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### Further Fall Prevention

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Further Fall Prevention Benchmark Study

A Paper Submitted in Partial Fulfillment of the Requirements for

NURS 5382

In the School of Nursing

The University of Texas at Tyler

by

Kristen Janes

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### **Executive Summary**

According to Shee et al. (2014), 60% of falls happen at the bedside. Falls are defined as events in which the soil, ground impact the individual, or other lower level, which are a public health problem and can cause severe or fatal injuries (Xiemenes et al., 2019). Many resources are available in most inpatient facilities to prevent falls but from personal experience, those precautions are not used with every patient. Resources are useless without implementation. Researching and observing what implementations work and what areas can be improved to decrease falls, increase patient safety, and decrease cost related to falls is imperative. Implementing all resources available along with instruction to staff, family members, and patients to increase compliance with resources available would be beneficial. Imagine using a pamphlet such as that encountered when educating passengers on a flight before departure on the safety precautions in place; this is the vision for the project change is to thoroughly educate staff, patients, and family members with pamphlets on admission as to why such fall precautions are in place and what is to be expected with their use. This process also includes the patients and family members in the plan of care related to safety during their loved one's acute care stay.

### **Rationale**

Falls rank as one of the most common types of accidents in the inpatient population (Subermaniam et al., 2017). Increased falls are adverse events that can result in injury, longer acute care stays, and increased health care expenses (Hoke & Zekany, 2020). The goal of this benchmark study is to decrease falls and increase patient safety by ensuring those fall interventions are being used properly on every patient. If evidence-based change is not implemented, patients will continue to fall and prolong their acute care stay or need additional treatment-related care or rehabilitation. For example, hip fractures are common outcomes of

falls. Like other surgeries, hip surgery can lead to death, which can also be an undesired outcome, all proceeding from a preventable fall. There is a potential to decrease fall rates by ensuring staff is knowledgeable and compliant with using all fall interventions available at the facility. If one or more patients can be safer in an acute care setting from a fall being prevented, then that would mean success.

### **Literature Synthesis**

There are many articles of interest when conducting a literature review related to the topic of falls. Many useful resources are available in the acute care setting; however, the question arises are these resources being educated on and use properly. While discovering evidence on the different resources and interventions available, one considered an educational piece such as a pamphlet to educate, coordinate, and implement all the resources to staff, patients, and family members. Being there are many different resources and tools available for fall prevention, each is explained. The aim is to combine all resources available and implementing more education on the importance of using these interventions consistently utilizing a pamphlet, educational card, and/or reward program.

Timmons et al. (2019) provide qualitative evidence through nursing and patient interviews to offer insight regarding technical and staff problems. Understanding the nursing and patient perspective, one would implement new goals and standards in hopes of meeting the expectations of both to reduce patient falls and increase patient safety during an acute care stay.

Cuttler et al. (2007) is a quality improvement project using descriptive analysis, bivariate analysis, and statistical data to address reducing medical-surgical inpatient falls and injuries with videos, icons, and alarms. The results include a reduction in falls by 20%, which provides data for the proposed change. While cost appears to be an ongoing issue to implementation,

education does give a decrease in falls as exhibited by statistical data. One would capitalize on this study to show that current interventions available do decrease falls if used consistently.

Shee et al. (2014) conducted a cohort study that explored preintervention and postintervention falls. Interventions include electronic sensor bed and chair alarm systems. The outcomes are fall incidence and fall-related injuries, as well as the acceptability of the staff to implement.

Sahota et al. (2014) completed a randomized controlled trial that had a large patient number with an intervention and a control group. Fall rates are lower in those in the group implementing bed and bedside chair pressure sensors using radio pagers. All these interventions are available at most facilities that would be of interest for this projected change project implementation.

Wolf et al. (2013) published a randomized control trial related to body-worn accelerometers. Statistical data in favor of fall interventions were presented. Fewer falls are seen in the intervention group using body-worn accelerometers than in the control group.

Ali et al. (2018) used a natural experimental study design using inpatient falls data from an incident report system called Datrix to evaluate the use of portable nursing stations with the bays of hospitals to reduce the rate of inpatient falls. A reduction percentage of 26.71% was found post-intervention. Computers on wheels are available now at most inpatient settings, therefore this would be a good intervention without increasing cost or need for new equipment. Having appropriate staff could be an area of concern to ensure each set of patients had a nurse and tech available within the site.

Ximenes et al. (2019) report a methodological study regarding the construction and validation of educational booklet content for fall prevention in hospitals. The instructional

booklet was found to be viable in education for fall prevention. When implementing the booklet for educational purposes, one understands that the fall interventions used are ultimately for the patient's safety.

Baker et al. (2019) explain that falls are a leading reason for older people presenting to the Emergency Department (ED). Providing telephone-based patient-centered fall prevention reduced falls but not fall injuries when falls occur. However, fractures were reduced in this randomized control study. Incorporating patient-centered strategies into clinical practice could offer improvement to outcomes and reduce falls in patients presenting to the acute care setting.

Cangany et al. (2018) explore if the concept of no toileting alone is the answer to fall prevention. Using a (Continuous Quality Improvement) CQI Model, Plan-Do-Study-Act to evaluate the number of patient falls over 3 years, incident reports of patients who fell, a timeline of fall precautions implemented, and staff turnover during the project period. This study concludes that fall bundles being linked to call systems and bed alarms with chair alarms in every room does decrease fall rates; however, implementing the concept of no toileting alone further decreased fall rates.

Hoke & Zekany (2020) uses a content analysis approach to examine responses to 3 questions on why patients fell, why nurses said they fell, and nurses' thoughts on how the fall could have been prevented. 61% of the falls are from activity, 24% from coordination, and 15% from the environment. Understanding patients' and nurse's perspectives is an important aspect when considering new implementations such as an educational booklet to cover the areas of concern.

Howard et al. (2018) also a CQI model, Plan-Do-Study-Act to reduce fall rates below the benchmark of 2.5 falls per 1,000 patient days. The purpose of the project was to implement

innovative measures to reduce falls to include more education on fall precautions, bed alarms, and the importance of communication amongst nursing staff. The study concluded that staff needs timely information related to falls to be more accountable in the prevention of future falls.

Rochon & Salazar (2019) describes the process of developing a falls prevention program to decrease falls and improve patient safety by including patients in their plan of care. Nurses partner with patients providing them with an educational card to remind them of their part in fall prevention. Rewards were given to patients with no falls at the end of their acute care stay. Fall rates decreased 71% and the length of stay decreased 17%.

### **Stakeholders**

Stakeholders include patients, family members, facility, director, and CNO. Granted permission from the education department and the director of the unit would be beneficial before implementing changes and having the authorization to lead staff in making purposed evidence-based changes. When implementing a new process, all stakeholders must be aware of the change for success (Howard et al., 2018). Patients have the right to be active members in their health care and decisions thereof. Patients and family members prefer the safety of their loved ones. The facility, director of the unit, and CNO also prefer patient safety and additionally, aspire to decrease the length of stays in the acute care setting related to falls to decrease costs associated with falls. No matter the incentive, the end goal of all stakeholders is to further decrease falls and increase patient safety.

### **Implementation**

Step 1: Evaluate what equipment is available and in use at the facility of choice. Step 2: Evaluate staff, patients, and family member's compliance with the use of available equipment and their willingness to be educated via booklet. Step 3: Identify which patient and their fall

score in which the fall precautions were implemented and why not on the patients that fall precautions were not in place. Step 4: Discuss with staff on near falls that were prevented by ensuring precautions were in place. Step 5: Evaluate pre interventional and post interventional fall scores on the unit. Step 6: As an extra measure, surveys would be beneficial from the stakeholders on how they felt the pamphlet helped prepare them for the fall interventions that were in place during the stay and if they found this information beneficial.

### **Timetable/Flowchart**

Meeting with stakeholders regarding the need for evidence-based change in the facility of choice would ideally take place before implementation to obtain permission. However, calibrating and modifying the implementation plan the first week would be beneficial to have objective data for the approving personnel. Reviewing the incident reports and fall rates, in the beginning, is essential to show improvement or lack thereof after implementation.

Evaluate and attain the best communication method amongst staff members and directors for updates or concerns with how the progression of implementation is proceeding is essential to not lose insight if issues arise. Establishing good communication is essential and should be mastered within the first two weeks. Develop a flowsheet or excel sheet for data collection in week two before implementation so information is tracked throughout the process in hopes that accurate data is adequately secured.

Week three is of major importance as this is when staff would be briefed on the new implementation and expectations. Also, gather information from staff on what information would be the most beneficial to put on the pamphlets and the way it should be presented to ensure the best outcome. Have all fall precautions available at the briefing and ensure staff is educated and can demonstrate proper use.



Pamphlet construction and implementation during week four on high fall risk patients to ensure proper utilization by staff and acceptance by stakeholders. This also includes using all fall interventions being presented in the pamphlet; record results on a flowsheet or excel sheet. During week six, implement pamphlet and all fall precautions on all patients regardless of fall scores on admission; make note of outcome.

Week eight would be a good point in the implementation phase to evaluate how the project team is feeling about the change and if there is a need to make changes to the pamphlet or if an educational card would suffice in the place of the pamphlet to be more readily available for reference. Should updates be required to the pamphlet then do so this week. Also, address any concerns currently and recognize exceptional involvement with the change project.

Week 12 is project completion; all data should be analyzed after being gathered throughout the project. Complete formulating all data into the flowsheet or excels spreadsheet. Debriefing to the stakeholders is essential to show the outcomes of the implementations. This is an excellent time to implement the reward program for patients with no falls during their acute care stay and reward their participation.

<b>Implementation Steps</b>	<b>Implementation Timeline</b>
Meet with stakeholders regarding the need for evidence-based change in the facility. Review incident reports and fall rates to the need for change. Obtain permission for new education and accountability of staff.	(Week 1)
Establish communication methods amongst staff members and directors on areas of updates and timelines.	(Week 2)
Develop flowsheets or excel sheets for data collection.	(Week 2)
Provided project briefings to entire clinical staff, provide education about the importance of utilizing available resources.	(Week 3)
Implement a new standard of care suggested by the literature and agreed upon by the team and leadership on high fall risk.	(Week 4)

Implement evidence-based changes all together to include all implementations on every patient regardless of fall score.	(Week 6)
Check-in with the project team and clinical staff for ongoing results and address any concerns. Make additional changes seen fit to further add to the goal of decreasing falls.	(Week 8)
Analyze data and consider data outcomes. Debrief stakeholders on outcomes. Thank participates and reward no falls during the stay.	(Week 12)

### **Data Collection Methods**

The data collection or evaluation process should include tracking implementations being used such as bed alarm, chair alarms, radio pagers, videos, icons, body-worn accelerometer, nurses' location from the patient such as in a bay or portable nurses' stations where the patient is visible, and educational booklet, card, and/or reward program. With each patient in the intervention group, team members should track what interventions were used, which participates received the pamphlet at admission, and which patients qualified and were provided with the reward program for not falling during the acute care stay. If the patient experiences a fall, one will also follow what the outcome was from the fall to include if the patient had severe injuries, the cost of injuries and if an extended stay was necessary. The evaluation could be easily tracked on a flowsheet or an Excel spreadsheet. Related cost and incident rates would reflect on how the change impacted the organization. The focus is to use what fall precautions the facility of choice already has in place with an emphasis on education upon admission on the use of all the precautions available, using the products consistently and adequately with every patient. Education will be achieved through pamphlets and one on one discussions with patients and family members proceeding with additional staff training on the appropriate use of the current fall interventions available.

### **Cost/Benefit Discussion**

Cost, profit margin, quality, and efficiency are all factors that govern practice change (Elwyn, 2016). The increased cost associated with falls, such as the cost of hip surgery, is on average, \$38,268 in the state of Texas. Medicare pays \$29 billion, private, or out-of-pocket payers pay \$12 billion, and Medicaid pays \$9 billion for nonfatal fall injuries. In the United States, \$754 million is spent on fatal falls (Florence et al., 2018). 5,000 pamphlets and/or booklets average between \$900 and \$1000 on many different printing company websites. If a patient is spared the cost related to a fall by truly understanding the importance of the fall precautions in place and complying with their use during the acute care stay, then all stakeholders are saving money essentially.

### **Overall Discussions/Results**

Unfortunately, due to COVID changes in healthcare, one was not able to implement this project as hoped for. From observation, fall rates increased during the time of COVID making it more imperative that there are changes implemented. A patient in the acute care setting is already at an increased risk for falls due to newly altered mobility, medication side effects, history of previous falls, frequent toileting, and altered mental status due to being out of their familiar environment (Cuttler et al., 2017). Researching the evidenced-based research and reviewing fall rates reflects that a change is needed in the acute care setting.

### **Recommendations**

Moving forward, one would recommend strict implementation of fall interventions and precautions for all patients, not just those that identify as being a high fall risk using assessment tools available. After researching the articles available and reviewing incident reports at the facility of choice and current facility, there is a need to further decrease falls. As a future MSN graduate, one recommends more education even before a nurse arriving at a facility; more

emphasis in the classroom settings on the long-term outcomes that fall can manifest would be greatly beneficial. One is extremely hopeful that with the right precautions, interventions, and education, the goal of decreased falls and increased patient safety can be attained.

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