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Fall Prevention in an Acute Care Setting

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Abstract

Purpose:

Purpose: The purpose of this quality improvement project is to implement a falls intervention to improve falls on the Medical Telemetry unit in the large metropolitan hospital.

Background: Between 700,000 and 1,000,000 falls occur in hospitals every year. Furthermore, approximately 30-35% of these falls result in injury and 11,000 falls result in death (Health Research & Educational Trust, 2016). Falls harm patients, families, and providers. They are also a high cost, as many insurance companies will not reimburse care when a patient falls. As a hospital organization it is important to ensure funds are going to the appropriate places.

Currently the metropolitan hospital had an increase of 6 falls from 2016 fiscal year to 2017 fiscal year. Through data itemization it appears the current protocol and procedures is not meeting the need to decrease and diminish falls.

Introduction

Medical care professionals are under a lot of pressure to keep the patients' safe while managing their care and sticking to a care plan to ensure their health is restored. A specific space where this process occurs is during acute care management which takes place in a hospital. A hospital is defined by World Health Organizations as, "a health care institutions that has an organized medical and other professional staff, and inpatient facilities, and deliver medical, nursing and related services 24 hours per day, 7 days per week" (Hospitals, 2017). Hospitals tend to have problems with patient falls. A fall is defined by the American Nurses Association as an unplanned descent to the floor with or without injury to the patient (Anderson, G., Campos, T., Earley, V., Johantges, D., Johnson, C., & O'Connor, E., 2008). The abundance in fall incidences has raised concern in a large metropolitan hospital in Southern California over the past two years. According to the large metropolitan hospital, the falls have increased in the past two years. The data provided by hospital management confirmed that there were a total of 31 fall occurrences in 2016 and an increase of 36 fall occurrences in 2017. Falls can result in physical and emotional harm to patients and furthermore causes distress to families and healthcare staff. The Fall Scale is used to score a fall on a rating from one to five. The following levels are determined with the following criteria: level one results in no injury or harm to patient, level two results in minor harm or injury to patient, level three harm requires sutures, level four falls result in a fracture, and level five falls result in death. In the 2017 fiscal year there were 27 level one falls, 8 level two falls, and 1 level three fall.

The Masters of Science Nursing (MSN) Clinical Nurse Leader (CNL) Students therefore saw a need for intervention and conducted researched to help address the abundance in fall occurrence in the hospital setting, particularly focusing on the medical telemetry unit. There are

an abundance of methods used to prevent falls, one being The Morse Fall Assessment Risk Tool. This scale uses a quick and easy method to determine the degree of risk that a patient is likely to fall by assessing several characteristic. Six items are used to determine the patients total score. The six items include history of falls, secondary diagnosis, ambulatory aid use, IV lock, gait and transferring ability, and mental status (Morse, JM., 1985). This uniform assessment scale is used in the electronic health record system to keep fall risk protocol known by all healthcare staff that will be providing care for the patient. The Morse Fall Scale is utilized at time of admission, per every shift, during transfer, and if a fall were to occur. The patients chart would be marked as a 'fall risk patient' specifying explicit interventions to prevent a fall. Some of these interventions would include a fall risk sign posted, bed alarm on, arm band, three side rails raised, yellow socks, bed in the lowest position, and requesting a sitter.

In order to create a realistic framework to guide the design of our quality improvement project the students focused on mirroring the chaos theory and complexity theory. These theories have been useful in many other healthcare change projects. An article, *Embracing Chaos and Complexity: A Quantum Change for Public Health* comments on the behavior changes to emphasize the importance of the chaos and complexity theory serving as a realistic framework for change projects. The behavior changes that need to be considered create a highly variable and chaotic process that may be unpredictable, include several components, and therefore result in a nonlinear process (Resnicow, K., & Page, S. E., 2008). This research helps confirm the importance of using the chaos and complexity theory to guide the process of creating the quality improvement project due to the hospital being a constantly shifting environment.

Literature Review

After reviewing the literature on fall prevention and interventions in the acute care setting, it has been found by multiple research studies that the fall assessment serves as a part of protocol that is important in helping prevent fall occurrences. Furthermore, all the literature examined mentioned the importance for implementing evidence based practice interventions. For example, an article, *Fall prevention practices in adult medical-surgical nursing units* described by nurse managers explains that the common fall prevention interventions included bed alarms (90%), rounds (70%), sitters (68%), and relocating the patient closer to the nurses' station (56%) (Shever L, Titler G,., Mackin L, & Kueny, A., 2011). The article also mentions that the evidence based practice interventions need to be further studied and education for the nurses and assessment of the unit needs to be implemented to ensure the interventions are being used correctly (Shever L, Titler G,., Mackin L, & Kueny, A., 2011). Another article comments on a fall risk bundle that was created specifically for individual patient needs, therefore every fall bundle was uniquely designed for the patient. Pre-intervention and post-intervention data was collected and analyzed concluding that fall occurrence has declined by 22 % (Titler G, Conlon P, Reynolds A, Ripley R, Tsodikov A, Wilson S, & Montie, M., 2016). The article conveys that teaching and education on identifying appropriate interventions to include in a patient's care plan is the most important step in the fall prevention bundle strategy. Lastly, an article titled *Most and Least helpful aspects of Fall Prevention Education to prevent injurious falls*, emphasizes the key importance of education for nurse's regarding fall prevention. The study also was designed to reflect on the nurse's educational experience and have them record the least helpful and most helpful aspects of the training program to help improve the training process (Tzeng, H & Yin, C.,

2014). Overall the literature presented will help provide the MSN-CNL students with a realistic guideline on what acute care settings have implemented and the results they have concluded.

Cost Analysis

A cost analysis was performed to determine the overall expenses needed for the MSN/CNL students to conduct a fall protocol assessment within one unit of the hospital. The total cost was determined by calculating the cost of having seven MSN/CNL students partake in assessing a total of 60 registered nurses as they conduct their patients. The nurse to patient ratio would be 1:4 on the medical telemetry unit. When predicting that each registered nurse would take two hours to assess his or her patients, a total of 120 donated hours would be assessed by the students to complete this assessment making it free from any costs.

Additional hours will be additional planning and communication once the assessment is completed. Five hours will be approximated for staff meetings and further communication if necessary about the process. Planning and designing an educational design program to deliver to the staff is approximated to consume ten hours. After the educational program is assembled and implemented the sixty nurses will be evaluated a total of three times each. Each evaluation is estimated to take an hour and a half to then total 90 hours of evaluation.

This entire process would therefore consist of approximately 230 hours to complete. If this process was developed by a Clinical Nurse Leader hired within the hospital who was compensated 38 dollars an hour it would result in a total cost of \$8,740 dollars to conduct this process. Refer to Appendix A for an outlined cost analysis proposal. The staff would not be compensated due to already being contracted with the hospital. Due to the MSN/ CNL students conducting the quality change project the hospital organization would not be responsible for any costs and ultimately be saving \$8,740 by implemented a training program to help positively

impact the quality of care related to fall precautions and intervention education (Reference Appendix A)

Foreseeable changes in reducing the amount of fall incidents on the unit are likely to be seen and therefore save the hospital from unnecessary costs. The Center for Disease Control concluded in the year 2012 that every fall incident costs the hospital organization an estimate of \$34,294. This then leads to the 34-billion-dollar cost to healthcare systems due to the injuries and harm causes by fall incidents (Falls Cost U.S. Hospitals \$34 billion in Direct Medical Costs, 2015). Although the first year of this educational program would be costly due to the hours used in implementation, the following years to come would not be as finically driven due to only needing to retrain staff or train new staff members when necessary. Nonetheless the cost of this program is trivial compared to the past costs associated with falls.

Clinical Microsystem Assessment-Methodology

Purpose

MSN-CNL students planned to meet with staff members at the large metropolitan hospital to determine a needed purpose for the quality improvement project within their graduate program. A meeting was therefore conducted with the Patient Safety Officer and Unit Manager to represent and speak on the hospital organization needs. After having knowledge about the hospitals need of a specific fall prevention program the students created an organized plan to approach the situation. Students organized the approach by planning to proceed with the following actions: assess the current fall incident reports, interview the staff and patients on the unit, and observe change of shift report between day and night shifts. The hospital staff had also acknowledged that they were interested in having the students conduct a root cause analysis report to help determine the cause of the fall and therefore create a realistic program that can

address the current needs of the unit. Although the students were unable to conduct this process due to the IRB needing approval, a root cause analysis would have been conducted and provided information on what specific problems are related to the fall incidents and therefore help create possible interventions to guide the medical telemetry unit with a fall protocol program.

Patient Population

The patient population within the large metropolitan hospital is required to be assessed for the potential risk of a fall occurrence. The Morse Fall Scale is used to determine the risk of falls with a specific scoring system as mention previously. The scale scoring system is utilized by assessing the following six items: history of falls, secondary diagnosis, ambulatory aid use, IV lock, gait and transferring ability, and mental status (Morse, JM., 1985). After using the scoring guidelines to determine the patient's overall score a risk level is determined. The scores range from 0 to 125. A score between 0 and 24 would indicate no risk, between 25 and 50 would indicate low risk level and a score above 51 would indicate a high-risk level (Morse, JM., 1985).

Patients who are determined to be at risk for falls by the Morse Fall Scale System receive a plan of care that includes fall risk bundle interventions or high-risk fall bundle interventions depending on the severity and needs associated with these risks. Fall risk implication for patients at fall risk include a falling star placed outside the room indicating to staff that the patient is at risk for fall, as well as providing yellow socks and a fall risk identification band. For patients with more need for interventions due to being at high fall risk would also have further interventions in place including: being in a room close to the nurse's station, having assistance during ambulation, bed in lowest position, and hourly rounded to assess patient's orientation and safety.

Due to the students being unable to assess the unit culture, the unit managers were able to help provide information regarding the patient population of the microsystem. The unit manager described the diagnosis of the patients being mainly composed of those with neurologic, cardiac, syncope, and alcohol induced problems related to fall incidences. For example, fall in blood pressure when standing up known as syncope could cause a patient to get dizzy, unsteady and result in a fall. The unit manager further explained that noncompliance and heavy work load tends to contribute to patients trying to ambulate by themselves and lead to a fall that could be easily preventable with proper intervention.

Professionals

Professionals within the hospital setting helping provide patient care include anywhere from physicians, nurses, and nursing assistants who provide direct physical care to other professionals such as social workers and the chaplain who may help provide emotional support and help plan for the future of the recovery process. On the medical telemetry unit where the MSN-CNL students are striving to implement a quality change project has 61 total beds available.

The nurse manager oversees the unit including the patients, the lead nurse, the unit clerk, the registered nurses, and the nursing assistants. The unit consists of twelve to fifteen registered nurses and four to five nursing assistants to provide care for the 61-bed unit. The charge nurse will oversee the nursing staff, assign patient to nurse ratio assignments, help in emergency situations, cover nurses for breaks, and communicate with other units in the microsystem when transfers may be necessary. Nurses are responsible for providing care for three to four patients during a shift with the help of an assigned nursing assistant who can have from eight to ten patients to assist with vital signs, activities of daily living, toileting, and other various needs of

the patient and nurse. Nursing assistants may also act as a sitter to manage behavior when a patient is at risk of harming themselves or others. For example, a patient who is severely disoriented and trying to constantly get out of bed may have a sitter to ensure they stay in bed and do not get out of bed without assistance and risk falling. Lastly, the unit clerk also known as the secretary is responsible for helping visitors, directing phone calls, and many other administrative tasks that are necessary to keep the flow steady and organized.

Process

The health care professionals in the hospital conducting the patients risk for fall are using the Morse Fall Scale to conduct the patient assessment and are also expected to update the patients' status according to the hospital policies. According to the policies in place at the large metropolitan hospital a patient is to be assessed for a fall using the Morse Fall Scale upon admission, once a shift, when being transferred, after a fall if one were to unfortunately occur and at the time of discharge. The status of the patients fall risk is updated and saved in the electrical medical record (EMR). This system is accessible to all medical professional staff that is involved in providing care for the patient. The Registered Nurse acting as the patient advocate and caring for the patient is responsible for using the Morse Fall Scale to assess the patients' current fall risk status and record this information in the EMR. Keeping up to date information in a computerized charting system is a great way for multiple health care staff members to stay involved with the current status of the patient's status to help keep the patient staff and provide appropriate interventions when necessary.

The medical staff caring for the patient can include physicians, nurses, nursing assistants, physical therapist, occupational therapists, phlebotomists, respiratory therapists, and many others who are all responsible for understanding the patients fall risk. The medical staff is trained to

understand the necessary precautions and interventions in place according to the patients fall risk status and is expected to follow the hospital protocol. The interventions for fall risk protocol include universal fall precautions and hospital specific fall precautions depending on fall risk status. The universal fall precautions include having the bed in the lowest position with the wheels locked, having the call light within easy reach for the patient, having access to personal belongings, and providing the patient with non-slip yellow socks. Fall precautions unique to the hospitals specific fall risk standards include interventions such as having bed alarms activate, applying yellow wrist bands, providing a toileting/ambulating companion, using hourly rounding, and placing the patient's room closest to the nursing station. Ultimately, the interventions required in response to fall risk status are implemented and monitored by registered nurses and nursing assistants, therefore the quality improvement project will be focused on these specific professionals to then be relayed to the remaining medical staff.

Patterns

On the unit, the shift begins with a "huddle" including the lead nurse, registered nurses, and nursing assistants that will be providing care for the upcoming shift. The huddle is a ten-minute round up from 655 to 705 and from 1855 to 1905 for the lead nurse to go over daily goals and relay important information details about every patient on the unit that is explicable to all staff members to have knowledge of. Although each nurse is assigned specific patients for the shift, there are unique situations sometimes involving an emergency where a nurse or nursing assistant is in a position to require care to a patient on the unit that they were not assigned to.

Proceeding the huddle, nurses get their assignments for the shift and gather information from the previous nurse responsible for the care of the patients assigned during what is called change of shift report. This process takes place until either 730 or 1930. Information provided by

the previous nurse includes a brief overview of the situation at hand, the background information, the assessment, and the recommendation of care to be continued known as an SBAR. The information included may include medications, new blood draw orders, dressing change directions, and other information pertinent to the patients care and well-being.

Due to lack of access to be present on the unit, the MSN-CNL students were unable to properly assess the unit patterns more extensively. The more thorough observations would have taken place during both day and night shifts to better grasp the culture of the unit overall.

Methods

The MSN-CNL students were unable to implement the process to lead to a quality change project due to being unable to adequately assess the unit and access information at the large metropolitan hospital. A root cause analysis was unable to be generated due to the lack of admittance and therefore resulted in some troublesome situations that took place throughout the majority of the time needed to complete a quality improvement project assessment. The hold back in our granted access to be on the unit to conduct this assessment was due to the Institutional Review Board (IRB) approval process.

The guidelines to writing an IRB were unfamiliar to the MSN-CNL students being that the IRB approval process normally takes place in a doctorate program. Nonetheless the MSN-CNL students researched and learned how to write an IRB and request approval for the quality change project the Patient Safety Officer and Unit Manager of the large metropolitan hospital supported. The Institutional Review Board (IRB) document was carefully written, revised, edited due to the strict guidelines and assistance offered by a research facilitator of the hospital. The students revised the IRB a total of five times from September 26, 2017 to October 27, 2017 following the recommendations of the research facilitator.

The MSN-CNL students were adamant about getting approved to begin their assessment and due to the back up in the IRB approval decided to take steps that the strict process allowed them to take in the time being. The students were able to take part at unit based council meetings arranged by the hospital staff. Three meetings at the hospital were conducting for the students to present the guidelines of the process they were seeking to allow the nurse manager and nursing staff to be aware of the upcoming process that would be taking place on the unit. The first meeting was arranged to allow time for the MSN-CNL students to present and introduce the project to the nursing staff who was very positive and attentive to our presentation. The following meeting was used to discuss the revisions of the IRB and if there were potential ways to speed up the approval process. After completing the revisions and online module training necessary to be able to conduct assessment and observation on the medical telemetry unit the students awaited feedback from the research facilitator and also planned for a third meeting which took place at a research-based council meeting. The outlined plan of the quality improvement project that was also explained in the IRB was presented and discussed. Due to the time restraint and delay in approval of the IRB the focus of the quality improvement project was directed toward using data from University of San Francisco to create a hypothetical quality improvement project.

In order to assess the microsystem 12 assessments on the medical telemetry unit were hypothetically conducted by the MSN-CNL students. This included a total six-day shift and six night shifts in order to get a full 24-hour perspective of the microsystem's structure. The group of eight students total were split into teams of two making a total of four teams to be sent to conduct the twelve on site assessments. The students would be assigned to shadow one floor nurse during shift change including the process of hand off and report as well as observe the first

encounter made with the patient. During the observation shadowing process the students would be evaluating the following: how nurses communicate with each other during shift change report, compliance and competency of nurses on following fall protocol specific to the unit, discussion of patients' current fall risk, ambulation requirements, and elimination needs, and lastly whether the oncoming nurse asked any questions regarding the criteria related to fall precaution listed above. Furthermore, the students will receive a list of patients that are currently identified for fall risk in the unit to help guide the data collection. For example, this would include confirming if three side rails are raised on the bed, fall risk signs posted outside the door, activated bed alarms, and call light placement available for the patients' easy reach. In conclusion of these steps the students would then be able to combine the assessment information with the data analysis and item analysis of previous chart information from patient falls from the fiscal year 2016 to the fiscal year 2017 to complete a root cause analysis to guide the quality improvement project. As said previously due to the unique situation the data utilized to conclude the quality improvement project was provided by the University of San Francisco.

Results

Root Cause Analysis

Due to inability to proceed our data collection process at the large metropolitan hospital, hypothetical data was used to continue the quality improvement project. In result to our challenges associated with data collection the University of San Francisco provided data to help us proceed.

The Root Cause Analysis was to be determined after observation and assessment of the medical telemetry unit to collect and analyze data while also observing and interviewing patients and staff as thoroughly described previously. Table 1 (Reference Appendix B) outlines the data

collected throughout five shifts accounting for three day shifts and 2 night shifts of observation. The day time shifts accounted for a total of 44 fall risk patients averaging to about 14 fall risk patients per shift. The night time shifts accounted for 34 fall risk patients averaging to 17 fall risk patients per shift. When averaging the total falls per shift including both day and night shift, each shift averaged to be caring for 15 patients at risk for falls. After collecting data on the abundance of patients being cared for on the medical telemetry unit who are identified as fall risk patients, fall risk factor data was collected and recorded in Table 2 (Reference Appendix B). The fall risk factor data associates the communication of these factors upon assessment of the patient. From most observed to least observed fall risk factors the following data was recorded: orientation and cognition (78%), then continence status (72%), number and types of prescribed medications (60%), number of diagnoses (45%), and finally, gait and balance (42%). Table three then summarizes the compliance of interventions associated with fall prevention. The data concluded the following: fall risk sign posted outside the door (63%), call light placed within reach (36%), three side rails up (36%), and bed alarm activated (7%).

These percentages revealed that following hospital protocol is a concerning problem for the unit. The compliance with activating the bed alarm which is a known essential hospital protocol was utilized by less than ten percent of the nursing staff overall on the medical telemetry unit. Being compliant with this intervention alone could reduce falls dramatically. Furthermore, less than 40 percent of nurses ensured the call light was in close reach for the patient and confirmed that three side rails were raised on the bed. Overall the nurses providing care on this unit are not performing proper fall assessments and furthermore not following universal hospital protocol.

Implementation

After determining the root cause analysis related to the abundance of fall occurrences on the medical telemetry unit an implementation of intervention related to the cause was to be implemented. Due to time restraints and failure to get IRB approval this implementation would be taken in the future. With observation of the fall assessment process used by the registered nurses including the use of the Morse Fall Scale, change of shift reporting, staff and patient interviews, and data analysis is hypothetically concluded that education for staff on fall assessment would serve as an appropriate intervention.

Kotter's 8 Steps (Reference Appendix F) was used to guide the intervention process (Kotter, 1996). The eight steps followed by Kotter's Change Models are as follows: establish a sense of urgency, create a guiding coalition, develop a vision and strategy, communicate the vision change, empower broad based action, consolidate gains and produce more change, and lastly anchor new approaches in the culture (Kotter, 1996). In step one in order to establish a sense of urgency, an assessment of the microsystem was conducted. As mentioned previously this included data analysis of incidence reports, staff and patient interviews, and shift change observations. These assessment findings would be shared with the nursing staff to help create an urgency and awareness. In step two, creating a guiding coalition, the MSN-CNL students would create a group of staff members that would be committed to guide the changes. This group would consist of unit managers, senior management, nurses, and nursing assistants. Step three, developing a vision and strategy would be conquered by creating an end goal for the units' success. The end goal created for this quality improvement project would be to ensure nurses and staff have a clear understanding on how to correctly conduct the Morse Fall Scale assessment. Following step three, step four communicating the change vision would include communicating the end goal and vision with all members of the staff on the medical telemetry unit about the just

in time training and what is to be expected. Step five, empowering broad-based action would then remove barriers and create a positive atmosphere to encourage enthusiastic participation in just in time training. Step 6, generating short term wins would then organize the Just in time training with bench marks for staff to see small positive change and continue to work hard and use correct assessment observation and tools. Step 7 is a continuation of step 6, consolidating gains and producing more change. By continuing to accomplish short-term goals over time staff members are able to stay motivated and continue to work on quality improvements and create positive changes in practice. Lastly step 8, anchoring new approaches in the culture consists of the medical telemetry unit continuing to evaluate and motivate staff to continue with performing an efficient Morse Fall Scale assessment so that it becomes a natural part of the unit's protocol. With the Kotter's Change Model serving as a guideline for implementation, fall occurrence should be reduced and therefore improve the safety and overall care of patients on the medical telemetry unit at the large metropolitan hospital.

Evaluation

Due to inability to gather data from the large metropolitan hospital, the data provided by University of San Francisco was used to help identify the Morse Fall Scale was not being utilized appropriately by nursing staff. It was determined that nurses were primarily relying on the charting in the EMR system conducted by the previous nurse to serve as their assessment data for the Morse Fall Scale. Nurses therefore need to be educated on how to use the Morse Fall Scale scoring system and be educated on the quick changes in a patient's status due to level of consciousness, medication, illness progression, and many other factors.

To evaluate the progress of just in time training, three phases will be conducted. Phase one will occur on the third day of the intervention changes being implemented. The MSN-CNL

students will observe the nurses to determine whether the nurses are properly assessing their patient's fall risk with the use of the Morse Fall Scale and complete a competency check off. This observation will be completed with all four patients the nurse is assigned to for their shift. The second phase will include a questionnaire that will be provided for the nurses for the nurses to give feedback on whether the just in time training helped improve their understanding of the Morse Fall Scale and if it helped them in their daily nursing practice. Lastly, the third phase will allow a time for nurses to reflect on the experience and express to the MSN-CNL students if they enjoyed the process and their opinion on the future implementation of this system on other units. This feedback opportunity is important to allow for constructional criticism to help further improve the training process.

Discussion

Due to inability to proceed with the quality improvement project the discussion will be centered on the IRB process. The large metropolitan hospital had difficulty accepting that our project was a quality improvement project in comparison to a research project. Nonetheless they required an IRB approval which was involved a strict, long process.

If the IRB was to be approved, it was predicted that there would be some difficulties during the process of completing the quality improvement project. The research facilitator mentioned to the MSN-CNL students that patient interviewing would be difficult to get approved and staff interviews would be challenging to find time for due to the nurses' busy schedules. Furthermore, the students were informed that the falls committee only meets once a month, so it would be difficult to speak to them about the implementation of just in time training due to the time provided to complete the quality improvement project. Lastly, data analysis of the patient falls from fiscal year 2016 and fiscal year 2017 would need to be provided by the unit manager

and all the data analysis would have to take place at the large metropolitan hospital to account for HIPPA regulations.

Overall, the quality improvement project created could be successful but the challenges associated require ample time and collaboration by hospital staff members and managers to properly utilize the process.

Nursing Relevance

Nurses are the patient advocates, they are constantly assessing the patient throughout the twelve-hour shift and making note of any changes. Assessing and observing for changes and behaviors related to fall risk is a major part of the nursing role. The Morse Fall Scale serves as a universal assessment scale that all staff members providing care for the patient can use as a guideline to understand the patient risk for falls. Nurses tend to use their own clinical judgment and rate a patient based on their own guidelines, but this only helps them recognize the patient's risk when multiple healthcare staff members also need to be aware and recognize the patient's fall risk level. Therefore, nurses need to be educated on the importance of using the Morse Fall Scale and how to properly score patients levels to keep the scoring system universal and accurate. The Morse Fall Scale will then identify a patient as no risk, moderate risk or high risk for falls and be recorded in the EMR system to allow all staff members to be knowledgeable on the patient's current fall risk status. Assessment of patients is a core part of the nursing process and nurses need to utilize the nursing process to ensure the best quality, patient centered care is provided for all patients.

Clinical Nurse Leader Relevance

At the large metropolitan hospital, there are no Clinical Nurse Leaders serving in the microsystem. The quality improvement project created by the MSN-CNL students is an example

of the work a clinical nurse leader would be doing to help solve problems in the microsystem and overall improve patient care. Clinical Nurse Leaders focus primarily on improvement in positive patient outcomes. The lateral integration utilized by a Clinical Nurse Leader could help the microsystem reduce the fall occurrence on the medical telemetry unit and assess the progress and then proceed to utilize the interventions in every unit in the hospital to create a greater positive change. This entire process is projected to take a total of 230 hours on the assessment alone. The Clinical Nurse Leader could be the direct person to lead this project because the role is focused on improving workflow and overall making positive changes to ensure the hospital is consistently making positive changes.

Future Direction

Clinical Nurse Leader Perspective

It is a known fact that every hospital has fall occurrences. The Clinical Nurse Leader sees this an opportunity to create a positive change that can potentially help resolve a larger issue and be used in many microsystems and therefore help more patients receive quality patient centered care. The Clinical Nurse Leader understands the value of addressing the fall prevention improvement project. An IRB would not be necessary to address the issue of fall occurrence rates in the microsystem if a Clinical Nurse Leader employed by the large metropolitan hospital was leading the project. The Clinical Nurse Leader could be available to address changes that need to be made or provide further teaching for nursing staff when necessary to ensure the project continues to show progress and create positive changes within the healthcare system.

Sustainability Plan

The sustainability plan would not be created until it was determined that the implementation of the quality improvement process would be permitted to take place at the large

metropolitan hospital. Due to the hospital management confusion between a quality improvement project and research project, the IRB may not get approved and therefore the students would not be able to proceed further with this proposed project. The IRB clearly outlines the design of the assessment of the microsystem to help guide the future students working on the fall prevention quality improvement project in an organized manner. If future students are able to assess the microsystem, the data could be used to create an educational program that suits the needs of the specific unit they are aiming to assist with creating a positive change.

Conclusion

Due to the troublesome process of obtaining Institutional Review Board (IRB) approval from the large metropolitan hospital the quality improvement project was hypothetically predefined. The plan created by the MSN-CNL students was produced in relation to the needs of the patients from the data reflection provided by the University of San Francisco. The students were able to understand and distinguish the differences between a research project and quality improvement project. I would predict if the quality improvement project was to be executed in the large metropolitan hospital, positive results with a decrease in patient falls would be noted.

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Appendix A

Cost Analysis

Intervention #1	Break down of training hours:	CNL Activity:	Hours Spent
“Just in time” training	1 st encounter: 30 min 2 nd encounter: 30 min 3 rd 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

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 C

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 D

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 E
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	

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Review of Incidence Reports

Date and time of fall: (eg. dd/mm/yy, 0000)			
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Shift (Circle one)	AM shift, PM shift, or NOC shift
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Was the patient identified as a fall risk? (Circle one)	YES/NO
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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	<input type="checkbox"/> No <input type="checkbox"/> Yes	0 25
	2. Secondary Diagnosis:	<input type="checkbox"/> No <input type="checkbox"/> Yes	0 15
	3. Ambulatory Aid	<input type="checkbox"/> None/bed rest/nurse assist <input type="checkbox"/> Crutches/cane/walker <input type="checkbox"/> Furniture	0 15 30
	3. IV Therapy/HepLock/Saline Lock	<input type="checkbox"/> No <input type="checkbox"/> Yes	0 20
	4. Gait:	<input type="checkbox"/> Normal/bed rest/wheelchair <input type="checkbox"/> Weak <input type="checkbox"/> Impaired	0 10 20
	5. Mental Status:	<input type="checkbox"/> Oriented to one ability <input type="checkbox"/> Overestimates/forgets limitations	0 15
	Patient is (select one) <input type="checkbox"/> No risk for falls (0) <input type="checkbox"/> Low risk for falls (<25) <input type="checkbox"/> Moderate risk for falls (25-45)		Total:

	<input type="checkbox"/> High Risk for Falls (>45) <div style="float: right; border: 1px solid black; width: 40px; height: 20px;"></div>
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.):	
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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)