a variety of fall risk prone areas, including

mental status, history of falls, ambulation and elimination status, vision status, gait and balance, medications, and predisposing disease (Briggs Healthcare, 2009). These assessments provided guidance about implementing fall prevention strategies in long-term care. The goal of this program was to reduce fall rates. This outcome was evaluated by assessment of fall rates 1 month before and 1 month after program intervention.

Problem Statement

The major health problem in long-term care patients is falls despite the preventive measures known to reduce fall risk (Huey-Ming, Chang-Yi, Allison & Atul, 2013). About one third of community-dwelling elderly persons and up to 60% of nursing home residents fall each year; one half of these fallers have multiple episodes. An estimated 424,000 fatal falls in elderly patients residing in long-term facilities occur annually in the United States (Alamgir, Muazzam, & Nasrullah, 2012). Each year 2.5 million nonfatal falls among older adults are treated in emergency departments in the United States; more than 700,000 of these patients are hospitalized because of fall injury (CDC, 2015a). Those who fall experience greater functional decline in activities of daily living (ADLs) and in physical and social activities and are at greater risk for subsequent incidence of falls.

Falls continue to be an important area in health care systems because of increased length of stay and higher cost of treating fall injuries. In 2013, direct medical costs for falls (what patients and insurance companies pay) totaled $34 billion (CDC, 2015b). To

address this problem, I initiated a fall prevention program that incorporated weekly use of the Briggs Fall Risk Assessment Tool to identify patients at risk for falls and implement appropriate fall prevention strategies before the patient has a fall. The goal was to decrease the fall rate in long-term care. Williams, Young, Williams, and Schindel (2011) stated that improved staff awareness and compliance with fall prevention strategies resulted in a 62% fall reduction rate over 1 year in six acute care units. Incorporating weekly use of the Briggs Fall Risk Assessment Tool may help nurses be proactive in dealing with fall prevention and may decrease risk and incidence of falls in the elderly population.

Purpose

Evidence-based researchers have refined nurses' ability to identify the clinical interventions that can reduce falls and fall-related injuries (Clancy, 2012). The purpose of this project was to assess whether weekly use of the Briggs Fall Risk Assessment Tool decreased fall rates in the elderly in long-term care. This assessment tool may also allow evidence-based interventions to be added to patient care. Changing the frequency of assessment from admission and when a fall occurs to weekly use may help identify patients at risk for falls. I assessed patient fall rates before and after implementation of the weekly use of the Briggs Fall Risk Assessment Tool to determine whether fall rates decreased.

Project Question, Goal, and Objective

The project question asked whether weekly fall risk assessments using the Briggs Fall Risk Assessment Tool could decrease incidence of falls in the elderly in long-term care. The project goal was to decrease fall rates with a fall prevention program that included weekly use of the Briggs Fall Risk Assessment Tool. The objective of this project was to provide an evidence-based fall prevention program in elderly patients in a long-term care setting by the weekly use of the Briggs Fall Risk Assessment Tool as a proactive measure to prevent elderly patients from falls in long-term care.

Framework for the Project

The theoretical model that was used to guide this project was the prevention model developed by Leavell and Clark in the 1940s (Davidson, 2011). This model is based on a model of primary prevention, which is preventing a condition from occurring; secondary prevention, which is early identification of a condition; and tertiary prevention, which occurs after a condition has presented and the recovery process has begun. This prevention model focuses on developing interventions to increase wellness activity and inspires scholars to look at integrative variables that have been shown to influence health needs. The model of primary prevention was used as a focus in this project. Primary prevention was significant to this project because it emphasizes that action needs to be taken prior to a disease or a fall to maintain a healthy state by reducing the burden of mortality or morbidity from falls in elderly patients in long-term care and through the

weekly use of the Briggs Fall Risk Assessment Tool. The weekly use of Briggs Fall Risk Assessment Tool was a proactive measure taken to prevent elderly patients from falls in long-term care. This model is based on the principle that prevention may be seen as an event and as a process and part of the continuum of data-driven intervention measures for falls

Definitions

Assistive devices, Briggs Fall Risk Assessment Tool, evidence-based practice, elderly patients, fall, fall-risk assessment, geriatrics care, long-term care, medication review.

Limitation and Delimitations

Limitations of this project were that the program was implemented and evaluated in one facility within an organization. Further, nursing staff have limited time to use the tool because nurses distributed their time to other tasks such as direct care with patients, individual tasks, and engagement with other health care providers. Another limitation was that the population was limited to elderly patients in long-term care only. Despite my employment with the facility, I minimized any possible bias during the time of data collection and implementation stage.

The scope of this project was limited to fall prevention in elderly patients in long-term care. Furthermore, the sample size for this project was on the entire elderly patients in long-term care residing in a facility in Harris County, Texas. Some of the ways in

which this project can be delimited is to include other facilities within the organization in the implementation and evaluation of the fall risk assessment program to allow different leadership and staffing systems in other facilities within the organization to be considered in the implementation and evaluation.

Literature Search Strategy

In this project, I used several search tools to identify pertinent literature, including online databases of Cumulative Index of Nursing and Allied Health Literature (CINAHL) and MEDLINE. I also used the Bing and Google Scholar search engines. I used the following terms and combinations to search for related articles: quality improvement program, falls prevention, nursing staff, elderly patients, Briggs Fall Risk Assessment Tool, pre and post intervention, evidence-based practice, social change, long-term care, implementation, weekly fall assessment, health care, and medication review. The literature review yielded 200 articles, and I selected 80. I categorized these articles based on research method, conceptual and theoretical framework, intervention, implementation, and outcome measures. I gathered the articles from current peer-reviewed journals and books.

This review contains specific literature related to a fall prevention program that is based on weekly use of the Briggs Fall Risk Assessment Tool in elderly patients in long-term care. I discussed literature related to my theoretical framework, methodology, concepts, model for this project, and model of prevention. I also review general literature

related to the fall prevention program and how community and policymakers influence fall prevention programs.

To identify a patient's risk for falling and to correct the problem or problems and ultimately prevent falls in long-term care, a fall prevention program is needed. Efforts applied in the area of fall prevention have been effective in reducing the incidence of falls and increasing awareness of staff, patients, and families of the importance of monitoring patients at risk for falls (Barker, O'Brien, Carey, & Weissman, 1993). The model underlying this project was a model of prevention by Leavell and Clark. The terms primary, secondary, and tertiary prevention were first documented in the late 1940s by Leavell and Clark (Davidson, 2011).

The prevention model focuses on developing interventions to increase wellness activity, and it inspires scholars to look at integrative variables that have been shown to influence health needs. The model of prevention was significant to this project because it promotes fall prevention in elderly patients in long-term care through the weekly use of evidence-based Briggs Fall Risk Assessment Tool. The integration of theory into nursing practice provided a guide to achieve nursing's disciplinary goals of promoting health and preventing illness across the globe (McCurry, Revell, & Roy, 2010).

Nursing practice is based on philosophy and theories to achieve the disciplinary goals. Nursing knowledge focuses on the wholeness of human life and transformation (Smith & Liehr, 2008). The need for research about fall prevention in elderly patients by

nursing professionals continues to grow, and the prevention model is a guide for practice and research. In addition, the clear understanding of these concepts in health care delivery is that this is a model that specifies nursing's focus on prevention, which can sometimes bring about EB practices that are not only useful to nursing but to other health care professionals.

My role in this project was as project director. I am an employee of the facility where project data were collected and implemented. Having the knowledge about the topic was important for me to minimize bias during the course of data collection based on the tactical, moral, and privacy issues of research procedures. Project directors must explicitly identify biases, values, and personal characteristics such as gender, history, culture, and socioeconomic status that may affect the ways they interpret the results of their project (Locke, Spirduso, & Silverman, 2007). Because of my personal ties to the project, I had to identify potential biases.

The prevention model addresses nursing practice, elderly patients, and the health care environment with specific concrete actions on fall prevention. This practice generates project questions and research that help in the understanding of theory and practice. The prevention model focuses on concepts that thoughtful nurses want to explore. These behaviors should result in patients' improved health, enhanced functional ability, and better quality of life. Health care professionals such as nurses constitute a part of the interpersonal environment that exerts influence on people during their life span.

The integration of theory into nursing practice provides a guide to achieve nursing's disciplinary goals of promoting health and preventing illness across the globe (McCurry et al., 2010). The prevention model has been used to identify nursing as a helping profession with interrelated concepts about health and nursing problems, such as falls prevention in elderly patients in long-term care. "It involves identifying a clinical problem, searching the literature, critically evaluating the research evidence, and determining appropriate intervention" (McEwen & Wills, 2011, p. 383). Williams et al. (2011) stated that improved staff awareness and compliance with fall prevention strategies resulted in a 62% fall reduction rate over 1 year in six units. McCarthy, Adedokun, and Fairchild (2010) stated that to apply the different fall interventions to patient care, nursing staff need to know that these intervention are available to them. According to Karlsson et al. (2013), fall prevention programs such as a call light within reach, bed in position, medication review, eye exams, and rounding every 2 hours are evidence-based practices in which a variety of single and multicomponent fall preventive interventions have been initiated. McCarthy et al. (2010) stated that falls pose a serious risk for the elderly living in long-term care facilities causing serious injuries and accidental death. Haines, Bennell, Osborne, and Hill (2004) stated that a significant portion of the burden and impact of fall-related injury occurs in acute and residential care facilities.

Vu, Weintraub, and Rubenstein (2006) concluded that an effective multifaceted fall prevention program for nursing home residents should include risk factor assessment and modification, staff education, gait assessment and intervention, exercise, assistive device assessment and optimization, and environmental assessment and modification.

Alamgir et al. (2012) emphasized the seriousness of falls in elderly patients in long-term care and found that an estimated 424,000 fatal falls in elderly patients residing in long-term facilities occur in the United States annually, and 37.3 million falls in elderly patients require medical attention globally. Falls and injuries are among the leading causes of mortality and morbidity in older adults (Huang et al., 2012). According to Healthy People 2020 (2014), falls are the leading cause of death from unintentional injury among older adults; deaths and injuries can be prevented by addressing risk factors. According to the CDC (2013), about 1,800 people living in nursing homes die each year from falls. Falls represent an important source of preventable morbidity and mortality in older adults, the fastest growing segment of the U.S. population (Michael et al., 2010).

Al-Aama (2011) noted that falls can be prevented through evidence-based interventions such as a call light with reach, exercises, and medication review, which can be either single or multicomponent interventions. Today's quality improvement efforts and risk management in the health care industries are based on patient safety, and organizations are working together to ensure that they delivere patient quality care that is

more effective and efficient (ECRI Institute, 2009). The results of a quality improvement study supported the effectiveness of a multifactorial fall prevention program in the care setting for adult patients (Trepanier & Hilsenbeck, 2014). Quigley et al. (2010) stated that risk factors for falls are multifactorial and interacting, and providers require guidance on the components, intensity, dose, and duration for an effective fall injury prevention program. Weekly utilization of the evidence-based Briggs Fall Risk Assessment Tool may produce improvements by reducing fall rates.

In this project, I explored the weekly use of the Briggs Fall Risk Assessment Tool to prevent falls in the elderly in long-term care. This evidence-based fall prevention program provides the tool that can result in reduced hospitalizations, improved fall outcomes, and increased referrals (Briggs Healthcare, 2009). To achieve the fall prevention outcome, there was a commitment to a plan of action, which was the weekly use of Briggs Fall Risk Assessment Tool and identification of a planned strategy that leads to implementation of this fall prevention program. Previous studies confirmed that nurses can identify patients at risk and that a preventive program can reduce the rate of falls, but few studies have been conducted over time. Evidence shows that effective interventions to prevent falls benefit patient health outcomes (Cameron et al., 2012). Stemmons, Zimmerman, Schrodt, Palmer, and Samuels (2012) stated that not all falls have serious consequences; falls with minor or no injury can cause anxiety and distress to

patients and their families. A fall prevention program for elderly patients in long-term care may help to reduce anxiety and distress in elderly patients and families.

Most fall risk assessment tools that have been tested for validity have been evaluated within the same patient population for which the tools were designed, so the accuracy of the tools has not been validated across different care settings with different patient populations (Feil & Gardner, 2012). To apply effective fall interventions to patient care, an EB fall risk tool is imperative for nursing staff in long-term care (McCarthy et al., 2010). The question was whether weekly fall risk assessments using the Briggs Fall Risk Assessment Tool enabled evidence-based fall prevention interventions to decrease incidence of falls in the elderly in long-term care. Implementing effective intervention strategies could decrease the incidence and health care costs of these injuries. Fall prevention may produce major economic benefits, and it is important to assess the economic costs and benefits of different methods of fall prevention to identify the most suitable methods to be employed.

Medical costs for falls treated in EDs in 2005 in people 65 years and older totaled $6.3 billion, including $451 million for patients who were treated and released and $5.8 billion for patients who were subsequently hospitalized (CDC, 2013). Developing a plan to put the program in place and make it successful is a crucial part of health planning and health promotion strategies (Hodges & Videto, 2001).

A before-and-after design was used to answer the project question in this quality improvement project. The project question was whether weekly use of the Briggs Fall Risk Assessment Tool would decrease incidence of falls in the elderly in the long-term care facility where the project took place. An impact evaluation is used to assess the changes in the well-being of individuals, which can be attributed to a particular project, program, or policy (Gertler, Martinez, Premand, Rawlings, & Vermeersch, 2011). The project goal was to decrease fall rates. Data were collected from participants to assess whether implementation of a fall prevention program that incorporated weekly use of the Briggs Fall Risk Assessment Tool was effective in decreasing fall incidents in elderly patients in long-term care. This assessment tool allowed evidence-based interventions to be added to patient care. Falls in the elderly population are becoming a major health problem in long-term facilities. The CDC reported in 2015 that each year 2.5 million older people are treated in emergency departments for fall injuries. Therefore, it was important to evaluate whether more frequent fall assessments using the Briggs Fall Risk Assessment Tool reduced the fall rate.

Population and Sampling

The population for this project included male and female elderly patients age 65 to 100 years in a long-term care term unit in Texas. The average daily census is approximately 55 patients. This community is composed of 40% rehabilitation patients and 60% long-term care patients. Fall assessment is done with the Briggs Fall Risk

Assessment Tool only on admission or when a fall occurs. This fall prevention strategy reduces fall incidence to 8%, which is greater than the overall facility average of 6%. The target population was long-term care patients because they are at high risk for falls due to comorbidities, polypharmacy, and muscle weakness. The total population of long-term patients is 30. I invited the entire long-term care population to participate in the project, which provided all patients in long-term care an equal chance of participation and avoided selection bias.

I used convenience sampling of participants in the long-term care unit to ensure the target population was represented. Convenience sampling allows investigators to take advantage of potentially large sample sizes (Owen et al., 2014). The factors that influenced my decision to use convenience sampling were that data collection was in the same facility to ensure consistency and accuracy of the data collected. This selection also allowed all elderly patients in long-term care an equal opportunity to participate to reduce sampling bias. Participation in this project was voluntary and did not pose any known risk to the participants.

Data Collection

I obtained project approval before beginning project-related activities. To protect the well-being of the participants, I first obtained approval from the project facility. After obtaining Walden University Institutional Review Board (IRB) approval number 06-27-16-0246515, I began the project by screening subjects for participation.

All long-term care patients at the project facility were given the opportunity to participate in the project. I met with each patient in his or her room to discuss the project. I administered a mini mental exam which is a way to observe and describe a patient's psychological functioning at a given point of time, to all prospective participants. Patients who did not pass the exam were not able to give consent; therefore, I contacted the patients' power of attorney (POA) in person or by phone for consent to participate and to schedule a face-to-face meeting at a convenient time and place within the facility, such as the patient's room or the TV room, for privacy. I informed patients or family members about the program and explained that participation was voluntary and could be withdrawn at any time. I asked participants to sign a consent form giving their permission, either in person or via mail. I obtained written informed consent prior to including patients in the project. I then explained to the patient or the POA that I was a staff at the facility and conducting a fall rate reduction project that would include weekly use of the Briggs Fall Risk Assessment Tool to determine whether this would decrease incidence of falls in elderly patients in long-term care. I explained to patients or their POA their rights relative to agreeing to participate in the program, their rights to withdraw from the project, and confidentiality of collected data. I also provided details about the project and answered all questions.

I used a pre-post design for this project. I collected pre-intervention data from the Quality Assurance and Performance Improvement (QAPI) facility database related to

incidence of falls for 1 month prior to the start of the program. Pre-intervention data were compared to post-intervention data. Evaluation of pre-and post-fall rates enabled me to determine whether a decrease in fall rates occurred in the fall prevention program.

The nurses on the project unit were experienced using the Briggs Fall Risk Assessment Tool at admission. I educated nursing staff on the weekly use of the tool. I conducted training three times a week for 2 weeks to review the entire program and nurses' role in the project. The training took place in the unit conference room and each training session took approximately 20 minutes. All nurses were invited to participate, and no nurse was required to participate. After the selection process, I trained the nursing staff, who are registered nurses (RNs) and licensed vocational nurses (LVNs), and emphasized how they could use the information provided by this tool to tailor interventions to prevent falls in elderly patients.

I met with each nursing staff member and gave each a copy of the Briggs Fall Risk Assessment Tool and a handout on how to use the tool weekly. I explained to the nursing staff that the project would last for 3 months. Pre-implementation data were collected for 1 month before the project was implemented. Post-implementation data were collected for 1 month. I collected data about the weekly use of Briggs Fall Risk Assessment Tool data from the nursing staff at the end of the shift every Tuesday for 1 month. I recorded the data as soon as possible to avoid losing data getting.

I conducted training of the nursing staff on the areas of fall risk identified by the weekly use of Briggs Fall Risk Assessment Tool and how to assign and calculate scores to each area. These areas included mental status, history of fall for the past 3 months, elimination status (continent or incontinent), vision status, gait or ambulation and balance status, and how to take systolic blood pressure in both lying and standing positions. I also trained nursing staff on the different medications and predisposed diseases that can cause falls. Weekly assessments were done every Tuesday for 1 month. I also trained nursing staff on how to use the Briggs Fall Risk Assessment Tool to plan interventions to prevent patients from falling by communicating the tailored fall prevention plan to the care team (i.e., nurses, nursing assistants, physical therapists, physicians, patients, and their family members). After the training, I provided the nursing staff with my contact information in case they had any questions going forward. The nurses signed an in-service sheet at completion of the training. After 2 weeks of training, I implemented the weekly use of the Briggs Fall Risk Assessment Tool for patients who consented to participate in the program. After 1 month of implementation, I collected fall rate data from the QAPI facility database. Pre- and post-fall rates were compared to answer the project question.

I measured pre-and post-fall rates based on the weekly use of the Briggs Fall Risk Assessment Tool. I collected fall rate data from the QAPI facility database 1 month before intervention. The implementation phase began with my giving the nursing staff the Briggs Fall Risk Assessment Tool form to assess patient fall risk weekly. I then collected

the Briggs Fall Risk Assessment Tool forms completed by the nursing staff at the end of the shift every Tuesday. The implementation of the weekly use of Briggs Fall Risk Assessment Tool in this project may help to prevent falls. The facility usually does fall risk assessment upon admission and when a fall occurs. If fall rates are shown to decrease with weekly use of the Briggs Fall Risk Assessment Tool, fall assessment may be performed more frequently in similar facilities to prevent falls. I collected post-intervention data related to incidence of falls for 1 month after the end of project training. I compared pre-intervention data with post-intervention data using percentage change to determine whether a decrease in fall rates occurred as a result of the fall prevention program.

Protection of Human Subjects

A program that involves human participants needs careful planning and procedures to protect participants' rights to privacy and to make sure that the project is conducted ethically. Ensuring the privacy and confidentiality of the project participants was one of the most important aspects of this project (Seppälä, Nykänen, & Ruotsalainem, 2014). A POA document is a legal written document used when someone wants another adult to handle their matters (Minnesota Judicial Branch, 2015). I explained the informed consent form to patients or their POA (for patients who did not pass the mini mental exam) because the POA is legally authorized to represent or act on behalf of the patient when the patient cannot make his or her own decisions. I explained

that signing the informed consent indicated patients' agreement to participate in the program, that they could withdraw from the project at any time, and that I would maintain confidentiality of the collected data .

I protected participants' confidentiality by obtaining de-identified participant data. I assigned patients numbers (PA1, PA2, etc.) for de-identification. To protect the data collected, I used a locked cabinet and a password-protected computer with a password only known to me, which contained consent forms signed by patients or the POA, pre-fall rate data from the facility database, completed Brigg Fall Risk Assessment Tool forms from the nursing staff, and post-fall rate data on the weekly use of Briggs Fall Risk Assessment Tool. I will keep documents associated with the project for 5 years and then discard. I am the only person who has access to the electronic and paper copies of the consent forms and data. HIPAA privacy rules protect the privacy of individually identifiable health information, while at the same time ensuring that project directors continue to have access to medical information necessary to conduct vital research (U.S. Department of Health and Human Services, 2013).

Instruments

I used the Briggs Fall Risk Assessment Tool (Appendix A) to measure the pre- and post-fall rate in elderly patients. I also used a self-developed demographic survey to assess the project outcome and enhance the quality of the project. I expected completion of the instrument (assessment tool) to take less than 5 minutes.

The Briggs Fall Risk Assessment Tool has eight clinical condition parameters (mental status, history of fall, ambulation/elimination status, vision status, gait/ balance and ambulation, systolic blood pressure, medications, and predisposed disease). The scores were used to assess the patients' status in the eight clinical conditions by assigning correspondence scores (1-4) that best describe the patients. Following is a detailed description of the eight clinical condition parameters:

Mental status: A patient's mental status was assigned 0 if the patient is oriented to person, place and time; 1 was assigned if the patient is disoriented to one category but oriented to two; 2 was assigned if the patient is disoriented to two categories but oriented to one; 4 was assigned if the patient is disoriented to three categories and the patient is also wandering.

History: This parameter determines if there was a fall incident in the past 3 months. Patients were assigned 0 if there were no incidents of falls; 1 was assigned if there is one to two incidents of falls; 4 was assigned to patients if there were three or more fall incidents.

Ambulation/elimination status: Patients were assigned 0 if they are regularly continent to bowel and bladder; 2 was assigned if they require regular assistance with elimination, and 4 was assigned if they are regularly incontinent.

Vision status: Patients were assigned 0 if there is adequate and they are not using glasses; 2 was assigned if their vision is poor and they are either using glasses or not using glasses; 4 was assigned if they are legally blind.

Gait/ balance and ambulation: Patients were assigned 0 if their gait and balance is within normal range; 1 was assigned if they have a balance problem while standing or walking; 1 was assigned to patients if there is decrease in muscular coordination or there is a jerking movement; 1 was assigned if there is a change in gait pattern when walking, for example, shuffling; 1 was assigned to patients if they require the use of assistive devices such as a walker, cane, or wheel chair.

Systolic blood pressure (SBP): This refers to the SDP reading while standing and lying. Patients were assigned 0 if there is no noted drop in their SBP while standing or lying; 2 was assigned if SDP drops less than 20mm/Hg; 4 was assigned if SBP drops more than 20mm/hg.

Medications: Response is based on the following types of medications, such as antihypertensive, hypoglycemic, diuretics, narcotics, sedatives/hypnotics, antiseizure, benzodiazepines, antihistamines, cathartics, anesthetics, and psychoatives. Patients were assigned 0 when none of these medications is currently taken or taken within the last 7 days; 2 was assigned when 1 to 2 of these medications is currently taken or within the last 7 days; 4 was assigned when 3 to 4 of these medications is currently taken or within the

last 7 days; 1 was assigned to patients if a patient has had a change of medication or dosage in the past 5 days.

Predisposing disease: Response is based on the following predisposing conditions such as hypotension, Cerebral Vascular Accident (CVA), seizures, osteoporosis, fracture, vertigo, Parkinson's disease, loss of limb(s), multiple sclerosis and arthritis. Patients were assigned 0 when none of these diseases is currently present; 2 when 1 to 2 of these diseases is currently present; 4 when 3 or more of these diseases are currently present.

If the total score is 10 or greater, the patient is considered a high risk for falls. Immediate interventions per facility protocol, such as bed in low position, medication review, frequent toileting, call light within reach and frequent checking, are needed to prevent falls. Therefore, the scores 10 or above will trigger implementation of EB interventions as outlined in this project.

The extent to which falls in elderly patients can be prevented requires a demographic survey. A comparable survey instrument that could be applied to this project does not exist; therefore, to protect against bias and add to clarity, reliability and interpretation, I used a self-developed de-identified survey. The items in the survey instrument included demographic data of patients' gender, age, and number of years in long-term care. Gender was coded as 1 for male and 2 for female. Age was coded as 1 for ages 65-74; 2 for ages 75- 84 years; 3 for ages 85-94 years and 4 for ages 95-115 years.

Number of years in long-term care was coded as 1 for 1-5 years, 2 for 6-10 years, 3 for 11-15 years, and 4 for 16-20 years (Appendix C).

Program Evaluation Plan

The program evaluation plan was to collect data from the facility database on the weekly use of Briggs Fall Risk Assessment Tool for elderly patients in a long-term care for 3 months before and after this project and compare the pre-fall incident reports to post-fall incident reports to determine if fall rates were reduced. I collected data from the facility database with the approval of the QAPI Department. I displayed the results in a table and graph using percentages to show whether fall rates had decreased.

An impact evaluation assesses the changes in the well-being of individuals that can be attributed to a particular project, program, or policy (Gertler et al., 2011). The purpose of this project was to implement a fall prevention program that uses the evidence-based Briggs Fall Risk Assessment Tool weekly. I used an impact evaluation to assess whether the fall rate decreased with implementation of this tool. I assessed the impact by comparing the percentage of difference between pre- and post-program implementation fall rates.

Summative evaluation enables determination of whether the intervention's overall goals, objectives, and long-term outcomes were achieved (Kettner, Moroney, & Martin, 2013). I conducted a summative program evaluation to evaluate whether the overall effectiveness of the project and whether this model is a sustainable model for decreasing

fall rates. Summative evaluations also generated feedback on effectiveness of the weekly use of Briggs Fall Risk Assessment Tool.

Findings

The purpose of this project was to assess whether weekly use of the Briggs Fall Risk Assessment Tool could decrease fall rates in the elderly in long-term care. This assessment tool also allowed evidence-based interventions to be added to patient care. Changing the frequency of use of this assessment tool was evaluated to determine whether it could decrease risk for falls. I measured patient fall rates before and after implementation of the weekly use of Briggs Fall Risk Assessment Tool to determine whether fall rates decreased. Falls among elderly patients are a serious issue because falls accounted for 24% of elderly visits to the emergency departments in the United States; however, researchers have shown that many fall risks can be reduced by fall prevention tools. Falls are the number one cause of unintentional injury hospitalization, rehospitalization, and death among people age 65 and older (Healthy People 2020, 2014). The aim of this project was to increase awareness of the risk of falls in elderly patients in long-term care and to provide an evidence-based prevention program to decrease fall rates. The goal of this project was to implement weekly use of the Briggs Fall Risk Assessment Tool to decrease incidence of falls in elderly patients in long-term care. I measured fall rates before and after weekly use of this fall risk tool. As the number of elderly adults increases over the next few decades, number of falls in elderly patients may

also increase. Falls not only affect this population but also the society as whole. Therefore, the project question was whether weekly fall risk assessments using the Briggs Fall Risk Assessment Tool could decrease incidence of falls in the elderly patients in long-term care.

I evaluated the use of Briggs Fall Risk Assessment Tool weekly with elderly patients in long-term care as participants because the participants were best situated based on their age, environment, medications, mental history, and physical history. I obtained results of the responses provided by 30 elderly patients in long-term care because they were the only ones who could participate in this project to ensure credibility of the results. A self-developed survey was used to collect demographic data of patients. The items in the survey included gender, age, and number of years in long-term care. Gender was coded as 1 for male and 2 for female. Age was coded as 1 for ages 65-74, 2 for ages 75-84, 3 for ages 85-94, and 4 for ages 95-100. Number of years in long-term care was coded as 1 for 1-5 years, 2 for 6-10 years, 3 for 11-15 years, and 4 for 16-20 years. The findings of this project showed a decrease in the fall rate with the weekly use of Briggs Fall Risk Assessment Tool.

Evaluation of Findings and Discussion

This project goal was to examine the weekly use of the Briggs Fall Risk Assessment Tool in elderly patients in long-term care to assess whether this led to decreased fall rates. The sample size included 30 long-term male and female elderly

patients 65 to 100 years old in a long-term care term unit. There were 20 females and 10 males who completed the project. Most (10) subjects were between the ages of 75 and 84 years, while 5 were between the ages of 95 and 115 years. Most (63%) participants were residents of the facility between 1 and 5 years, and only one was a patient in the facility for 11-15 years. Participants were categorized based on their age, gender, and the number of years in the long-term care facility, as indicated in Tables 1-3 below.

Table 1

Demographic Data

Demographic data	Participants	Years	Frequency	Percentage
Age	30	65-74	7	23%
		75 – 84	10	33%
		85 - 94	8	27%
		95 - 115	5	17%

Table 2

Number of Years in the Facility

Demographic data	Participants	Years	Frequency	Percentage
Number of years in the facility	30	1 – 5	19	63%
		6 – 10	10	33%
		11 – 15	1	3%
		16 – 20	0	0%

Table 3

GenderDemographic

Demographic data	Participants	Gender	Frequency	Percentage
Gender	30	Male	10	33%
		Female	20	67%

The data collection tool used in this project was the Briggs Fall Risk Assessment Tool. The Briggs Fall Risk Assessment Tool is an evidence-based fall prevention program with eight clinical conditions that may provide more frequent fall assessment and use strategies that can result in fall reduction in elderly patients. Nursing staff in the past had used these eight clinical conditions from the Briggs Fall Risk Assessment Tool to evaluate patients at risk for fall and develop interventions to reduce fall rates. Pre-implementation fall rate data were collected from the QAPI facility database prior to the implementation of the weekly use of the Briggs Fall Risk Assessment Tool by the nursing staff. Pre-implementation data were compared to post-intervention data after 1 month of implementing the weekly use of the Briggs Fall Risk Assessment Tool. Results indicated that the weekly use of the Briggs Fall Risk Assessment Tool decreased fall rates by 29.4%. The project outcome showed that the weekly use of the Briggs Fall Risk Assessment Tool decreased fall rates in elderly patients in long-term care.

Evaluation of Findings with Supported Evidence

The project question was whether weekly fall risk assessments using the Briggs Fall Risk Assessment Tool could decrease incidence of falls in the elderly in long-term care. To answer this question, I monitored the number of falls in elderly patients in long-term care for 1 month with the weekly use of Briggs Fall risk Assessment Tool. Data were obtained from each of the 30 long-term care patients and a total number of

falls was calculated by adding and averaging the fall scores. The data are presented according to 1-month pre-implementation and 1 month post-implementation.

The total number of falls before the implementation of the weekly use of Briggs Falls Risk Assessment Tool was 12 (70.6%). After the implementation of the weekly use of Briggs Fall Risk Assessment Tool, fall rate decrease to 5 falls (29.4%). Figure 1 shows the data on pre- and post- implementation.

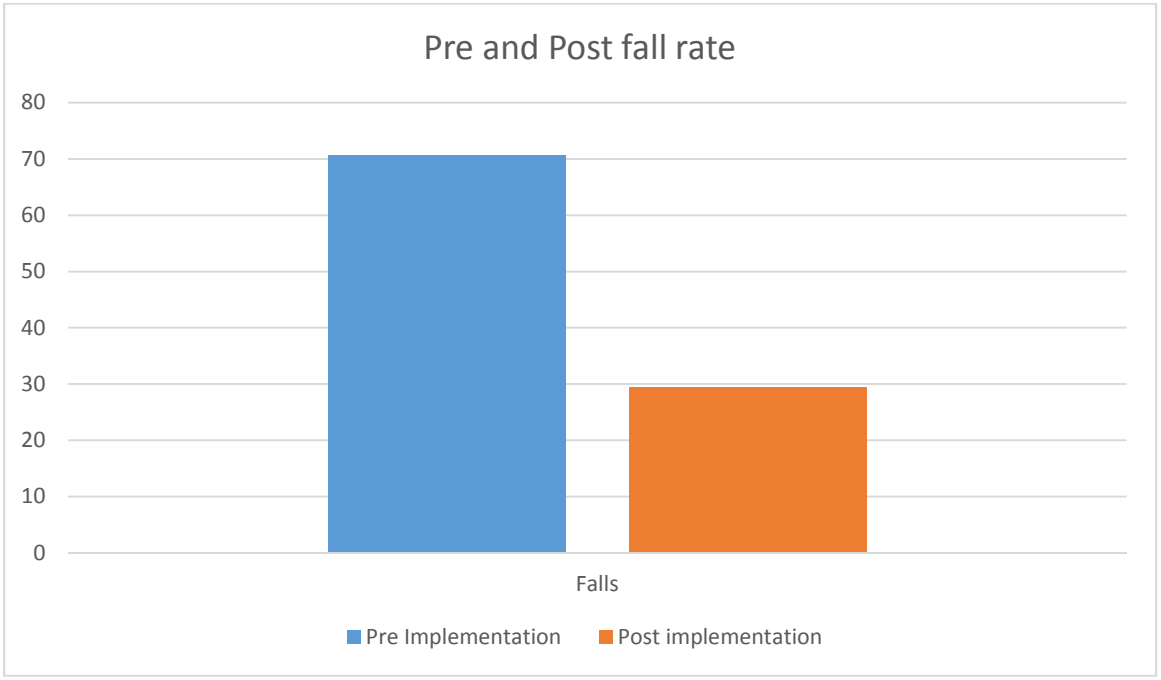

Figure 1. Pre and post fall rates.

The Briggs Fall Risk Assessment Tool is an effective tool because it helps reduce falls and hospitalization when used on a weekly basis. This evidence-based fall prevention program provides the means to reduce hospitalizations, improve fall outcomes, and increase referrals (Briggs Healthcare, 2009). Previous studies confirmed that nurses can identify patients at risk and that a preventive program can reduce the rate of falls, but few studies had been conducted over time. Evidence shows that effective interventions to prevent falls are important to benefit patient health outcomes (Cameron et al., 2012).

The model underlying this project was the model of prevention. This model focuses on developing interventions to increase wellness activity and inspires scholars to look at integrative variables that have been shown to influence health needs. The model of prevention was significant to this project because it can be used to promote fall prevention in elderly patients in long-term care through the weekly use of evidence-based Briggs Fall Risk Assessment Tool. The integration of theory into nursing practice provides a guide to achieve nursing's disciplinary goals of promoting health and preventing illness across the globe (McCurry et al., 2010).

The policy development for fall prevention requires accurate and timely data. Many fall prevention efforts have failed because of limited development. The weekly use of the Briggs Fall Risk Assessment Tool may continue to cycle within the health care system to the extent that data are routinely collected and analyzed, as was done in this

project. The recommendation is for long-term care units to start using the Briggs Fall Risk Assessment Tool weekly instead of upon admission or when a fall occurs. As demonstrated in this project, using the Briggs Fall Risk Assessment Tool upon admission or when a fall occur remains limited because it is not a proactive measure. The weekly use of Briggs Fall Risk Assessment Tool may improve patient outcomes.

The weekly use of Briggs Fall Risk Assessment Tool may help professional health practitioners, especially nursing staff, to gain more knowledge on falls in elderly patients and on proactive fall prevention. Weekly use of the Briggs Fall Risk Assessment Tool may allow nurses to adopt proactive intervention strategies and improve fall prevention practices. The results of this project also showed that falls in elderly patients are a principal concern in the health care setting across the United States.

Implications

Policy

Weekly use of the Briggs Fall Risk Assessment Tool on elderly patients in long care continues to promote Fall Prevention Awareness Week. Fall Prevention Awareness Week is an endeavor that allows the state's department of aging and disability services to develop recommendations to raise public awareness about fall prevention, educate older adults and individuals who provide care to older adults about best practices to reduce the incidence and risk of falls among older adults, encourage state and local governments and the private sector to promote policies and programs that help reduce the incidence and

risk of falls among older adults, encourage area agencies on aging to include fall prevention education in their services, and develop a system for reporting falls to improve available information on falls (National Conference of State Legislatures, 2014). The Texas Fall Prevention Coalition was established in 2007 to promote, implement and evaluate evidence-based programs and policies that help reduce risk factors of falls and injuries in older adults; provide education and resources to increase public awareness, mobilize communities and affect policy change for a falls-free Texas.

Practice

An evidence-based, Fall-Risk Self-Assessment Tool help to increase awareness about fall risk factors, ways to reduce fall incidents in older adults and to build on existing lay knowledge about fall risks and perception that falls are a relevant problem and can about their specific risks and how to minimize them Vivrette et al (2011). Weekly use of the Briggs Fall Risk Assessment Tool may change the current way that fall risk assessment is done on admission or when a fall occurs. Proactive nursing care requires the nursing staff to assess a patient for falls weekly and can thereby reduce fall incidents and prevent falls from occurring.

Research

This project may serve as a foundational framework for other nursing researchers to build upon to examine the benefits of weekly use of the Briggs Fall Risk Assessment Tool. Growing evidence supports the weekly use of Briggs Fall Risk Assessment Tool

(Briggs Healthcare, 2009). Nursing researchers need to be more aggressive in rigorous and larger scale evidence-based studies to examine weekly use of Briggs Fall Risk Assessment Tool. Developing a plan to put the program in place and make it successful is a crucial part of health planning and health promotion strategies. For future studies, researchers may want to develop a plan to put a fall prevention program in place and make it a successful health planning and health promotion strategy.

Social Change

A fall prevention program in long-term care often involves social change in the healthcare system by revealing successful fall interventions. This can also involve behavioral changes of the community towards falls and fall prevention in elderly patients. An important measure of quality is the extent to which patients' needs and expectations are met. Services that are designed to meet the needs and expectations of patients and changes in social structure, social behavior, or the social relations of a society must include care provision that is evidence-based (Health Resources and Services Administration, 2014). Most of the notable social changes from weekly use of the Briggs Fall Risk Assessment Tool on elderly patients in long-term care is that it decreases fall rates. The weekly use of Briggs Fall Risk Assessment Tools also demonstrated positive social change in helping to increase awareness about fall risk factors, ways to reduce fall incidents in older adults, and to build on existing lay knowledge about fall risks and perception that falls are a relevant problem. The implication for social change is that the

results of this project reinforced the importance of the use of an evidence-based tool and the weekly use of the Briggs Fall Risk Assessment Tool for elderly patients in long-term care that decreases fall rates.

Strength and Limitations of the Project

The strengths of this project is that the sample size for this project covered the entire elderly patients residing in the long-term care facility, which gave all patients an equal opportunity to participate and also minimized bias in data collection. Another strength of this project is that the Briggs Fall Risk Assessment Tool included the use of the eight clinical condition parameters, which highlighted the specific areas of elderly patients at risk for falls.

The project results were limited to one facility within an organization; other facilities within the organization were not included in the implementation and evaluation of the fall risk assessment program so that different leadership and staffing systems in other facilities within the organization could be considered. Furthermore, the 1-month pre- and post-implementation were not sufficient for accurate data representation. Nursing staff had limited time to use the tool because nurses distribute their time to other tasks such as direct care with patients, individual tasks, and engagement with other health care providers. A similar project could include a longer time period of pre- and post-implementation, such as 6 months pre- and 6 months post-, to allow nursing staff more time for their assessment.

Analysis of Self

As Scholar

Evidence-based practice (EBP) involves the use of best research evidence to support clinical decisions in practice" (Grove, Burns, & Gray, 2013, p. 28). Application of evidence -based practice to develop my DNP project has helped me to focus on advanced nursing practice because advanced nursing practice involves the identification of a problem and provide an intervention for that problem through research findings and the best evidence present. As a DNP scholar, research into issues like the weekly use of the Briggs Fall Risk Assessment Tool in elderly patients in long-term care increased my knowledge on the importance of fall prevention in elderly patients. The outcome of my project can open the door for other scholars to build upon.

The National Academy of Sciences (2009) stated that there are three sets of obligations that encourage researchers to follow their professional standards. First, researchers have an obligation to honor the trust that their colleagues have in them, because irresponsible conduct in research can make it impossible to achieve a goal regardless of the type of research that is being carried out. Second, researchers who follow professional standards build personal integrity in their research careers. Finally, scientific results greatly influence society, and researchers have an obligation to act in ways that serve the public. Some scientific results directly affect the health and well-being of individuals. Policymakers are also known to have used research on a number of

occasions for issues that will affect an entire community. My DNP project has allowed me to grow as researcher, leader, and nursing educator. According to Grossman and Valiga (2009), leaders in nursing have the responsibility to prepare today for tomorrow's challenge. They are responsible through their vision, creativity, ability to facilitate change, and ability to manage and survive chaos and for articulating a preferred future for the profession and its practitioners.

Williams et al. (2011) stated that improved staff awareness and compliance with the continuous influx of new knowledge in rapidly changing healthcare systems demonstrated nursing continue education process. My DNP scholarly journey also helped me to expand my knowledge in financial management. Finkler, Kovner, and Jones (2009) stated that financial management aids in the preparation of a budget for the coming year helps to control results throughout the year, and helps to evaluate the performance of and manage each department.

As Practitioner

As a director of nursing in skilled nursing facility, I have grown in strengths in the area of leadership and management skills. My DNP journey also provided me the vision, creativity, ability to facilitate change, ability to manage and survive chaos, and articulate a preferred future for the profession and its practitioners, whether in clinical, administrative, educational, research, and health policy. According to Grossman and

Valiga (2009), leaders in nursing have the responsibility to prepare today for tomorrow's challenge.

As Project Manager

As the project director and manager, my role is to evaluate whether the weekly use of Briggs Fall Assessment Tool can decrease falls in elderly patients in long-term care. This leadership role has influenced my leadership style and generated positive changes in sustaining improvement efforts. In this role not only was I involved in the process, but I also focused on helping every member of the team succeed. Thompson (2011) pointed out that the transformational leader encourages problem solving and empowers followers to do what is best for the organization. The leadership role evolves throughout the quality improvement journey from been a facilitator to a follower, a motivator, manager of conflict, an active performer of task and back to a leader. This project expanded my confidence and knowledge in research in which I learned a lot about data collection.

Project Contribution to Professional Development

This outcome of this project provided the tool that can decrease falls in elderly, which can result in reduced hospitalizations, improved fall outcomes, and increased referrals. The project's contribution to my professional development is that it can be developed into a standardized procedure that is applicable to all long-term care facilities. The standardized procedure can decrease adverse outcomes and improve total quality of

care. Implementing effective intervention strategies could appreciably decrease the incidence and healthcare costs. The proactive nature of this project may change fall intervention for nurses. This project opened doors for interdepartmental collaboration within the healthcare industry.

Summary

One way to reduce falls in elderly patients in long-term care is to frequently assess for fall risk and implement evidence-based strategies to prevent falls. Therefore, weekly use of Briggs Fall Risk Assessment Tool as implemented in this project has addressed the problem of falls in the elderly in long-term settings. The result of the weekly use of Briggs Fall Risk Assessment Tool, as assessed pre- and post-implementation forn falls with injuries and falls without injuries, showed a decrease in fall rates. After the implementation of the weekly use of Briggs Fall Risk Assessment Tool, fall rate decreased to five falls (29.4%) compared to12 falls (70.6%) post-implementation. Evaluating whether the weekly use of the Briggs Fall Risk Assessment Tool reduces fall rates in elderly patients in long-term compared to the use of Briggs Fall Risk Assessment Tool upon admission or when fall occurs showed that weekly use of Briggs Fall Risk Assessment Tool significantly decreased fall rates.

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Appendix A: Falls Risk Assessment

FALL RISK ASSESSMENT

INSTRUCTIONS: Upon admission and quarterly (at a minimum) thereafter, assess the resident status in the eight clinical condition parameters listed below (A-H) by assigning the corresponding score which best describes the resident in the appropriate assessment column. Add the column of numbers to obtain the Total Score. If the total score is 10 or greater, the resident should be considered at HIGH RISK for potential falls. A prevention protocol should be initiated immediately and documented on the care plan.

	PARAMETER	SCORE	RESIDENT STATUS/CONDITION	ASSESSMENT DATE ▶ 1	2	3	4
A.	MENTAL STATUS	0	**ORIENTED** x 3 (time, place, person)				
		1	**DISORIENTED** x 1				
		2	**DISORIENTED** x 2				
		4	**DISORIENTED** x 3				
		4	**WANDERS**				
B.	HISTORY OF FALLS (Past 3 months)	0	**NO FALLS** in past 3 months				
		2	**1 - 2 FALLS** in past 3 months				
		4	**3 OR MORE FALLS** in past 3 months				
C.	AMBULATION/ ELIMINATION STATUS	0	**REGULARLY CONTINENT**				
		2	**REQUIRES REGULAR ASSIST WITH ELIMINATION**				
		4	**REGULARLY INCONTINENT**				
D.	VISION STATUS	0	**ADEQUATE** (with or without glasses)				
		2	**POOR** (with or without glasses)				
		4	**LEGALLY BLIND**				
E.	GAIT/BALANCE/ AMBULATION Indicate appropriate point value for each item that applies.	0	Gait/Balance normal				
		1	Balance problem while standing/walking				
		1	Decreased muscular coordination/jerking movements				
		1	Change in gait pattern when walking (i.e., shuffling)				
		1	Requires use of assistive devices (i.e., cane, w/c, walker, furniture)				
F.	SYSTOLIC BLOOD PRESSURE	0	**NO NOTED DROP** between lying and standing				
		2	Drop **LESS THAN 20 mm Hg** between lying and standing				
		4	Drop **MORE THAN 20 mm Hg** between lying and standing				
G.	MEDICATIONS		Respond below based on the following types of medications: Anesthetics, Antihistamines, Antihypertensives, Antiseizure, Benzodiazepines, Cathartics, Diuretics, Hypoglycemics, Narcotics, Psychoactives, Sedatives/Hypnotics.				
		0	**NONE** of these medications taken currently or within last 7 days				
		2	**TAKES 1 - 2** of these medications currently and/or within last 7 days				
		4	**TAKES 3 - 4** of these medications currently and/or within last 7 days				
		1	If resident has had a change in medication and/or change in dosage in the past 5 days = score 1 additional point.				
H.	PREDISPOSING DISEASES		Respond below based on the following predisposing conditions: Hypotension, Vertigo, CVA, Parkinson's disease, Loss of limb(s), Seizures, Arthritis, Osteoporosis, Fractures, Multiple Sclerosis.				
		0	**NONE PRESENT**				
		2	**1 - 2 PRESENT**				
		4	**3 OR MORE PRESENT**				
	TOTAL SCORE		Total score above 10 represents HIGH RISK				

ASSESS	SIGNATURE/TITLE/DATE	ASSESS	SIGNATURE/TITLE/DATE
1		3	
2		4	

NAME–Last	First	Middle	Attending Physician	Record No.	Room/Bed

Appendix B: Demographic Survey

Demographic Survey

Demographic data	**Participants**	**Codes**
Age		1 ----------(65-74) 2 ----------(75-84) 3 ----------(85-94) 4 ----------(95-115)
Number of years in the facility		1 ----------(1-5) 2 ----------(6-10) 3 ----------(11-15)

		4 ----------(16-20)
Gender		1 ----------(Male) 2 ----------(Female)