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Assessment of Fall Protocol Use on a Medical-Telemetry Unit

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Abstract

Purpose: This quality improvement project serves to implement a fall prevention plan to decrease patient falls on the medical-telemetry unit of a large metropolitan hospital.

Background: Patient falls are a persistent nationwide problem in the acute care setting. Between 700,000 and 1,000,000 falls occur in hospital every year and approximately 30-35% of these falls result in injury and 11,000 falls result in death (Health Research & Educational Trust, 2016). Falls always cause harm to the patient, whether it is emotional or physical; but, falls can also cause harm to the providers, family, and organization. Patient injury, additional hospital expenses, and non-reimbursement from insurance companies accrue costs with the organization. In addition, harm to the patient would cause negative patient outcomes that would affect the reputation and patient satisfaction scores of the hospital. The large metropolitan hospital has an increase in patient falls from fiscal year 2016 to 2017. The medical-telemetry unit's current fall prevention protocol needs to be addressed so that an effective, evidence-based practice intervention could be implemented to decrease patient falls and improve patient outcomes.

Keywords: *fall prevention, evidence-based practice, Morse Fall Scale, fall risk, fall assessment*

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Introduction

Statement of the Problem

Patient falls remain a persistent problem in the acute care setting, and has the potential to cause physical and emotional harm to patients, family, staff, and the organization. Among the older population, in-patient falls are the leading cause of harm and can lead to injury, prolonged hospital stays, and higher cost of care (Dunne, Gaboury, & Ashe, 2014). The potential physical harm caused by a fall can include fractures, head trauma, hemorrhage, and death. Even if a fall does not result in physical injury, it may cause emotional harm, including anxiety and fear of the events surrounding the fall. In addition, hospitals are reimbursed based on the Bundled Payment for Care Improvement model, which provides payments based on the quality of patient care. Therefore, a negative patient outcome such as a fall would not only increase hospital costs by lengthening the hospital stay but also disqualify the hospital for reimbursement by Medicare and Medicaid for those accrued costs (Inouye, Brown, & Tinetti, 2009).

According to the National Database of Nursing Quality Indicators, a fall is defined as "an unplanned descent to the floor or extension of the floor, with or without injury to the patient" (Williams, Szekendi, & Thomas, 2014). In-patient falls is an issue experienced at a national level in the United States. Between 700,000 and 1,000,000 falls occur in hospitals every year and approximately 30-35% of these falls result in injury and 11,000 falls result in death (Health Research & Educational Trust, 2016). Patient falls cause negative outcomes such as physical trauma, emotional harm, prolonged hospital stays, increased risk of hospital-acquired illnesses, and fatalities. However, a patient fall can also impact the organization by causing emotional distress among staff and increasing hospital costs. In 2012, fatal falls resulted in $616.5 million

and non-fatal falls resulted in $30.3 billion in healthcare costs. These costs increased in 2015 to

$637.7 million for fatal falls and $31.3 billion for non-fatal falls (Burns, Stevens, & Lee, 2016).

A multitude of factors cause patient falls, including issues with communication, medication,

education, call-light responsiveness, toileting, and fall assessments, which make fall prevention a

challenging issue to address.

Rationale

The Master of Science in Nursing (MSN)-Clinical Nurse Leadership (CNL) students

addressed patient falls in a large metropolitan hospital. Patient fall data was obtained from the

hospital on the medical-telemetry unit over the last two years. According to the data provided,

the unit had reported an increase in falls from 31 falls in fiscal year 2016 to 36 falls in fiscal year

2017. The falls were categorized by levels: Level 1 falls had no physical harm, Level 2 falls had

only minor physical harm (i.e. break in the skin not requiring sutures), Level 3 falls required

sutures (i.e. large break in the skin), Level 4 falls resulted in a fracture, and Level 5 falls resulted

in death. In fiscal year 2016, there were 24 reported Level 1 falls, 6 reported Level 2 falls, and 1

reported Level 3 fall. In contrast, fiscal year 2017 had 27 Level 1 falls, 8 Level 2 falls, and 1

Level 3 fall. After reviewing the data, the management team indicated that they wanted to

prevent patient falls and decrease hospital costs. The MSN-CNL students were tasked with

conducting a quality improvement project to improve patient outcomes.

The large metropolitan hospital utilizes a fall prevention protocol to reduce patient falls

on medical-telemetry. Patients are assessed for fall risk using the Morse Fall Scale, which occurs

upon admission, during transfer between units, once a shift, and post-fall during hospitalization.

The assessment is documented in the electronic medical record and used to determine the level

of interventions implemented to prevent patient falls. Patients labelled as a "fall risk" follow a

fall prevention protocol that includes: non-skid socks, fall risk arm band, and fall risk sign

outside the patient door. Depending on the nurse's assessment of the patient's mental status and

degree of unsteadiness, additional interventions may be implemented such as a bed alarm or a

sitter.

　　　Data from the large metropolitan hospital and plan for quality improvement rely on the

theoretical framework of the chaos model and complexity theory. Rapid changes in the politics

and structure of healthcare are constantly occurring, which impacts patient care quality and

safety. The chaos model describes "changes that are rapid, random and frequent" and the

complexity theory is utilized to understand this healthcare environment (King & Gerard, 2013).

By utilizing this theoretical framework, the MSN-CNL students can perform a quality

improvement project that would include these constant changes in healthcare to improve patient

outcomes, quality of care, and safety.

Literature Review

　　　Patient falls in an acute care setting reflect quality of care and safety as well as cause

detrimental effects to the patient, staff, and organization. Falls are "one of the most frequently

reported incidence types in hospitalized patient" and "can result in significant injury, extended

hospital stays, increased health care costs, loss of independence, and even death" (Williams,

Szekendi, & Thomas, 2014). Risk assessment tools are essential in the process of implementing

preventative measures to advocate for patient safety and improve patient outcomes. A literature

review was conducted using PubMed, and keywords such as *patient falls, fall prevention, Morse*

Fall Scale, fall risk, acute care, and *fall assessment* were used. Retrospective case-control

studies and systematic reviews were obtained from the published articles on the electronic

database. Articles used in this literature review included analysis and perception of patient falls,

current fall prevention programs, and risk assessment tools. This research was chosen to provide

evidence-based literature for the quality improvement project due to its correlation to the

problem of patient falls and analysis of the effectiveness of the Morse Fall Scale. Among all the

literature reviewed, the consensus definition of a fall is an unplanned descent to the floor with or

without injury. As indicated earlier, there are between 700,000 and 1,000,000 falls occurring in

hospitals every year in the United Sates. Approximately 30-35% of these falls result in injury and

11,000 falls result in death (Health Research & Educational Trust, 2016). The cost of falls had

increased from 2012 to 2015, resulting in $616.5 million in fatal falls and $31.3 billion in non-

fatal falls (Burns, Stevens, & Lee, 2016). An in-depth analysis of literature on patient falls and

the validity of the Morse Fall Scale would be done to provide evidence-based practice in

developing a proper falls assessment to reduce patient falls on the medical-telemetry unit in the

large metropolitan hospital.

A common theme among the literature reviewed is the validity and effectiveness of the

Morse Fall Scale. According to Baek, Piao, Jin, and Lee, the Morse Fall Scale "showed a

relatively high predictive performance" with promising validity in determining fall risk factors

among patients (2014). Utilizing the Morse Fall Scale helps nurses categorize patients into

groups based on their fall risk and implement interventions based on that risk. Even through the

Morse Fall Scale had a high sensitivity, according to O'Connell and Myers, the scale had a low

positive predictive value of 18%, which meant that there were many false positives (2002).

Contrary to the results from that study, having many false positives would actually increase

positive patient outcomes by resulting in more interventions to prevent harm and staff

hypervigilance. However, despite use of this scale to prevent falls, patient falls are continuing to

occur. Research by Williams, Szekendi, and Thomas includes a review of the components of fall

prevention protocols and what percentage of the staff fully implements each component of the protocol; they found that "identification of patients at most at risk of moderate to serious injury from a fall early in each shift" was only conducted by 44% of the staff (2014). Despite the 100% of the staff completing the full risk assessment on each patient, there was a lack of performance frequency of the assessment. This research indicates that the fall assessment tools were not being utilized correctly in the in-patient setting to prevent patient falls. The solution is to implement a plan where nurses are taught and evaluated on correctly conducting the fall assessment tools. A new protocol would be established to be integrated into the current nursing practice on the unit.

From the literature reviewed, it was gathered that the Morse Fall Scale had a high predictability for determining fall risk and would improve outcomes if implemented correctly. However, there is a common theme indicating that providers are not properly conducting these assessments; therefore, they are not taking the corrective actions to prevent falls. The next steps in this process is to determine where his problem originates. There are many causes for conducting an improper assessment: lack of understanding of the tool, relying on previous knowledge, not conducting an assessment, or assuming the outcome of the assessment tool. Further investigation must be done to determine the root cause of improperly conducted Morse Fall Scale assessments and an intervention would be planned to specifically address that problem.

Cost Analysis

The MSN-CNL students calculated the cost of implementing a plan to reduce patient falls on the medical-telemetry unit. With eight MSN-CNL students assessing 60 nurses, it would take two hours to assess each nurse. Therefore, the initial assessment phase of this quality improvement project would require 120 hours. After the initial assessment is conducted, the

MSN-CNL students would start implementing the just-in-time training, which would include three encounters with each nurse. Each encounter would be 30 minutes for each nurse, which would account for 1.5 hours of training for one nurses and 90 hours total for 60 nurses (Appendix A). In addition to these hours spent on the unit, the MSN-CNL students would coordinate meetings and collaborate with hospital leadership, which would take approximately five hours. Ten hours would be used to design the new fall prevention protocol. Evaluating outcomes and reporting results to the leadership team would include five hours. According to Appendix A, there would be 230 hours dedicated to this quality improvement project.

A CNL would be trained to assess, implement and evaluate this project. At $38/hour, the CNL would cost $8,740 to conduct his project over 230 hours. There would be additional costs for educational tools and management follow-up. However, the work to be completed will be done by MSN-CNL students; therefore, would be conducted at no cost to the organization. The cost savings generated from this project would come from the time and labor of the MSN-CNL students, but there are additional cost savings based on the success of this project. According to the CDC, the average hospital cost for a fall injury is over $30,000. The cost savings of just preventing one fall would return more than $3 in benefits for every $1 invested into the first year of this project. The savings would equal more than $20,000 for each prevented fall. In subsequent years, the cost savings would continue to increase as more falls are prevented at no added expense, except when more additional training is necessary. Investment in continued training would continue to increase cost savings as this new protocol would be successfully integrated into the nursing care practice on the unit.

Methodology - Clinical Microsystem Assessment

Purpose

The MSN-CNL students would conduct an assessment of the medical-telemetry unit at the large metropolitan hospital. After collaborating with the patient safety officer and medical-telemetry unit manager, the students would assess fall incident reports, interview patients and staff, conduct an item analysis on patients who fell, and observe change of shift and the Morse Fall Scale assessment. A root cause analysis would be created based on the data of the assessment to determine the main cause of patient falls. Utilizing the root cause analysis would allow the students to plan the best intervention to address the specific cause of falls and make the biggest impact on patient outcomes.

On the large metropolitan hospital premises, the MSN-CNL students planned to analyze the fall incident reports from fiscal years 2016 and 2017 and conduct an item analysis on the patients who fell. The data would be analyzed to determine common trends that contribute to patient falls. According to unit leadership, most patient falls are related to toileting. The MSN-CNL students would then observe nurses during change of shift and patient fall assessments. Students would be observing for any fall-related data or assessments being shared with the on-coming nurse, such as the discussion of a fall risk, ambulation capabilities, and the Morse Fall Scale assessment score. Then, the students would observe the primary nurse conducting the Morse Fall Scale assessment and collecting fall-related data that would be entered in to the electronic medical record. After the observation phase, the students would interview the nurses and patients. Nurses would be asked about how they obtained fall-related data from the patients and how they felt about the current fall prevention protocol. Patients would be asked about fall prevention education and staff responsiveness to the call lights. All nurses and staff would be asked the same questions by the MSN-CNL students and observations and questionnaires would be conducted during night and day shifts. The data would be analyzed to determine the gaps in

care related to patient falls. A root cause analysis would be created from the analyzed data and the best evidence-based practice intervention would be implemented to promote the best patient outcomes.

Population

The medical-telemetry unit at the large metropolitan hospital utilizes the Morse Fall Scale assessment to determine patient fall risk. This tool uses six items related to patient falls and scales those items based on the patient assessment. The first item is a history of falls within the past three months, which would be scored 0 for "no" and 25 for "yes." The second item is a secondary diagnosis, which would be scored 0 for "no" and 25 for "yes." The third item is the use of an ambulatory aid, and the score is determined by the type of ambulatory aid. "Bed rest or nurse assist" is scored a 0, "crutches, cane, or walker" are scored a 15, and "furniture" is scored a 30. The fourth item is the presence of an intravenous line or heparin/saline lock, which would be scored a 0 if it was "not present" and a 20 if it was "present." The fifth item would be an assessment of the patient's gait and ability to transfer. "Normal, bedrest, or immobile" would be scored a 0, "weak" would be scored a 10, and "impaired" would be scored a 20. The last item would be an assessment of the patient's mental status, which would be scored a 0 if the patient was "oriented" and a 15 if the patient "forgets limitations." Patients would be categorized a high fall risk, low fall risk, or no fall risk based on their Morse Fall Scale assessment score. A score of 0-24 indicates "no risk," 25-50 indicates "low risk," and greater than 50 is "high risk" (Morse Fall Scale, n.d.).

At the large metropolitan hospital, interventions were implemented based on the category of fall risk. The interventions included a falling star sign on the outside of the door, non-skid socks, and a fall risk arm band. Patients that were a high fall risk were more closely observed by

the staff and could have a sitter or be in a room closer to the nurses' station. Hourly rounding,

three side rails up, beds at the lowest position, bed alarm, and continuous education would also

be implemented to ensure patient safety and prevent falls.

The MSN-CNL students collaborated with the unit manager to gain more insight into the

patient population on medical-telemetry. It was shared that most falls were related to toileting

and patients' overestimation of their abilities to ambulate independently. The unfamiliar

surroundings, medical treatments, and medications also contributed to patient falls. The medical-

telemetry staff also perceived barriers to preventing patient falls, including patient non-

compliance, high workload, and a large distance between patient rooms. All staff and patient

issues contribute to the increasing number of falls on the unit.

Professionals

The medical-telemetry unit has a total of 61 patient beds available for patients and serves

mostly cardiac patients, but can have patients with other diagnoses such as neurological, renal,

pulmonary, and gastrointestinal patients. The nurse manager oversees all patients and staff and

each shift consists of one charge nurse, one unit clerk, 12 to 15 registered nurses, and 4 to 5

nursing assistants. The charge nurse is responsible for managing the staff and patients during the

shift. The floor nurses are responsible for 3 to 4 patients per shift to ensure that there is no patient

overload and quality care is provided for all patients. The nursing assistants help with toileting,

comfort care, and assisting with activities of daily living. Nursing assistants may be sitters caring

for only one patient or on the floor caring for 8 to 10 patients. The unit secretary manages the

call lights, alerting the staff, assisting visitors, and other administrative tasks. The telemetry

monitor technician stays at the nursing station and observes the current patient EKG readings on

the monitor. They are responsible for alerting staff if there is a sign of a cardiac problem,

printing EKG strips, and assisting with troubleshooting the telemetry monitors.

Processes

The medical-telemetry unit's current fall prevention protocol consists of nurse

assessments upon admission or transfer to another unit, every shift, and post-fall during

hospitalization. Additional assessments may be conducted when the patient changes condition or

upon a change in the medication regimen that may increase the risk of falls. All fall assessments

are documented in the electronic medical record and fall prevention interventions are initiated

based on the assessment. The nurse would utilize the Morse Fall Scale assessment to assess

patients for a fall risk. All patients are a standard fall risk, and interventions include frequent

orientation and education, call light use, bed in lowest position, all necessary items within reach,

additional lighting as needed, non-skid footwear, minimizing environmental hazards, and

frequent rounding and assessments. Moderate and high fall risk patients have additional

interventions: initiation of a "Risk for Falls" care plan, STAR symbol on the door, bed alarm

activation, ambulation and transfer assistance, obtaining ambulatory aids, patient supervision

when ambulating or transferring, frequent toileting, sitter, and communicating safety issues

during hand-off.

Certain strategies are available for specific types of patients to prevent falls. For patients

with elimination issues, interventions such as education on call light use, offering toileting at

frequent intervals, providing non-skid footwear, and the use of a bedside commode would be

implemented. Communication strategies include communicating the patient's fall risk and fall

prevention measures when the patient is leaving for a procedure or test or during care hand-off.

If a fall occurs, the current protocol is to assess the patient, perform a new falls assessment,

notify the physician of the patient's condition and the event, notify the family of the event, and update the patient's plan of care to indicate a fall risk. All documentation must be done when the fall risk assessment is completed, a care plan is initiated, education is provided, or a patient fall has occurred.

Patterns

The staff on medical-telemetry conduct a 10-minute huddle before every shift to discuss patient care and ensure efficient care coordination. The huddle includes the daily goal and indicates which patients are a high fall risk so that all staff can act as a team to prevent falls. After each huddle, the nurses receive their assigned patients and obtain report from the off-going nurse. The change of shift report includes any pertinent information and status of the patients, which includes medications, most recent vital signs, new orders, or tasks that need to be completed.

The MSN-CNL students did not conduct an assessment of the microsystem due to the Institutional Review Board (IRB) approval process. However, the students were able to receive unit data and information from the unit leadership. If the microsystem assessment were to be conducted, the change of shift and patient assessment process would be observed and analyzed for gaps in patient care. The data would then be synthesized so that an evidence-based practice intervention could be implemented on the unit.

Methods

Due to the IRB approval process, this quality improvement project was not conducted. The large metropolitan hospital had a strict approval process where the MSN-CNL students had to submit an IRB to the research council to be approved, and firm guidelines had to be followed. From September 26, 2017 to October 27, 2017, the students rewrote the IRB five times and had

three meetings with hospital leadership and the research council to present and discuss these guidelines. The first meeting was a presentation on medical-telemetry with unit staff and management to introduce the proposed quality improvement project plan. The second meeting was conducted to revise the IRB to adhere to the provided guidelines. The final meeting was presenting the IRB to the research-based council, who would have the ultimate decision whether to approve or reject the IRB. The IRB approval process took the majority of the semester and the MSN-CNL students were not able to proceed with the project; therefore, in lieu of the hospital's data, University of San Francisco (USF) provided data from another large metropolitan hospital so that the MSN-CNL students could move forward with the project and demonstrate competency as CNLs.

The assessment methods indicated previously would be conducted on the medical-telemetry unit. All MSN-CNL students would review fall incident reports and conduct item analyses on patients who fell (Appendix D). Then, the eight students would group into pairs to conduct observations and interviews on the day and night shifts. Each pair would conduct one day shift and one night shift assessment. The assessment would include observations of change of shift, observations of nurse fall risk assessments, and patient and staff interviews. The change of shift observations would focus on communication of fall risk, ambulation, toileting, and current implemented interventions. Observations of the nurse fall risk assessments would focus on proper assessment technique and whether or not the assessment was conducted (Appendix C). The staff would be asked about their current fall prevention protocol and how they obtained data for the patient fall risk assessment (Appendix B). Patient interviews would be conducted to analyze their understanding of fall prevention (Appendix B). This assessment would analyze

current nursing practices related to falls on the unit and correlate them to the increasing number of patient falls.

Results

Due to complexities with the IRB approval process, the MSN-CNL students were unable to obtain assessment data from the medical-telemetry floor at the large metropolitan hospital. In order to demonstrate CNL competency, the students utilized data provided by USF from another institution. With the data provided, the students were able to move forward with the assessment, implementation, and evaluation stage of the quality improvement project. A root cause analysis was conducted based on the data to determine the gap in care contributing to patient falls.

Root Cause Analysis

Nurse observations were conducted to determine how nurses communicate during hand-off report and how the patient fall assessment was performed. Shift change observations focused on the communication of fall risk factors and the patient's fall risk category. Nurse assessment observations were conducted to determine if the fall assessment was conducted correctly. In Table 1, the MSN-CNL students observed 3 AM and 2 PM shifts, and there was an average of 14.6 fall risk patients on the AM shift and 17 fall risk patients on the PM shift. Throughout the period of observation, 78 patients total were identified as a fall risk and the average number of fall risk patients on this medical-telemetry unit was 15.6 per shift (Appendix E, Table 1). Table 2 summarizes the percentage of data communicated during the fall risk assessment. These factors are a part of the Morse Fall Scale assessment and must be discussed, assessed, and documented to conduct an appropriate fall risk assessment. From most to least observed was orientation and cognition (78%), continence status (72%), number and types of prescribed medications (60%), number of secondary diagnoses (45%), and gait and balance (42%) (Appendix E, Table 2). The

Morse Fall Scale assessment is documented in the patients' electronic record accordingly. However, the data shows that the components of the Morse Fall Scale assessment was not being properly conducted because the components were not addressed 100% of the time. Patients were still not properly identified as fall risks and appropriate interventions were not implemented due to this gap in care. Based on the questionnaires and observations of nurse documentation, the nurses understood the purpose of the Morse Fall Scale assessment; however, many important fall risk factors were not being properly discussed and assessed. Therefore, it was determined that nurses were not conducting their own Morse Fall Scale assessment and were relying on a previous nurse's assessment or their assumptions of the patient to determine the patient's fall risk.

Care planning performance was assessed by determining the percentage of fall prevention interventions implemented based on the patients' Morse Fall Scale assessment score. An appropriate fall assessment should have been conducted by the nurses to determine the appropriate interventions. The purpose of this observation was to collect data on overall compliance to the fall protocol as well as the competency of the nurses. Table 3 indicates the percentage of nurse compliance to the fall risk protocol and the interventions implemented. In order of highest compliance to lowest are the following interventions: fall risk sign posted outside of the door (63%), call light placed within reach (36%), three side rails up (36%), and bed alarm activated (7%) (Appendix E, Table 3). The data indicated that staff was not 100% compliant to the fall prevention interventions, especially when it came to activating bed alarms. It was observed that the bed alarm was only activated when the patient was not alert and oriented.

The root cause analysis indicated that nurses were not properly conducting their own Morse Fall Scale assessment and relied on the assessment of the previous nurse or their assumptions about the patients' fall risk. Therefore, the Morse Fall Scale assessments were not conducted at all or incorrectly. This led to inappropriate documentation and fall prevention interventions. Nurses were not properly implementing fall prevention interventions because the Morse Fall Scale assessment was not conducted appropriately; instead, they relied on previous interventions implemented by the previous nurse. The importance of conducting a correct Morse Fall Scale assessment would be emphasized in this quality improvement project because it improves patient outcomes by accurately indicating their fall risk. The status of the patients change throughout their hospital stay, so nurses should be conducting their own assessment each shift to determine changes from the baseline and implement appropriate fall prevention interventions. Based on the root cause analysis, the quality improvement project would focus on educating nurses in conducting an appropriate Morse Fall Scale assessment.

Implementation

Utilizing Kotter's Eight Step Change Model, an intervention would be planned to address the nurses' need to perform the Morse Fall Scale assessment correctly (Appendix F). First, the MSN-CNL students would establish a sense of urgency towards the problem. An assessment of the microsystem was conducted to determine the underlying cause of increasing falls, and the problem would be presented to the staff and leadership team and how it contributes to patient falls as well as its consequences. A guiding coalition would be created to establish a group of champions that would be committed to the quality improvement project and the improvement of patient outcomes. This would include unit managers, senior management, nurses, and nursing assistants. Then, the vision and strategy would be developed to define the end goal, which is to

increase understanding of the Morse Fall Scale assessment and decrease patient falls. This is where the staff would have a clear understanding of the plan and how it would be conducted. The change vision would be communicated to the staff and managers of the medical-telemetry unit to ensure a clear understanding and expectations from this quality improvement project. The MSN-CNL students would then empower the team to commit to broad-based action by removing barriers and encouraging participation. Short-term wins would be generated to establish progress with the project, and short-term benchmarks would be established by checking-off staff competencies and seeing a reduction in patient falls within the month of starting the intervention. As the quality improvement project continues to move forward, gains would be consolidated and more change would be produced. The short-term goals would continue to be accomplished and would establish motivation to continue with the project and change in practice. The last step of the quality improvement project is to anchor the new approaches into the culture of the unit. The evaluation of staff and outcomes would continue, but the purpose is to motivate the staff to continue performing the Morse Fall Scale assessment correctly so that it becomes a part of the unit's nursing practice.

Just-in-time training would be implemented by the MSN-CNL students to educate the nurses on proper use of the Morse Fall Scale assessment. There would be three encounters with each nurse on the medical-telemetry unit. During the first encounter, the MSN-CNL student would demonstrate the Morse Fall Scale assessment correctly on a patient to the nurse. The second encounter would be when the nurse demonstrates and teaches back the Morse Fall Scale assessment to the MSN-CNL student. Any changes and corrections to the nurse's technique would be made at this time. During the last encounter, the nurse would perform the assessment correctly and the MSN-CNL student would check-off the nurse's competency on this skill. The

Morse Fall Scale assessment would be conducted by the primary nurse on every shift for every patient. The results would be documented in the electronic medical record appropriately and interventions would be indicated and implemented throughout the shift.

Evaluation

Evaluations of the nurses' understanding of the Morse Fall Scale assessment and patient falls would be conducted throughout this project. The first evaluation phase would take place at the third encounter with the nurses, where the MSN-CNL student would check-off the nurses' competencies on performing the fall risk assessment. Specific guidelines would be indicated so there is confidence in the nurses' ability to perform the assessment. Such guidelines include asking the patient specific questions related to falls and assessing the patient's mental status, strength, and gait. The nurse would also successfully integrate the assessment into the plan of care and implement the appropriate interventions. During the second evaluation phase, a questionnaire would be given to the nurses to assess if the quality improvement project met their needs and if they adequately learned from the process. This evaluation provides input about the project and what could be better addressed to ensure that the nurses learn appropriately. Phase three of the evaluation stage would be another questionnaire provided to the nurses asking if they enjoyed the process and what challenges they faced. The result of this questionnaire provides a better idea of whether the nurses were receptive to the training and would adhere to the new protocol in the future. A positive outlook on this quality improvement project would indicate a higher success in integrating this new practice into the culture of the unit. Ongoing evaluations would be conducted in the future to ensure nurse competency in conducting the Morse Fall Scale assessment and if there is a correlation to fewer patient falls.

The results of the evaluation stage would determine the success of this project in the future. Future evaluations would also include a check to determine the number of nurses adhering to the new fall prevention protocol as well as online modules to be completed annually to ensure that nurses continue to understand how to correctly conduct the Morse Fall Scale assessment. The goal of this project is to successfully integrate new, evidence-based practice into the care of patients and improve patient outcomes related to falls.

Discussion

Due to the complexities with the IRB approval process, the fall prevention quality improvement project was not conducted. There was a misunderstanding between the MSN-CNL students' goals and hospital leadership, who thought that the students were conducting a research-based project. Therefore, it is essential that there is emphasis and clarity on quality improvement projects. Hospital leadership should demonstrate a clear understanding of the project and what it entails before the MSN-CNL students start with the project.

If the project was able to move forward, it would have been difficult to conduct because of the complexity of patient falls and the massive scope of the problem. Collaborating with hospital leadership, unit management, and the falls committee has proven difficult because of the different availability times for each group. It would have been hard to get all team members to meet at the same time so that the problem of falls could be discussed and a clear understanding of the quality improvement project could be communicated. The hospital team would have to understand that, due to the large problem of patient falls, this project would have to be continued with future MSN-CNL students. Once this process was completed, the MSN-CNL students could move on with the assessment phase of the project.

The fall prevention quality improvement project has the potential to improve patient

outcomes by increasing understanding of the fall risk assessment and ensuring a correctly done

assessment. The Morse Fall Scale assessment was not being properly conducted by the primary

nurses, so proper fall prevention interventions were not implemented. Nurses were relying on the

information of the previous nurse or their assumptions of the patient's fall risk, which resulted in

an inaccurate fall risk assessment. Therefore, the CNL's ability to lead, educate, and ensure nurse

competency would not only prevent patient harm but also benefit the organization.

Nursing Relevance

Patient falls remain a persistent issue in the acute care setting, but nurses have the

potential to advocate for their patients and prevent harm. It is important to conduct a proper fall

risk assessment because it would prevent patient harm as well as benefit the hospital. To further

improve nursing practice regarding fall prevention, there would need to be increased safety and

nursing advocacy in patient ambulation abilities. There would also need to be a higher level of

nursing practice placed on proper fall risk assessments so that nurses are held accountable for

performing the assessment correctly and implementing the proper interventions. The

interventions should also be consistent and communicated to all staff involved in patient care.

The CNL would play an essential role in educating nurses and evaluating competencies in the

Morse Fall Scale assessment. The patients should be properly educated and re-educated every

shift about their fall risk status and the fall prevention interventions implemented. The nurse

should evaluate the patient's understanding on falls risk and their adherence to the fall prevention

plan.

Nurses should properly assess, document, and communicate patient fall risks to their

team to ensure the continuation of fall prevention. Conducting a proper assessment is essential as

the health status of patients can change throughout their hospital stay. Therefore, it is important

for the nurses to conduct their own assessment every shift and ensure that all components of the

Morse Fall Scale assessment are addressed. After the assessment process, the nurse would

document the assessment and add the appropriate interventions to the patients' care plan. The

interventions should be appropriate and maintained throughout the shift. In addition, the fall risk

assessment and interventions would be effectively communicated during hand-off. The next

nurse would conduct another assessment to ensure the care plan is updated and fall prevention

interventions are implemented appropriately. By providing a consistent, structured fall

prevention protocol, the MSN-CNL students would improve patient outcomes and reduce patient

harm.

Clinical Nurse Leader Relevance

The CNL is a valuable asset to the clinical microsystem because they possess the

training, education, and expertise required to improve processes and the quality of patient care.

The CNL curriculum includes advanced pathophysiology and pharmacology, health assessment,

improvement science, financial resource management, healthcare systems leadership, and

healthcare informatics. These courses provide the clinical knowledge as well as the leadership

competencies required to conduct quality improvement projects. The CNL would be able to

assess the microsystem, identify gaps in care, utilize evidence-based practice to determine the

best intervention, implement a plan, and evaluate that plan.

The CNL's position is dedicated to working exclusively on improve the quality of patient

care by improving the work flow and environment. As indicated in the cost analysis, total of 530

hours would be required to complete this project, which equates to 3.3 months of full-time work.

Other roles such as nurse managers, clinical nurse specialists, and staff nurses would not have

time to take on this responsibility because they have other roles to fulfill. However, the CNL role

specializes on quality improvement projects and would be dedicated to spending time on the

projects. The integral role of the CNL and the leadership competencies would ultimately focus

on improving patient outcomes by improving the dynamics and nursing practice in the

microsystem.

Future Directions

Clinical Nurse Leader Perspective

In the future, there would need to be a clear understanding of the quality improvement

project and the MSN-CNL students' goals. Hospital leadership should be able to understand,

contribute, and collaborate on this project in order to produce the best results. While the IRB

process provided a great plan for assessing the medical-telemetry unit, the MSN-CNL students

were not able to conduct the assessment due to complexities with the approval process. In

addition, patient falls is a huge problem in all patient care organizations, and setting realistic

goals are important as this project would have to be continued with future MSN-CNL students.

However, addressing patient falls and improving the nursing practice would greatly benefit the

organization as well as the patients. Therefore, this project should be conducted at the large

metropolitan hospital in the future to improve their outcomes and prevent patient harm. As both

nursing and evidence-based practices change, it is up to the CNL to advocate for change and

improving practices.

Sustainability Plan

It is important to communicate with hospital leadership if the quality improvement

project will continue with future MSN-CNL students. There must be a clear understanding on the

project to prevent barriers and misunderstandings while conducting this project. A detailed plan

to prevent falls has been determined, so students should be allowed to start and continue with the

project. Future MSN-CNL students can assess the microsystem through questionnaires,

observations, and item analyses and then create an evidence-based practice intervention based on

their findings. As this quality improvement project addresses a huge problem, it is important to

set realistic goals with hospital leadership and establish a timeline so that the project moves

forward effectively. Once hospital leadership understands the role of the MSN-CNL students and

the goal of the quality improvement project, the project can move forward to improve patient

outcomes and benefit the organization.

Conclusion

Although this project was not conducted and there were barriers to the IRB approval

process, the components of the project were described in detail. The MSN-CNL students worked

to create a solid plan for assessing the microsystem, which could be utilized for future students

initiating this project. This project should be continued to address the increasing problem of

patient falls and determine the underlying gap in care. Once completed, this project has the

potential to promote positive patient outcomes, prevent patient harm, and increase the quality of

nursing practice. Ultimately, CNL competencies were demonstrated through a detailed

description of the quality improvement project, as the data obtained from another large

metropolitan hospital could have been similar to this organization. As patient falls is a

nationwide problem, it is highly probable that the same gap in care would impact both

organizations. However, it is also possible that multiple gaps in care impact patient falls, and

they would be addressed after the microsystem assessment is conducted.

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Appendix A

Cost Analysis

Intervention #1	Break down of training hours:	CNL Activity:	Hours Spent
"Just in time" training	1st encounter: 30 min 2nd encounter: 30 min 3rd encounter: 30 min 1.5 hrs for training 1 RN or 90 hrs for training 60 RNs	Initial Assessment Coordination Educational Design Training 60 RNs Reporting Back	120 hours 5 hours 10 hours 90 hours 5 hours
		Total hours to cover all 60 RNs	230 hours

Appendix B

Interview Questions

Nursing Staff Questions:

1. What are some interventions most commonly used on this floor for fall prevention? In your opinion, is it effective? Why or why not?
2. What is the protocol used on this floor when a fall occurs?
3. Which patient population do you find to be most at risk for falls? Specifically, what age, gender and diagnosis are the most common.
4. Do you communicate with your patients the importance of using their call light when they need help out of bed? If so, how compliant are they, and what do you think would help them become more likely to comply?
5. Do you find that patient's family and friends understand that their loved one or friend is a fall risk and what that means specifically?
6. What are your feelings about falls? What is the climate on the unit about fall prevention?
7. What are the barriers that you have experienced while implementing the fall prevention protocol?
8. When you are giving a patient medication that might cause them to get up more (i.e diuretics), what interventions do you use to prevent them from falling? Do you feel these interventions are appropriate?
9. Under what circumstances would you implement the need for a patient to have a sitter if they are a fall risk?
10. Do you find that more patients fall during change of shift or during your breaks? Why or why not?

Patient Questions:

1. Do you feel that the nursing staff is communicative with you about the fall risks?
2. Do you understand why you are considered a fall risk?
3. Does your family and friends understand why you are considered a fall risk?
4. How safe do you feel, in terms of risk of falling, with these prevention measures in place?
5. Do you feel that the nurses taking care of you respond to your call light within a reasonable time (1-5 minutes)? Or do you find it taking more than 5 minutes?
6. When you have to use the restroom, knowing you are a fall risk, what is your initial action?
7. Did the nurse provide you with instructions for getting up to use the restroom?
8. Did the nurse communicate the safest way to ambulate?
9. When you feel dizzy from standing, did the nurse speak to you about how you should react?
10. Did the nurse address to you the importance of keeping on your non-slip socks?

Appendix C

Guidelines for On-Site Observations

Students will be observing change-of-shift report on-site between nurses and nursing assistants for the following:

1. Discussion of existing fall risk or potential for fall risk during report
2. Discussion of current patient ambulation status
3. Mentions of patients' Morse Fall Scale (MFS) score

In addition to these three items, observations will be made continuously while on-site for the following:

1. Change in status of patients (altered level of consciousness, over medication, under medication, acute pain, sedation, nutrition imbalances, cardiac status, and etcetera)
2. Time it takes for health care providers to respond to call lights or beeping IV lines
3. How long patients take once situated in the bathroom or bedside commode and the exact location of the health care provider while patient is using the bathroom

Appendix D

Data Collection Sheets

Patient Demographics	
Name	
Age/Sex	
Diagnosis	
Comorbidities	
Psych Diagnosis	
History of falls	
Bone Disease	
Coagulopathy	
Recent Surgery	
Current drug and/or alcohol use	
Hx of drug and/or alcohol use	
Homeless or Housed	
Was CIWA used? (circle one) **If yes, indicate treatments/interventions used during the fall.**	YES/NO
Detailed review of medications	

Review of Incidence Reports			
Date and time of fall: (eg. dd/mm/yy, 0000)			
Shift (Circle one)	AM shift, PM shift, or NOC shift		
Was the patient identified as a fall risk? (Circle one)	YES/NO		

Was Morse Fall Scale Used? (Circle one)
If yes, how did the patient score? (as recorded on charting)

YES/NO

Item	Select Areas of Risk (check one per item)	Score
1. History of falling	❏ No ❏ Yes	0 25
2. Secondary Diagnosis:	❏ No ❏ Yes	0 15
3. Ambulatory Aid	❏ None/bed rest/nurse assist ❏ Crutches/cane/walker ❏ Furniture	0 15 30
3. IV Therapy/ HepLock/Saline Lock	❏ No ❏ Yes	0 20
4. Gait:	❏ Normal/bed rest/wheelchair ❏ Weak ❏ Impaired	0 10 20
5. Mental Status:	❏ Oriented to one ability ❏ Overestimates/forgets limitations	0 15
Patient is **(select one)** ❏ No risk for falls (0) ❏ Low risk for falls (<25) ❏ Moderate risk for falls (25-45) ❏ High Risk for Falls (>45)		Total:

Nursing care plan to address fall risk:	
Did the patient have sitter (circle one)	YES/NO

Who was with the patient when the fall occurred?	
The reason for the fall:	
Injuries sustained as a result of the fall:	
Post-fall interventions (eg. extended LOS, x ray, etc.):	

Appendix E

Root Cause Analysis

Table 1

Number of Fall Risk Patients on a Medical-Surgical/Telemetry Unit

Data	AM Shift	PM Shift	Total
Number of Shifts Observed	3	2	5
Number of Patients Identified as a Fall Risk	44	34	78
Average Fall Risk Patients per Shift	14.6	17	15.6

Table 2

Fall Risk Factor Assessment Composition

Fall Risk Factor	Percent Communication of Fall Risk Factor During Nursing Assessment
Patients level of orientation and cognition	78%
Continence status	72%
Number and types of prescribed medications	60%
Number of diagnoses	45%
Gait and balance	42%

Table 3

Care Planning Performance

Fall Risk Prevention Intervention	Percent Compliance with Fall Risk Protocol
Three side rails up	36%
Fall risk sign posted	63%
Bed alarm activated	7%
Call light placed appropriately within reach	36%

Appendix F

Kotter's 8 Steps

Step 1	Create a climate for change
Step 2	Create a guiding coalition
Step 3	Develop a vision and strategy
Step 4	Communicate the vision
Step 5	Empower broad-based action
Step 6	Create short term wins
Step 7	Consolidate gains to produce more change
Step 8	Anchor new approaches in the organization

(Kotter, 1996)