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Reducing Falls in the Vulnerable Elderly: Implementing an Inpatient Fall Prevention Program

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This is to certify that the doctoral study by

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

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MS, Walden University, 2009

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Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Inpatient falls are a leading cause of fatal and serious injuries among hospitalized elderly patients, often with devastating consequences. This quality improvement project was conducted on a geriatric unit in a large southeastern U. S. hospital, following recognition of an increase in the number of falls with several sustained injuries. After an analysis of the previous fall prevention strategies, a panel of stakeholders who formed a falls prevention committee determined that implementing an evidence-based fall risk assessment tool to help identify risk factors, as well as implementing interventions to address those risk factors, would make fall prevention more patient specific and comprehensive. Guided by the IOWA Model, this project was designed to assess the effectiveness of implementing the Morse Fall Scale for a period of 2 months on the geriatric unit. Nurses were educated on the use of the tool and interventions, and 32 (87.5%) shared their perceptions of the effectiveness of the tool using a 5-item questionnaire following tool implementation. Fall rates based on nursing assessments and incident reports were monitored 6 months prior to, 2 months during implementation, and 2 months after the implementation of the MFS ended. The fall rate on the unit decreased by 50% during the implementation of the Morse Fall Scale; 99% of nurses agreed or strongly agreed that the tool was easy to understand, quick to use, identified and increased awareness of fall risks as well as fall prevention strategies, and decreased falls. Nurses leading fall prevention programs supported by evidence can address the serious patient safety issue of falls to decrease the negative impact on patients, families, and health care systems by reducing falls among elderly patients.

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Dedication

This project is dedicated to my family, who have made me the person that I am today. They taught me about commitment and perseverance. They have inspired me to succeed and I could not have done this project without their support.

Acknowledgments

I would like to acknowledge my parents, husband, children, brothers and their families for helping me to get through this. Without your love and support, I would not have been able to complete this project. Thank you all for your encouragement and just being there. I would also like to thank my chairperson and my chair committee for all of their assistance in getting me through this process.

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Section 1: Nature of the Project

Introduction

Inpatient falls have become a serious patient safety problem. Fall prevention has attracted the attention of many healthcare agencies, facilities, and providers. According to Health Research & Educational Trust (2016), between 700,000 and 1,000,000 people experience falls in hospitals across the United States annually and 30 to 50% of those falls result in injury. Falls can cause serious injury to elderly patients. This is a very vulnerable population, as the body's ability to function starts to decline. There are physical, sensory, and cognitive changes that are associated with aging. Therefore, advanced age is a considerable risk factor. Costa-Dias et al. (2014) found that 89% of inpatient falls occurred in elderly patients aged 60 and older. Furthermore, 40% of those inpatient falls occurred in elderly patients between the ages of 80 to 89.

In this DNP quality improvement project, I focused on elderly patients who fall during a hospital stay. The group that I focused on for this project were those age 65 and older. A geriatric unit in a large southeastern hospital reported several falls from January to June of 2013. Patients on this unit have sustained injuries as a result of a fall. In this DNP QI project, I focused on evaluating the effectiveness and outcomes of implementing the Morse Fall Scale assessment tool with interventions on the fall prevention program and provide recommendations to be implemented on the geriatric unit.

Problem Statement

According to the Center for Disease Control and Prevention (Center for Disease Control and Prevention [CDC], 2016), falls are the leading cause of death in people of

age 65 or older. In acute care settings, the fall incidence ranges from 3.3 to 11.5 falls per 1,000 patient days depending on the unit (Bouldin, Andresen, Dunton, Simon, Waters, Liu, et al. 2013). Falls by elderly patients are the largest category of reportable incidents and are a significant problem in hospitals. Higher rates were reported in neurology, geriatric, and rehabilitation units (Trinh, Achat, & Assareh, 2016). These rates are also very conservative since staff fail to report every fall (Trinh, Achat, & Assareh, 2016).

On the geriatric unit where this project was conducted, the protocol on falls did not include the use of a specific fall risk assessment tool. Fall assessment was based on the nurses' judgement alone. Despite evidence that a risk assessment tool can identify which patients are at risk for falling based on a number of contributing factors identified through research (Aranda-Gallardo et al., 2013), no tool was used on this unit. Several studies address fall prevention in acute care settings. Implementing this fall prevention program may serve as a guide for future evidence-based studies that will help decrease the morbidity and mortality caused by inpatient falls in this vulnerable population.

Purpose Statement

The purpose of this QI project was to evaluate the effectiveness of a comprehensive evidence-based fall prevention program for hospitalized elderly patients. An appropriate question would be "Can the implementation and evaluation of a fall risk assessment tool with interventions impact patient fall rates when compared to preimplementation of the fall prevention program?" Several studies (Aranda-Gallardo et al., 2013; Bouldin et al., 2013; Cumbler, Simpson, Rosenthal, & Likosky, 2013; Phelan, Mahoney, Voit, & Stevens, 2015) have been conducted regarding this topic and will

contribute to this project. In this project, I identify factors that place elderly patients at risk for fall, includes a screening tool, and identifies interventions to address these risk factors. Prior to implementation of the fall prevention program, nursing staff on this unit were educated by in-services that included are pretest, a PowerPoint presentation, and a posttest. Furthermore, I presented a proposal to the nurse administrators of the unit for an evidence-based plan to implement this program and evaluate its effect on the fall rate on the geriatric unit in the future, if the hospital decides to do so. The evaluation of the goals and outcomes provided by this study improves quality care and patient outcomes.

Nature of the Doctoral Project

The nature of this doctoral project was to evaluate the effectiveness of incorporating a fall risk assessment tool into a fall prevention program for elderly patients on the geriatric unit. Falls are a specific problem for a target population related to a health promotion and disease prevention issue of national significance. De-identified data provided by staff that included patient falls on the geriatric unit were measured in terms of fall rate, which is the number of falls per 1000 patient bed days. These data were analyzed and provided monthly by the unit manager. At the time this project was initiated, the fall rate for the geriatric unit is 4.1 falls per 1000 patient bed days. The goal was to reduce the fall rate to 2.0. This fall rate was chosen for two reasons. Firstly, the average fall rates for acute care settings range from "3.3 to 11.5 falls per 1,000 patient days" (Bouldin, Andresen, Dunton, Simon, Waters, Liu, et al. 2013, p 13). Therefore, a rate of 2.0 is better than the average. Secondly, objectives should be realistic and

attainable. Even though a fall rate of zero would be ideal, this may not be easily attainable. It would be better to over-achieve rather than under promise.

The practice model that guided this project was the IOWA Model and the Morse Fall Scale (see Appendix A), which was used as the tool to identify which patients were at risk for falls. The approach that I used in this doctoral project to analyze the evidence was accomplished by both a qualitative and quantitative method.

Significance

Falls in hospitalized patients are a major concern because it is considered one of the largest liabilities for healthcare facilities across the nation (Bouldin et al., 2013). Falls are devastating to patients, family members, providers, and the health care system. Patient falls are a serious problem for acute care hospitals. The unfamiliar environment of a hospital setting, acute illness, surgery, bed rest, medications, treatments, and the placement of intravenous lines and tubes pose common challenges for elderly patients. Healthcare facilities are now being forced to examine their current practices and guidelines regarding fall prevention. In 2005, the Joint Commission introduced a national patient safety goal that required hospitals to reduce the number of falls and to implement a fall reduction program. This requirement became a standard in 2010. Healthcare facilities are being surrounded in an environment that is pay-for-performance. As of 2008, healthcare facilities were no longer receiving reimbursement for treating injuries that resulted from in-patient falls (CDC, 2008). This heightened attention to this issue. The average hospital stay for patients who fall is 12.3 days longer and leads to a 61% increase in patient-care costs (CDC, 2008). Not only do falls have a tremendous impact

on the patient, they also affect the healthcare organization. With known societal and financial impact, there is an incentive to develop and test further strategies for fall prevention.

Most patients come to hospitals to seek treatment for their health problems and to alleviate their undesired symptoms. Injuries sustained from falls will delay a patient's recovery. Nurses provide a large part of care to hospitalized patients and can have a significant impact on patient outcomes. Therefore, nursing care should be evidence-based to help ensure that patients are receiving the best care possible without additional complications. As mentioned previously, most studies for fall prevention are from long term care facilities. There are only a few studies that focus on acute care settings. This project can provide valuable information for fall prevention programs for elderly patients in acute care settings. The information generated from this project can also attempt to address this gap in knowledge.

A comprehensive fall prevention program has many implications for social change within communities and healthcare facilities. Falls can occur anywhere. Elderly patients can also prevent falls at home just by using interventions that will make their environment safer and their ability to move around more stable. Reports have shown that patients who have fallen once are more likely to fall again (Cumbler, Simpson, Rosenthal, & Likosky, 2013; Phelan, Mahoney, Voit, & Stevens, 2015). Falls have a negative impact on patients. These impacts can be physical, psychological, and economic. They may sustain physical injuries such as lacerations, fractures, internal bleeding, or even death. They may suffer from depression, anxiety, and fear from falling

again (Cumbler, Simpson, Rosenthal, & Likosky, 2013; Phelan, Mahoney, Voit, & Stevens, 2015). Furthermore, they may have a longer hospital stay, increased healthcare costs, and greater rehabilitation needs (Callis, 2016).

Because this healthcare facility did not have a comprehensive fall prevention program, this project can have a significant impact. It may attract the attention of stakeholders to improve the care of the elderly. This may lead to a decrease in fall rate, which will decrease the morbidity and mortality rates. In addition, this would mean fewer costs to the facility. The program could also be implemented for different populations on other units or throughout the entire healthcare system.

Summary

This chapter provided an overview of the significance of the problem of falls in elderly patients. The purpose and the objectives of this project have been clearly identified. Falls are costly to both the patient and the healthcare facility. The physical, psychological, and economic impacts on the elderly population are tremendous. The implications for social change have been addressed. Evidence-based practice was used to guide this fall prevention program to ensure that patients were achieving the best possible outcomes. In Section 2, I will address the concepts, models, and theories that guided this project, along with the relevance to nursing practice and background. I will also discuss my role and the role of the project team.

Section 2: Background and Context

In this section, I focus on the concepts, models, and theories that supported this project. Literature reviews are important because they inform readers about what research has already been done and what is already known on a particular subject. It also establishes a relevancy of the research. Fall prevention has been well documented throughout the research. Most studies examine fall prevention in long term care facilities. However, the recent changes in healthcare has stimulated studies that focus on fall prevention in acute care settings. I addressed this gap within that literature with this project.

Concepts, Models, and Theories

Evidence-based practice **(**EBP) models are necessary to ensure that research can be successfully synthesized, and evidence-based guidelines can be developed for practice (Booth, Sutton, & Papaioannou, 2016). Melnyk, Gallagher-Ford, Long, and Fineout-Overholt (2014) defined EBP as a problem-solving approach that utilizes the current best evidence to answer clinical questions. To implement EBP successfully, EBP models are used. “These models provide a step-by-step guide on how to take on a clinical problem and match it with an intervention based on research to make an organizational and departmental change to practice” (Brown, 2014, p. 157).

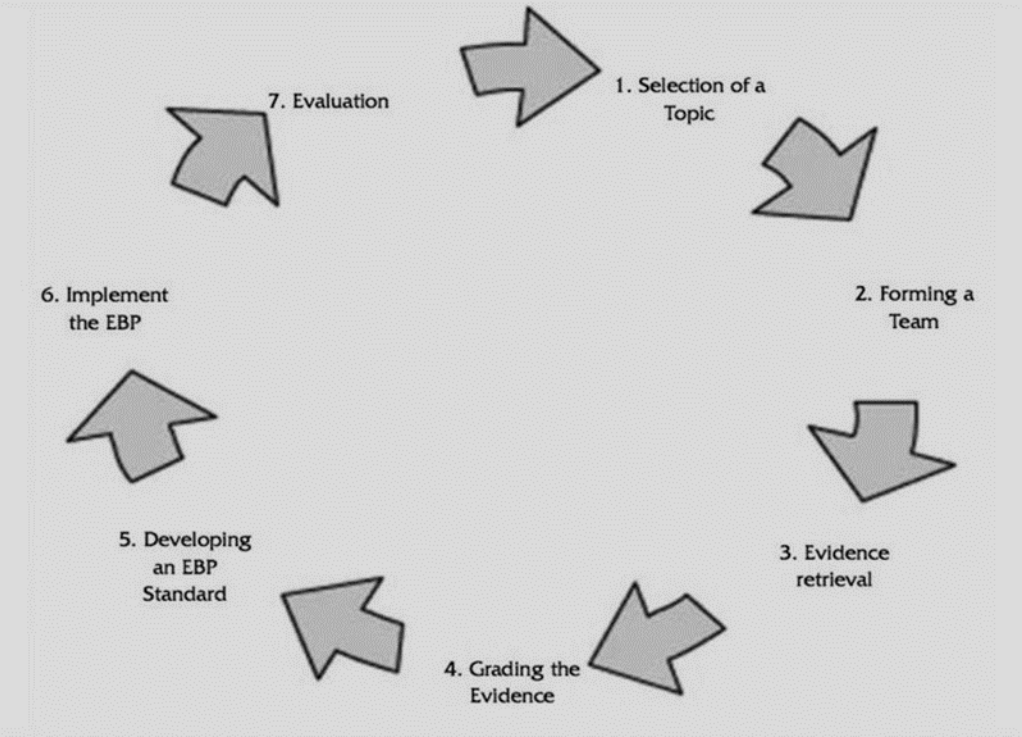

Figure 1. The Iowa Model (Doody & Doody, 2011)

The practice model that guided this project was the Iowa Model (See Figure 1). The IOWA Model was an appropriate model for implementing this quality improvement project. This model allowed nurses to transition to the idea of evidence-based practice by using tools for introducing, implementing, and evaluating evidence-based practices (Brown, 2014). According to Brown (2014), the process begins with selecting an area for improving care based on evidence. Falls in the elderly have been a well-documented problem for the elderly. This problem increases the morbidity and mortality in this vulnerable population. The second step was determining the priority of the potential topic for the organization. This problem is a priority for all healthcare organizations because falls are costly and there is no reimbursement for falls. The next step involved formulating an EBP team composed of key stakeholders; finding, critiquing, and

synthesizing the evidence; setting forth EBP recommendations, with the type and strength of evidence used to support each clearly documented; determining if the evidence findings are appropriate for use in practice; and writing an EBP standard specific to the organization. Once these steps were completed, the changes would be implemented. These changes were then evaluated to ensure that the goals of the program were being accomplished. The question here was "Are the number of falls decreasing?" Impact program evaluation was important because it focused on the participants. Next, there was a transition to ongoing quality improvement (QI) monitoring, staff education, and competency review of the EBP topic. The IOWA model has shown to produce positive patient outcomes (Brown, 2014) and was aligned to the program goals and objectives mentioned previously.

Definition of Terms

Defining a fall can be a challenge because there are several definitions for fall. Haines, Bennell, and Osborne (2004) define a fall as "any event when a participant unexpectedly comes to rest on the ground, floor, or another lower level" (p. 677). The National Database of Nursing Quality Indicators (2012) defined a fall as "an unplanned descent to the floor with or without injury" (para. 3). In addition, the World Health Organization (2014) defined a fall as "an event which results in a person coming to rest inadvertently on the ground or floor or other lower level" (para. 1). These definitions are similar and consistent throughout the literature. For this DNP project, the fall definition that I used was an "unplanned descent to the floor (or extension of the floor, e.g., trash can or other equipment) with or without injury to the patient" (The Joint Commission,

2009, p. 213). It is important to have a standard definition for falls so that the hospital can accurately and consistently, track and trend fall data. According to The Joint Commission (2005) "to reduce the number of falls and improve overall safety, it is important that the starting point for all reporting and analysis begins with an organization's clear, consistent, and fully communicated definition of falls" (p. 14). When analyzing the effectiveness of a fall prevention program, rates of fall incidence and severity of injury should be included.

A fall can occur with or without injury. Falls with injury were assessed on a five-point scale as follows:

1. No apparent injury.
2. Minor: bruises or abrasions as a result of the fall.
3. Moderate: an injury that causes a tube or line displacement, a fracture, or a laceration that requires repair.
4. Major: injury that requires surgery or a move to the intensive care unit for monitoring of a life-threatening injury.
5. Death. (Health Research & Educational Trust, 2016)

Injuries that rate as a 3–5 are reported as falls with serious injury/1000 patient days.

Relevance to Nursing Practice

Falls in healthcare organizations have been well documented; however, historically addressing this problem and providing a resolution remains significant to nursing practice. According to Weil (2015), the number of patient falls still continue to rise despite 6 decades of research studies. Although the impact of falls in healthcare

organizations were identified and prevention plans were implemented, currently hospitals are still dealing with this issue. Nurses play a key role in safeguarding our patients from falls. Nurses are responsible for conducting a thorough assessment to identify risk factors, implementing interventions to address these risk factors, and educating patients and family members (Cox et al. 2015). Through the use of a fall risk assessment tool, nurses have a standardized way of identifying a patient's potential risk for falling. Without these tools, nurses would solely rely on using their nursing judgement. In acute care settings, nurses have varying degrees of experience. Novice nurses have not acquired enough experience to develop that nursing judgement. Implementing a fall risk assessment tool would provide consistency among all nurses. According to Cox et al. (2015), "In order to successfully prevent a fall, risk factors must be accurately assessed, and prevention strategies must be effectively implemented" (p. 82).

Local Background and Context

The geriatric unit in a large southeastern U.S. hospital reported a problem with inpatient falls. At the time that this project was initiated, the fall rate was 4.1 falls per 1000 patient bed days. In order to improve the quality of care, an assessment of the current fall prevention protocols of the healthcare facility was analyzed. Interventions included nonskid socks, uncluttered rooms, bed alarms, fall signs outside of the patient's room and the whiteboards in the patient's room, sitters, and hourly rounding. However, there was no fall risk assessment tool being used. Fall risk was based on nursing judgement.

Falls in hospitalized patients are a major concern because they are considered one of the largest liabilities for healthcare facilities across the nation (Bouldin et al., 2013). Falls can have a tremendous impact on the patient, the family members, health care providers, and the health care system (Ott, 2018). Patient falls are a serious problem for acute care hospitals. The unfamiliar environment of a hospital setting, acute illness, surgery, bed rest, medications, treatments, and the placement of intravenous lines and tubes pose common challenges for elderly patients. All of these factors increase the patient's risk for falling. Healthcare facilities are now being forced to examine their current practices and guidelines regarding fall prevention. In 2005, the Joint Commission introduced a national patient safety goal that required hospitals to reduce the number of falls and to implement a fall reduction program (CDC, 2008). This requirement became a standard in 2010. Healthcare facilities are being surrounded in an environment that is pay-for-performance. As of 2008, healthcare facilities were no longer receiving reimbursement for treating injuries that resulted from in-patient falls (CDC, 2008). This heightened attention to this issue. The average hospital stay for patients who fall is 12.3 days longer and leads to a 61% increase in patient-care costs (CDC, 2016). Not only do falls have a tremendous impact on the patient, they also affect the healthcare organization as well.

With known societal and financial impact, there is an incentive to develop and test further strategies for fall prevention. This fall prevention program may serve as a guide for future evidence-based studies that will help decrease the morbidity and mortality caused by inpatient falls in this vulnerable population. I implemented this quality

improvement project to prevent falls in the elderly population, who are admitted to the geriatric unit. Improving the quality of care and health related outcomes are in alignment with this healthcare facility's mission and vision.

Role of the DNP Student

The increase in patient falls and the impact from their injuries motivated me to review this organization's current fall prevention plan to see if there was room for improvement. Previous family member's hospitalization did not result in any falls, and caring for patients who had previously fallen did not create any biases for this project. The intent of this project was to maintain all professional integrity during the pilot. I conducted this quality improvement project in a professional manner that was supported by evidence-based practice. I was responsible for analyzing the current fall prevention protocols of the geriatric unit and determine areas of improvement.

Once I devised an improvement plan, it was presented to the geriatric unit administrators for approval. I was also responsible for educating the unit nurses on the use of the Morse Fall Scale and evaluating their learning using a pre- and posttest method. In addition, the nurses were educated on the interventions associated with risk factors of the Morse Fall Scale. This quality improvement project was piloted for 2 months on the geriatric unit. During this time, I oversaw the project, managed data collection, and analyzed the findings. Once the pilot was completed, I continued to monitor the number of patient falls on the unit to ascertain the effect of the termination of the pilot.

Role of the Project Team

Members of a fall prevention committee that formed consisted of the floor manager, the clinical education specialist, the geriatric unit doctor, a physical therapist, a pharmacist, nurses, and patient care associates. A review of the chart of patients who have fallen in the last 6 months on the geriatric unit were performed to identify contributing factors. Falls were also trended by the time of day that the fall occurred and number of staff members on shift. It is important to identify these risk factors so that the nurses working on that unit were well informed and more attentive. In addition, the committee analyzed and researched three fall risk assessment tools: Morse Fall Scale, Hendrich II Fall Risk Model, and the John Hopkins Fall Risk Assessment Tool. Based on evidence-based practice and the current literature, the fall prevention committee selected the Morse Fall Scale as the fall risk assessment tool to be implemented.

Summary

In this section, I provided an overview of the background and context regarding this quality improvement project. The IOWA model served as the conceptual model that guided this project. The use of a conceptual model was essential in guiding this evidence-based project. This project was in alignment with the mission and vision of the healthcare facility. My role, as well as the project committee's role, was clearly outlined. In Section 3, I address the practice-focused question, sources of evidence, operational definitions, participants, project design methods, protection of human subjects, analysis and synthesis of this project.

Section 3: Collection and Analysis of Evidence

An increase in the number of inpatient falls on the geriatric unit in a large southeastern hospital has heightened the concerns of unit and hospital administrators. I reviewed the current fall prevention protocols to determine areas of improvement and I introduced a revised plan. The purpose of this quality improvement project was to evaluate the effectiveness after the introduction of the Morse Fall Scale and interventions to address the risk factors of the Morse Fall Scale (Morse, 1997). Even though several research studies have provided valuable insight into this problem, falls in acute care settings still occur. In this section, I will address the practice-focused question, the sources of evidence and literature review, analysis, and synthesis.

Practice-focused Question

The elderly population is estimated to increase from 11 million in 2010 to 18 million in 2030 (Bragg & Hansen, 2015). Acute care settings will be expected to provide this increasing population with improved quality care and better patient outcomes in regard to fall prevention. With this quality improvement project, I attempted to answer the question: Can the implementation and evaluation of the Morse Fall Scale assessment tool with interventions impact patient fall rates when compared to pre implementation of the fall prevention program?

Operational Definitions

The fall rate was determined by:

$$\frac{\text{Number of hospitalized patients who fall X 1000}}{\text{Number of total inpatient days}}$$

Example:

A facility has had 4 falls in the last month. The census was 30 for 30 days, which is 900 inpatient days. Thus, the fall rate for last month was (4/900) x 1000 = 4.44 per 1000 inpatient days. This means that for every 1000 inpatient days, one can expect to have about four falls.

The injury rate is determined by:

$$\frac{\text{Number of injuries X 100}}{\text{Number of inpatient falls}}$$

Example:

A facility has had 80 falls in the last month. Of those 80 falls, 8 resulted in injury. Thus, the injury rate for last month was (8/80) x 100 = 10 per 100 falls. This means that 10% of the falls last month resulted in injury.

Sources of Evidence

Literature reviews are important because they inform readers of what research has already been done and what is already known on a particular subject. They also establish a relevancy of the research. Fall prevention has been well documented throughout the research. Most studies examine fall prevention in long term care facilities. However, within the last 10 years, more studies have focused on fall prevention in acute care settings.

I performed a comprehensive literature search to identify evidence-based studies related to fall prevention in the elderly from 2013 to 2018. Publisher Medline (PubMed),

Medical Literature Analysis and Retrieval System Online (MEDLINE), Cumulative Index to Nursing and Allied Health (CINAHL), OVID, and the Cochrane Database of Systematic Reviews were the databases used for this search. Full text articles and articles written in the English language were filters used in these databases. *Elderly falls, geriatric falls, fall prevention, risk factors for falls, inpatient falls, hospital falls, falls in acute care, fall risk assessment, fall risk assessment tools,* and *the Morse Fall Scale* were keywords used for this search.

Published Outcomes and Research

Falls. Falls are the leading cause of death related to injury among the elderly (CDC, 2016). Even though most patient falls are considered a preventable occurrence, it is ranked as the second most common undesirable event during hospitalization (Baek et al., 2014). A patient who falls in the hospital can sustain different levels of injuries, ranging from minor bruises, to broken bones, or even death. In addition to the physical impact that a fall can have on a patient, there are also psychological, social, and financial impacts as well. Psychologically, the patient may experience fear of falling again, increasing their anxiety levels. Socially, the patient may lose confidence in their mobility efforts and refrain from attending events or activities. According to Godlock, Christiansen, and Feider (2016), the estimated cost of fall related injuries in the elderly population is $30 billion and is expected to increase to $54.9 billion by 2020. The healthcare system is responsible for the cost of the injury which could be additional length of the hospital stay, any procedures or diagnostic tests, treatments, and rehabilitation. However, once the patient is discharged home, they may need additional

services. Often times these services are not fully covered by insurances and the patient is responsible for the copay.

Risk factors. Risk factors were divided into two groups, intrinsic and extrinsic factors. Intrinsic factors are those that are physiology based. Several studies have identified these factors to be altered elimination, cognitive and sensory impairments, altered or limited mobility/gait, and impaired balance (LeLaurin & Shorr, 2019; Bergin, 2016; Shabbir, Farooqi, & Jan, 2016; Zhao & Kim, 2015). Contributing to these risk factors are medications, age-related conditions, history or fear of falling, and fluid and electrolyte imbalances. Interventions should be targeted to these intrinsic risk factors. For example, exercise and strength training may be used for problems with altered or limited mobility/gait (Sherrington et al., 2001). Patients with multiple medications can benefit from a medication review and modification (Bergen, 2016; Stubbs, Denkinger, Brefka, & Dallmeier, 2015).

Fall risk assessment tools. The majority of fall risk assessment tools attempt to address these risk factors (Bassett, Siu, & Honaker, 2018). Many healthcare facilities have implemented fall risk assessment tools to identify which patients are at high or low risk for falls. A systematic review conducted by Healy and Haines (2013) revealed that the scores obtained from these tools have low specificity and low sensitivity. However, the knowledge obtained from these tools can have clinical benefits. Effective interventions that focus on specific risk factors are more appropriate and effective. Therefore, assessment tools need to be more comprehensive and must be linked with

interventions (Healy & Haines, 2013). Just identifying a high or low risk patient alone is not effective in preventing falls.

According to the Joint Commission on Accreditation of Healthcare Organization (2006), the most important preventive strategy is to assess patients periodically using a highly predictive fall risk assessment scale. Three fall risk assessment tools have been considered for implementation of this project. These tools are the Morse Fall Scale, Hendrich II Fall Risk Model, and the John Hopkins Fall Risk Assessment Tool. All of these tools use a point scale system.

The Morse Fall Scale consists of six variables that include history of falling, secondary disease, ambulatory aid, intravenous therapy/heparin lock, gait, and mental status. The total score can range from 0 to 125. A total score below 25 is classified as low risk. A score between 25 and 30 points is classified as moderate risk. A score of 51 or higher is classified as high risk (see Appendix C). The reliability and validity of this tool has been well documented in the literature (Bassett, Siu, & Honaker, 2018; Watson, Salmoni, & Zecevic, 2016; Webster, 2016).

The Hendrich II Fall Risk Model consists of seven variables that include gait, mental status, elimination, medications, loss of balance, gender, and depression. The total score can range from 0 to 16. A score above 5 is classified as high risk. This model also incorporates the "Get up & Go Test." The predictive validity of the Hendrich II Fall Risk Model was low due to its lower sensitivity and specificity (Aranda-Gallardo et al., 2013).

The John Hopkins Fall Risk Assessment Tool consists of eight variables that include age, fall history, elimination, medication, patient care equipment, mobility, and

cognition. A total score can range from 0 to 28. A total score below 6 is classified as low risk. A total score between 6 and 13 points is classified as moderate risk. A total score above 13 is classified as high risk. According to Klinkenberg and Potter (2017), the John Hopkins Fall Risk Assessment Tool had "moderate to poor predictive validity" (p. 111) and was not very reliable. A comparison of these tools is shown in Appendix A.

Multidisciplinary approach. Tricco et al. (2017) performed a systematic review and a meta-analysis which suggested that injuries related to falls were preventable with interventions that were multifactorial or individualized. Several studies identified that fall intervention programs were effective when a multidisciplinary team intervention was implemented (France et al., 2017; Quigley, 2016; Hickman et al., 2015). The evidence from these studies, in regard to the successful implementation of multifactorial interventions, recognize these important factors: leadership support, engagement of staff in the design, guidance by a multidisciplinary team, pilot testing, and changing negative attitudes. A multidisciplinary approach including physical therapy, pharmacy, and nursing for specific interventions is essential.

There also needs to be a focus on prevention, detection, and treatment. For example, if a patient is confused because of low oxygenation, then that is what needs to be focused on. Medications need to be reviewed. Hourly rounding by staff can offer continence management. Exercise and access to mobility aids can also be beneficial. Environmental changes are also important to consider. Basic things such as a clutter free environment, a well -lighted room, placing items within reach, and the use of slip mats can make a significant impact (Ambrose, Cruz, and Paul, 2015).

Evidence Generated for this Doctoral Project

Participants. The target population in this quality improvement project were the patients admitted to the geriatric unit who were 65 years of age and older. The approach of purposive sampling was very appropriate for this project because a specific population was being targeted and this was beneficial. It was also very important to maintain patient confidentiality. Patients were assigned random numbers to maintain the deindentification process.

Procedures. Planning is a necessary stage in program development. The success of any project depends on its plan. "Health professionals have always planned programs to achieve desirable ends, such as to make a positive impact on health status and improve the quality of life" (Hodges & Videto, 2011, p. 107). Once a program has been developed, it is also important to evaluate the program. Several models and theories exist to guide in the evaluation process. According to Kettner, Moroney, and Martin (2017), "the primary purpose of program evaluation is to provide feedback on results, accomplishments, or impacts (outcomes) and to inform policy makers and planners about the effectiveness of programs and the appropriateness of the social intervention hypothesis that underline them" (p. 241).

Because permission was already obtained by the hospital, the Morse Fall Scale (Appendix B) served as the tool for identifying which patients were at risk for falls. The Morse Fall Scale was selected by the fall prevention committee because it has received the most support from evidence-based literature of randomized controlled trials. Its validity and reliability scores have been documented by several studies (Bassett, Siu, &

Honaker, 2018; Watson, Salmoni, & Zecevic, 2016; Webster, 2016). Sensitivity and specificity are measures of validity. The sensitivity scores of the Morse Fall Scale range from 69% to 84% and the specificity scores range from 65% to 69% (Aranda-Gallardo et al, 2013). Oliver, Daly, Martin, & McMurdo (2004) have reported a predictive validity of approximately 70%. Furthermore, the Morse Fall Scale was easy to use and took less than 5 minutes to complete.

Each patient was assessed for specific risk factors by the nursing staff. These risk factors were history of falls, secondary diagnosis, ambulatory aid, IV or IV access, gait, and mental status. Depending on the risk factor, specific interventions were initiated to address them. If a patient had a previous fall prior to admission, a flag was placed on the patient's chart documenting a history of falling. If the nurse documented a gait problem or if the patient used an ambulatory aid, then a physical therapy consult order was requested from the health care provider. If the patient had an IV infusion, the health care provider would be contacted to determine if the IV could be discontinued and use an alternative form of treatment. Patients were assessed upon admission, when a change in condition occurred, and throughout hospitalization as needed. Therefore, assessment for risks were a continuous process, performed daily and as needed.

If the hospital chose to implement this quality improvement tool, then nurses on the unit would be educated on how to use this tool through in-services and it will be incorporated into practice. Immediately after implementation, data would be generated to determine if the risk assessment tool better prepared nurses to identify which patients were at risk for falling and if the interventions helped to decrease the number of patient

falls on the unit. Nurses would be asked to evaluate the Morse Fall Scale using a Likert scale questionnaire. The de-identified data would then be provided to the DNP student for analysis.

Because the focus of this project was on quality improvement, a mixed method approach was most appropriate. A mixed method approach consisted of using both qualitative and quantitative project designs. Falls were reported through incident reports. The incident report was reviewed and contributing risk factors were identified. A post fall huddle occurred with fall prevention committee members and geriatric unit staff to perform a root cause analysis of the incident. A sample of a post huddle fall report is listed in Appendix C. A broader perspective would be achieved this way. Terry (2012) identified several advantages of this design. This type of design may have a higher credibility and may generate data that is statistically significant. Furthermore, this project design "can be used to study a small number of cases in depth" (p. 105). Terry (2012) also identified that a limitation to this study design was that it can be more time consuming.

Archival and Operational Data

Hospital administrators are required to monitor the number of patient falls that occur at their facility. Agencies, like the Joint Commission and the Agency for Healthcare Research and Quality use this data to generate benchmarks to be used by other hospitals across the nation. When a patient falls in the hospital, the patient is assessed for injuries and treatment is rendered. An incident report is generated by the nurse and documents a brief description of the incident, including time, location, and if any injuries

were sustained. Unit managers calculate the fall rate for their unit. This report will then go to hospital administrators, who meet monthly with the unit managers to discuss these reports. Hospital administrators and unit managers perform a root cause analysis of the incidents to determine what factors played a role in the fall and if there was anything that could have been done to prevent the fall. A quarterly report is generated and archived showing the unit, the numbers of falls, and the fall rate. This is the data was provided to me for analysis and recommendations for improvement. Fall rates are a very good way to measure if a fall prevention program is effective.

Protection of Human Subjects

IRB approval was received from Walden University and the IRB of the healthcare facility deferred to Walden University as the primary IRB since this project was a quality improvement project. The protection of human subjects is a necessary step in any DNP project. The data obtained from this project was data that was already being generated by the healthcare system. Therefore, consent from patients was not required. Data was based on nursing assessments and incident reports. All data was de-identified and assigned random numbers. This was done to ensure the privacy of the patient's information. The data was stored on a password protected computer and documents were stored in a locked cabinet. The data will be kept for 3 years in a password protected computer and then destroyed.

Analysis and Synthesis

This healthcare facility is committed to patient safety and decreasing the number of patient falls. Therefore, this project would be of great assistance to them. A review of

the current literature and practice guidelines of the healthcare facility provided important data regarding current practices. A fall prevention committee was formulated that consisted of the floor manager, the clinical education specialist, the geriatric unit doctor, a physical therapist, a pharmacist, nurses, and patient care associates. A review of the chart of patients who have fallen in the last 6 months on the geriatric unit were performed to identify contributing factors. Falls were also trended by the time of day that the fall occurred and number of staff members on shift. It is important to identify these risk factors so that the nurses working on that unit were well informed and more attentive. The committee was in agreement on the use of the Morse Fall Scale.

Once the Morse Fall Scale was implemented, the number of falls would continue to be monitored for 8 weeks. Once the pilot was complete, monthly fall rates was still monitored to determine the impact of the termination of the pilot. Each month a fall rate and the number of falls were requested from the unit manager. Therefore, the number of falls before the pilot, during the pilot, and after the pilot were tracked. This allowed the researcher to determine if the fall prevention program was effective in reducing the number of falls.

The question here was “Are the number of falls decreasing?” Impact program evaluation was important because it focused on the participants. Next, there was a transition to ongoing quality improvement (QI) monitoring and staff education. The IOWA model has shown to produce positive patient outcomes (Taylor-Piliae, 1999) and was aligned to the program goals and objectives mentioned previously.

Dole (Laureate Education, 2013) suggests that having specific goals, how to measure those goals, and having a realistic timeframe are elements necessary to evaluate any program. Evaluation was an ongoing process. Impact evaluation measured the short-term changes intended for this population. The long-term changes were based on the outcome evaluation which took into consideration the improved health status or quality of life from preventing a fall.

Summary

Evaluation was necessary in every step of program planning. Evaluation models and theories guided program designers through each step to improve the program. The IOWA model and impact evaluation were very appropriate for this study. An evaluation plan developed was in alignment with the program goals, objectives, and activities. The short-term effects of impact evaluation and the long-term effects of outcome evaluation as a result of the implementation of this program were also identified. Evaluation would be vital in ensuring the success of any program implementation. In Section 4, I address the findings and implications, recommendations, contributions of the doctoral project team, strengths and limitations.

Section 4: Findings and Recommendations

Falls by the elderly in acute care settings are a major problem in healthcare facilities across the United States. Falls can cause serious injury and is the leading cause of morbidity and mortality in the elderly population (Costa-Dias et al., 2014) The purpose of this quality improvement project was to evaluate the effectiveness of a comprehensive fall prevention program for hospitalized, elderly patients age 65 years and older. After I reviewed the current fall prevention practices, it was determined that assessing the risk of a patient falling was based solely on the nurses' judgement. Therefore, the implementation of a fall risk assessment tool was needed. The Morse Fall Scale (MFS) was implemented on the geriatric unit. Nurses were trained on the use of the MFS via in-services.

Interventions were coupled with the MFS to improve patient outcomes. As mentioned previously, the review of scholarly evidence shows that fall risk assessment tools are a major contributor in the prevention of falls. Furthermore, the data generated would minimize the gap in practice for acute care settings, as the majority of studies have been conducted primarily in nursing homes.

The number of patient falls were recorded. This data provided support for this quality improvement project. Nurses performed a fall risk assessment using MFS on each patient admitted to the unit. Patient's information was de-identified. The fall rate was calculated per month. After the 8-week data collection period, the nurses were given a questionnaire using a Likert scale to evaluate the effectiveness of the MFS. A MFS score was obtained for a sample of N=130 patients over a period of 8 weeks. Based on this

score, the patient was classified as being at low, moderate or high risk for falls. Fall reduction interventions were assigned to specify the patients' plan of care. For instance, if a patient was scored as having a weak or impaired gait, the nurse would obtain an order for a physical therapy evaluation.

Findings and Implications

The numbers of falls on the unit for each month in 2017 (Appendix D) served to establish a pattern of monthly falls prior to the implementation of this quality improvement project. Prior to the implementation of this quality improvement project, the average falls per month was 2.25 from January 2017 to August 2017. During implementation, the average falls per month was 1.5 from September 2017 to October 2017, an improvement of 67%. After withdrawal of the quality improvement project, the average falls per month was 3.0 from November 2017 to December 2017. The implementation of this quality improvement project resulted in a decrease in the average number of falls per month for patients on the geriatric unit, therefore suggesting the program is effective.

Nurses completed a Likert scale questionnaire (Appendix E) to evaluate this quality improvement tool. This questionnaire consisted of five questions. Twenty-eight of 32 nurses (87.5%) responded to the questionnaire. Nurses positively responded to the quality improvement tool. Based on the results of this questionnaire, 99.2% of the nurses (N=28) either strongly agreed or agreed that the MFS was (1) easy to understand, (2) could be computed in less than three minutes, (3) was effective in identifying patients at

risk for falls, (4) improved the staff's awareness of fall prevention and (5) helped to decrease the number of patient falls. Detailed results can be found in Appendix F.

This quality improvement project has had a positive influence and practice improvement on the nursing staff of the geriatric unit. This fall prevention program was easily applicable to the geriatric unit and nurses did not feel overwhelmed by the program. They reported that it was quick and easy to use, which encourages compliance. Based on the results from these findings, this fall prevention program can have a significant impact on individuals, the community, the institution and the health care system as a whole. Preventing a patient from falling during a hospital stay can keep that patient from sustaining additional injuries which may result in an increase in morbidity and mortality. A shorter length of hospital stay without additional injury also brings psychological well-being to the patient as well as their family members. Moreover, when a patient sustains an injury from a fall, the nursing staff can also feel responsible, disturbing their psychological well-being as well. The institution is impacted by increased healthcare costs from the treatment of injury, increased length of stay, and increased staffing hours due to patient falls. The entire healthcare system is also impacted because it wants to be recognized for patient safety and improving the lives of the patients.

Patient safety should be every healthcare systems priority. Patients, being cared for in any healthcare institution, should feel that every precaution is being taken to ensure their well-being. By implementing this quality improvement project, the number of falls by elderly patients can be reduced significantly. With that being said, this fall prevention program can provide positive social change, where nurses and nurse managers can serve

as change agents in the healthcare system. In other words, they have the ability to create and influence positive change for the betterment of their patients, their community, their institution, as well as their healthcare system.

Recommendations

Introduction of the MFS as a fall risk assessment tool combined with patient specific interventions has significantly decreased the number of inpatient falls. The fall rate during the implementation of this quality improvement project was below 2.0 and the project goals were met. To decrease the gap in nursing practice, the healthcare system must develop a policy that requires the nurse to assess a patient's risk for falling by using the MFS. The policy must also specify a time frame for the fall risk assessment to be completed upon patients' admission to the geriatric unit. Furthermore, fall risk assessment needs to be a continuous process. Nurses should establish a baseline fall risk upon admission and continue to assess fall risk whenever there is a change in the patient's condition. Nurses must be held accountable for following hospital policies. Nurse managers must also be held accountable for ensuring that unit nurses are following policies and they must continuously evaluate the fall risk prevention program to guarantee that the program is meeting its goals.

Contribution of the Doctoral Project Team

A fall prevention committee consisted of the floor manager, the clinical education specialist, the geriatric unit doctor, a physical therapist, a pharmacist, nurses, and patient care associates. This committee contributed to the planning of the project and provided valuable input regarding the interventions associated with the fall risk factors of the MFS.

Once the project was being implemented, a doctoral project team was created. This consisted of the geriatric unit doctor, the nurse manager, the clinical managers, the clinical education specialist, and myself. It was vital that everyone on the team supported the project and the steps involved. This encouraged the nursing staff to be more compliant with performing the fall risk assessments using the MFS.

Strengths

One of the greatest strengths of this quality improvement project is that all patients on the geriatric unit are elderly patients, aged 65 or older, which is the target population. Another strength is that the MFS tool is widely a used tool that uses evidenced based support. The tool is multifaceted in that it addresses six risk factors for falling, including prior history of falls, secondary diagnoses, use of ambulatory aids, having an IV or heparin lock, patient's gait status, and patient's mental status. Additionally, many nurses, both new and seasoned, are familiar with how to use the MFS tool. Lastly, the quality improvement project includes the use of interventions specific to each patient's needs. It is not enough to just identify patients' risk of falling. Nurses must also identify why patients are falling and come up with a solution to prevent this from happening.

Limitations

A limitation to this quality improvement project was that in-services that were planned to educate nurses on the fall prevention program were not as detailed. Nurses on the geriatric unit with prior experience used the MFS tool before and did not want to participate in the in-service. New nurses on the geriatric unit claimed that they had prior

knowledge of the MFS in their nursing curriculum and were already comfortable using tool. The nurses also felt that the interventions were self-explanatory and that they did not require further education.

Another limitation of this quality improvement project was that there were only elderly patients, 65 years and older, included in the project. If patients were younger than 65 years of age, they were automatically excluded from the project. In addition, per the geriatric unit guidelines, for patients to be admitted to this unit they must have an anticipated length of stay no longer than three days. Thus, if a patient was 65 years of age or older and required a length of stay greater than three days, the patient was admitted to another unit within the hospital.

Summary

Reducing the number of inpatient falls in elderly patients can be accomplished by assessing for fall risk and implementing evidenced based strategies to prevent falls. Therefore, the use of the MFS, as implemented in this project, has addressed the problem of inpatient falls in the elderly in the geriatric unit. In Section 5, I will address my dissemination plan and an analysis of self as a practitioner, scholar, and project manager.

Section 5: Dissemination Plan

Dissemination is a vital part of nursing research and therefore it is necessary to have a plan on how to disseminate the findings of this quality improvement project. Initially, my goal was to disseminate these findings on the geriatric unit. As nurses and nurse managers play a critical part in this process, dissemination is necessary to make them aware of how their actions can impact their patients' outcomes, whether it be positively or negatively. It can serve to motivate them and in turn they can motivate others. As participants in this quality improvement project, nurses would have a strong interest in the findings. A poster board presentation can be created for the geriatric unit. In this presentation, I will address background information, what the problem is, what methods were used, what the findings were and what the implications of this quality improvement project are.

The second part of the plan would be to disseminate the findings of this quality improvement project to the health care system's fall committee. This can be done by an oral presentation accompanied by a PowerPoint presentation. This will allow committee members to ask questions in an open forum. Other members of the healthcare system who have a vested interest in improving patient outcomes are the stakeholders and administrators. An oral presentation accompanied by a PowerPoint presentation would also serve as an effective way to communicate these findings. Again, an open forum for asking questions or clarification would be ideal. Stakeholders and healthcare system administrators have the power to make changes. Getting them to "buy in" would yield faster and more effective results.

In order to disseminate these quality improvement project findings to the broader nursing profession, participation seminars, conferences, or nursing research fairs can be beneficial. Presenting at nursing organization meetings or conferences is also a great way to reach the target audience. Another method that can be used are papers or publications. These can be journals or hardcopy and online publications. Because this is a quality improvement project, a specialty publication may be more suitable.

Analysis of Self

As a Practitioner

Improving quality of care leads to better patient outcomes. As all practices need to be based on evidence, it is vital that nurses continue to find ways that yield the best possible outcomes for their patients. There is a large amount of research findings in the world of nursing. However, these findings are not being translated into practice. According to Mackey and Bassendowski (2017), "nurses must be proactive in their quest for research knowledge, so the gap between theory and practice continues to close" (p. 51).

My goal was to improve fall rates for elderly patients in the acute care setting. Even though there was a fall prevention program in place, the fall rates were unexpectedly high. Even one fall was one too many. I had to analyze the current fall prevention program and make improvements. This process taught me how to analyze the current research, as well as national guidelines and recommendations on fall prevention, and how to incorporate them into current practice. In addition, I found it to be a balancing act between the nursing staff and administration. This experience has allowed me to grow

as a practitioner. I was able to see first-hand how small changes could have such a big impact on patient safety. I have grown as a leader, a manager, and a facilitator of change.

As a Scholar

According to Grossman and Valiga (2016), nurse leaders and educators are faced with the responsibility of preparing today's nurses for tomorrow's challenges. Educating and improving nursing staff awareness on the importance of fall prevention was of vital importance. Once the nursing staff saw the benefits of using a fall risk assessment tool, they became more compliant. The nursing staff also saw the benefits of using patient specific interventions to yield better patient outcomes. Nurses are constantly being bombarded with new knowledge which can be overwhelming at times. As a scholar, I have learned that knowledge must be disseminated in a clear and concise manner when educating nurses in the clinical setting. Then, allow them time to process this knowledge and give them the opportunity to ask questions. I have gained insight on how to analyze, organize, and disseminate information. I was able to successfully facilitate change in the attitudes of the nurses through education, which led to increasing compliance with this quality improvement project.

As a Project Manager

The role of a project manager is very complex. According to Stanley, Malone, and Shields (2016), "the project manager helps define the goals and objectives of the project, determine when the various project components are to be completed and by whom, and create quality control checks to ensure that completed components meet a certain standard" (p. 53). This project has allowed me to develop my skills as a change agent and

expand my knowledge base and experience as a project manager. As a result, I am able to initiate change and manage with more confidence and competence. This will be a valuable asset for future quality improvement projects.

Summary

Inpatient falls in the elderly continue to be a major problem for hospitals across the globe. According to the U. S. CDC (2016), falls are the leading cause of fatal injury and the most common cause of nonfatal trauma-related hospitalizations among the elderly. There is a substantial amount of evidence that supports the use of a comprehensive fall prevention program that includes a fall risk assessment tool a long with interventions to reduce the number of falls in hospitalized elderly patients. The implementation of the MFS and interventions demonstrated an improvement in the fall rates on the geriatric unit. This quality improvement project attained its goal of reducing the fall rate to 2.0 on the geriatric unit. In addition, this quality improvement project enhanced the nurse's awareness of fall risk and the need for interventions.

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Appendix A. Comparison of Risk Assessment Tools

Risk Factors	Morse Fall Scale	Hendrich II Risk Model	John Hopkins Fall Risk Assessment Tool
History of falls	X		X
Gait instability	X	X	X
Lower extremity weakness			
Altered mental status	X	X	X
Altered elimination		X	X
High risk medications		X	X
Secondary diagnosis	X		
Ambulatory aid	X		X
Intravenous access	X		
Dizziness or vertigo		X	X
Depression		X	
Male gender		X	
Advanced age			X
Automatic high- or low-risk triggers			X

Appendix B. Post Fall Huddle Report

Post Fall Huddle Report

Not part of medical record

Unit:_____Location of Fall: _____
Date_____Time of Fall:_____
Activity Order at the time of fall:_____
RN Assigned:_____ PCA Assigned:_____
Staff Present during Huddle_____, _____
_____, _____, _____
_____, _____, _____

What could we have done differently to prevent this fall?
_____
What is the diagnosis patient admitted with and what is patients history?
_____

What was mental status prior to fall?_____

Did the patient receive medication that may have led to the fall? What medications and when?
_____
_____

When was rounding last performed and what was addressed at the time of round?
_____
_____

What was patient doing when fall occurred?
_____

Were there any injuries? _____What were the injuries? _____

Did patient require change in level of care? _____

What is the follow up for any treatments?
_____

Was Bed or Chair Alarm On? Y N
Do we need to move patient closer to station? Y N
Did we order a sitter for this patient? Y N Should we order sitter for patient now? Y N
Was family notified? Y N
Is physical therapy actively seeing this patient Y N Do we need to get an order for PT to evaluated this patient Y N

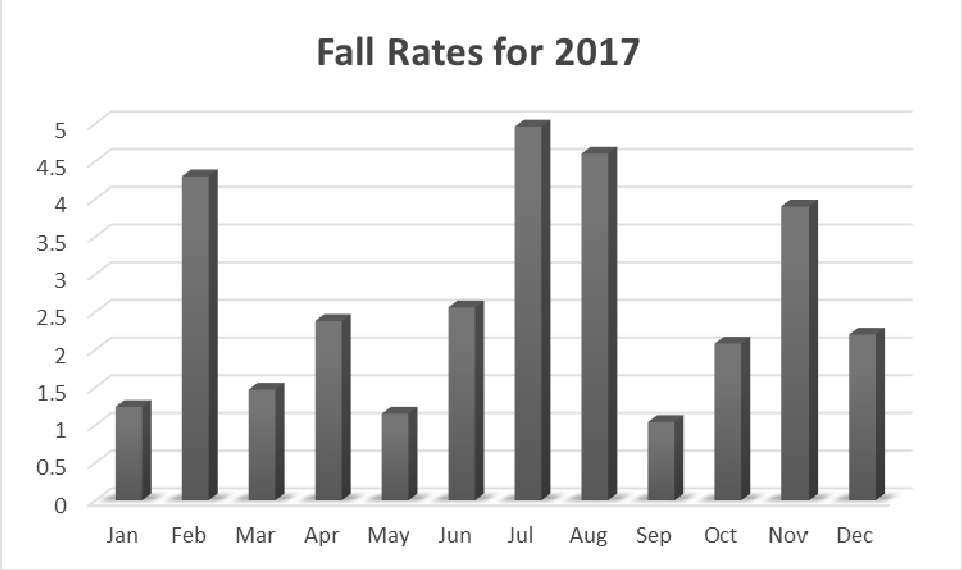
If injury has occurred family must be notified by administrative representative.

Patient Label/ Name/ Age / Gender

Appendix C. Morse Fall Scale

Item	*Scale*	*Scoring*
1. History of falling; immediate or within 3 months	No 0 Yes 25	_____
2. Secondary diagnosis	No 0 Yes 15	_____
3. Ambulatory aid Bed rest/nurse assist Crutches/cane/walker Furniture	 0 15 30	_____
4. IV/Heparin Lock	No 0 Yes 20	_____
5. Gait/Transferring Normal/bedrest/immobile Weak Impaired	 0 10 20	_____
6. Mental status Oriented to own ability Forgets limitations	 0 15	_____

Appendix D. Monthly Fall Rates for 2017



Month	Average Monthly Census	Number of Falls	Fall Rate
January	26	1	1.24
February	24	3	4.3
March	22	1	1.47
April	28	2	2.38
May	26	1	1.15
June	26	2	2.56
July	26	4	4.96
August	28	4	4.6
September	32	1	1.04
October	31	2	2.08
November	34	4	3.9
December	29	2	2.2

Appendix E: Likert Scale Questionnaire

Morse Fall Risk Assessment Tool

1. The MFS is easy to understand.

Strongly agree Agree Neutral Disagree Strongly disagree

2. The MFS can be completed in less than 3 minutes.

Strongly agree Agree Neutral Disagree Strongly disagree

3. The MFS is effective in identifying patients at risk for fall.

Strongly agree Agree Neutral Disagree Strongly disagree

4. The MFS improves the staff's awareness of fall prevention.

Strongly agree Agree Neutral Disagree Strongly disagree

5. The MFS can help to decrease the number of patient falls.

Strongly agree Agree Neutral Disagree Strongly disagree

Appendix F. Nurses Responses to Likert Questionnaire

Respondents	Question 1	Question 2	Question 3	Question 4	Question 5
1	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
2	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
3	Strongly Agree	Agree	Agree	Agree	Agree
4	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
5	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
6	Strongly Agree	Strongly Agree	Agree	Agree	Agree
7	Agree	Agree	Neutral	Agree	Agree
8	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
9	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
10	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
11	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
12	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
13	Strongly Agree	Agree	Agree	Agree	Agree
14	Agree	Agree	Agree	Agree	Agree
15	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
16	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
17	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
18	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
19	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
20	Strongly Agree	Agree	Agree	Agree	Agree

21	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
22	Strongly Agree	Strongly Agree	Agree	Agree	Agree
23	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
24	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
25	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
26	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
27	Strongly Agree	Strongly Agree	Agree	Agree	Agree
28	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
Count (N)	28	28	28	28	28
Not Answered	0	0	0	0	0
Total	28	28	28	28	28
Strongly Agree	26	23	20	20	20
Agree	2	5	7	8	8
Neutral	0	0	1	0	0
Disagree	0	0	0	0	0
Strongly Disagree	0	0	0	0	0
TOTAL	28	28	28	28	28
Strongly Agree (%)	93%	82%	71%	71%	71%
Agree (%)	7%	18%	25%	29%	29%
Neutral (%)	0%	0%	4%	0%	0%
Disagree (%)	0%	0%	0%	0%	0%
Strongly Disagree (%)	0%	0%	0%	0%	0%
Total	100%	100%	100%	100%	100%