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Quality Improvement in Reducing Falls in a Medical-Surgical-Telemetry Unit

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Quality Improvement in Reducing Falls in a Medical-Surgical-Telemetry Unit

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Abstract

Problem: Inpatient falls are the top quality measure for patient safety in hospitals. In the United States, falls affect approximate one million people per year leading to increased healthcare utilization and cost. A Northern California Hospital 24-bed Medical-Surgical-Telemetry (MST) Unit has experienced high rates of patient falls in 2016 to 2017. Therefore, it is imperative that this hospital MST unit develop an effective fall prevention program.

Context: The MST is a 24-bed inpatient telemetry unit serving a population at risk for cardiovascular disease with patients primarily 65 years and older. The MST unit has also experienced a high turnover of unit managers impacting staff focus and awareness on daily nursing task rather than on patient centered-care and safety.

Interventions: The plan is to integrate a Clinical Nurse Leader (CNL) to establish an interprofessional team to reduce fall rate in the MST unit. The plan is to test this project that includes three components: 1) a quality improvement model, 2) a proactive risk assessment, and 3) standardized intentional rounding. The overall project aim is to lengthen the days between patient fall events and thereby reduce the incidence of falls per year. This project is currently in progress.

Measures: The outcome measures will include be the number of fall events in the unit per month and the average days between fall events. The process measures will include staff compliance to the steps for intentional rounding and be the number of compliance from each observation of staff on intentional rounding, and the balancing measure will be the result of the job satisfaction survey completed by the MST unit staff.

Results: Intervention testing started on October 31, 2017. Currently, there is not enough data to establish a trend, but the initial results show a positive outcome. So far, the average days between patient fall events have increased from baseline. There were only four fall events from January to June 2018 compared to 27 patient falls in 2017.

Conclusions: Based on the preliminary results, integrating the CNL using quality improvement science with a proactive approach assisted in the reduction of fall events per month in the MST unit. Moving forward, the CNL need to develop the unit champions to sustain this project. The team will need to continue post-fall huddles and discussing the various ways of preventing falls. This project demonstrates the impact of the Clinical Nurse Leaders who can accelerate the translation of evidence into practice and improve outcomes.

Quality Improvement in Reducing Falls in a Medical-Surgical-Telemetry Unit

Introduction

Inpatient falls is a top quality measure for patient safety in hospitals. In the United States, falls affect 700,000 to 1,000,000 people each year, resulting in serious injuries that can lead to increased health care utilization (Ganz, Huang, & Saliba, 2013).   According to the Joint Commission (2013), falls affect not only the elderly population but anyone who is at risk due to various factors, including changes in their physical and medical condition that can leave them weakened or confused. In addition, falls with severe injuries resulting in death is among the top ten reportable sentinel events in hospitals. Bouldin et al. (2013) reported US hospitals' falls rate at 3.53% per 1000 patient days. The Centers for Disease Control and Prevention (2016) reported that the average hospital cost for a fall injury is over $30,000/per event. Research has also shown that one-third of fall events are preventable (The Joint Commision, 2013). With the increase of both fall events and the cost to treat fall injuries in hospitals, it is imperative that hospitals develop an effective fall prevention program.

Therefore, this paper will describe a fall prevention project currently in progress at a Northern California Hospital Medical-Surgical-Telemetry (MST) unit to reduce the incidence of patient falls. The Clinical Nurse Leader (CNL) will establish an interprofessional team who will implement specific intervention to reduce fall rates in the hospital unit. The project aim is to increase the days between patient fall events by improving the effectiveness of the intentional rounding process and addressing patients' basic needs by the MST staff. The intervention plan is to test the intentional rounding process through direct staff observations and patient interviews. The expectation is to develop a culture of safety and to prevent patient injuries from fall events.

The project utilized the Kotter Change theory to provide a strategic step in this quality

improvement initiative and to transform the culture of safety in the MST unit.

The CNL completed a microsystem assessment and identified the quality gap in the

patient care process leading to the patient fall events. The CNL also informed the hospital

leadership of the proposal to reduce fall events in the MST unit. A quality improvement

approach led by the CNL using the Institute for Healthcare Improvement (IHI) tools to facilitate

the change process. This overall project aim is to lengthen the days between patient fall events

and thereby, reduce the fall rate in the MST unit.

Problem Description

Patient fall rates are measured by the number of fall events per 1000 patient days and are

a direct measure of how well a hospital is ensuring patient safety (Agency for Healthcare

Research and Quality [AHRQ], 2013). The National Database of Nursing Quality Indicator

collects the estimated prevalence of falls occurring in the hospitals across the United States. The

national hospital average of fall rate is 3.10% (Bouldin et al., 2013).

In the previously mentioned Northern California hospital, the 2017 overall inpatient falls

rate was 2.8%, the third highest inpatient fall rate in the regional hospital organization. This

hospital had previously made efforts to reduce patient fall events. Considering efforts to reduce

falls in the macrosystem level, data shows currently, 45% of all inpatient reported falls in the

MST unit. There were also no significant differences in the number of fall events in the MST

unit from 2016 to 2017 (28 versus 27 fall events respectively). These patients fall events

triggered a need to take more action to reduce inpatient falls in the MST unit.

Available Knowledge

The PICOT model for clinical question that guided the search for evidence in this project was: In the MST unit (P), how does intentional rounding (I) compared to no intervention (C) to reduce patient fall events (O) from 2018 to the present (T). A comprehensive electronic search was conducted in December 2017 reviewing evidence that examined fall prevention practices and utilization of intentional rounding using the Cumulative Index to Nursing and Allied Health Literature (CINAHL) database. The following search terms were utilized: inpatient or hospital falls, falls prevention, and rounding was selected using the database. The search yielded 22 articles. Additional articles were explored that involved clinical practice guidelines and expert opinion on fall events in the hospital settings. Twelve articles were selected for this review (see Appendix B). The level of evidence of the article types included a random control trial, two quasi-experimental designs, integrative studies, expert opinion and clinical practice guidelines. The John Hopkins Nursing Evidence-Based Practice appraisal tool was used to appraise the evidence for this review. The appraisal tool includes criteria to evaluate the strength and quality of the evidence.

The AHRQ (2013) provides a roadmap for the implementation of a successful fall prevention program. The AHRQ consensus guideline recommends intentional rounding as an approach in the reduction of patient fall events in the hospital. Hourly rounding is an essential part of nursing and patient care that addresses patient's needs such as pain, potty (toileting), positioning, and personal belongings/needs (Hicks, 2015). The study has shown that intentional rounding reduces patient's use of call lights, improves patient satisfaction, and decreases patient falls in various hospital settings (Hicks, 2015). In addition, Forde-Johnston, (2014) described intentional rounding as a structured approach wherein patients are checked at set specific times

to assess, anticipate, and meet their fundamental needs. Authors also listed six steps in intentional rounding: introduction, the setting of expectations, nurse's questioning patients' needs, utilize the 4 P's (positioning, personal needs, pain, and placement), provide patient's need and documentation of the care provided. Rounding with a purpose or intentionally provides a patient-centered care approach, thus, improve patient satisfaction and decrease patient risk events.

Patients may respond differently or ask for help depending on the care being provided. Meade, Bursell, & Ketelson (2006) study proved that regular rounding reduces the frequency use of call lights, increases patient satisfaction, and reduces patient falls. However, a quasi-experimental study utilizing a standardized intentional rounding process (SHaRP) resulted in an efficiency of nursing care but the significant increased use of call lights (Krepper et al., 2012). Developing a standardized rounding tool should involve the patient's perception and feedback.

Integrating teamwork training and a staff-led system design with customized intentional rounding appeared to be effective in reducing patient falls (Morgan et al., 2016). Staff engagement in providing feedback on every falls event fostered teachable moments and prevented future falls by becoming proactive. Leadership rounding is essential to ensure the intentional rounding process is taking place. Hutchings, Ward, & Bloodworth (2013) described the implementation of the "Caring around the clock model" and discussed leadership insights into the importance of developing a culture change in communication among staff and patients. The leadership integration on this project is essential to assist in the development of the rounding tools and to incorporate coaching staff to improve patient care experience. The MST staff and leadership adherence on inpatient rounding approaches will be essential in creating a culture of safety and prevention of falls.

Rationale

The project focuses on establishing a culture of safety by reducing fall events in the unit. Fall events during acute hospitalization can cause the patient's minor to severe injuries, may decrease patient's functional mobility, lengthen hospital stay, and increase healthcare cost. This Kotter change model will guide the MST unit team to identify the driving and restraining forces to guide the team in the improvement process. Utilizing the Kotter theory (Kotter International, 2014), the CNL will inform hospital leadership regarding the urgency for the fall prevention project and ask for assistance to support and to facilitate the implementation for change. As a clinician, the CNL is in the position to influence safe and quality care from the administrative areas directly to the unit's providers who deliver the services (Reid & Dennison, 2009). A letter sent to the Clinical Nurse Executive states the urgency of the project (see Appendix E). Next, the CNL will lead and collaborate with the MST staff to form interprofessional teams to plan, assess, implement a test of change, and evaluate outcomes. Then, the team will form their vision of how to approach the problem. In the end, this will empower the team, including staff nurses, to actively participate in every decision and to plan for the various phases of the project. In addition, the CNL needs to be cognizant of the barriers to the prevention of patient falls and should be able to report any untoward events to the leadership. The team then focuses on results and improvement of outcomes. Subsequently, the CNL provides or asks for incentives to help sustain the project and recognize the team for their efforts. Lastly, the project interventions and outcomes must be evaluated to ensure processes adhere to the organizational culture of safety standards.

Specific Project Aim.

The specific aims of this project are to achieve a 25 % reduction of the overall fall events per 1000 patient days in MST from a baseline rate of 3.1% to 2.3% and to lengthen days between falls from an average of 12 days to 30 days by July 2018.

Methods

Context

Microsystem Assessment

The hospital setting for the project is a licensed 140-bed capacity non-profit hospital, Primary Stroke Center, and a designated Level II Trauma center. The microsystem chosen for this project is a 24-bed capacity medical-surgical and telemetry nursing unit. Fifty percent of the MST patient population consists of age 65 years and older. Forty-seven percent admitted to the unit are female. The top five discharge diagnoses include ST-Elevation myocardial infarction, sepsis, stroke, respiratory failure and traumatic injury or fractures. The unit accepts all patients that have an acute episode or stroke symptoms. The typical average length of stay is less than five days.

The unit is comprised of a manager, two assistant nurse managers, registered nurses, patient care technicians, unit assistants, and hospitalists. Supporting services include nursing education, cardiology, neurology, rehabilitation, radiology, pharmacy, social services, case management, palliative care team, laboratory, housekeeping, and engineering. The unit has a routine patient admission and discharge process. The hospital uses a computerized physician order entry, and the nurses, including the ancillary staff, acknowledge all orders. The staff uses a face-to-face handoff communication process known as "Nurse Knowledge Exchange."   The

physicians and the care team conduct multi-disciplinary rounds and intentional rounding to communicate the daily patient plan of care.

Reducing harm in a population of primarily elderly patients (50%) with cardiovascular disease can be challenging for the MST unit, since this patient population is at high risks for falls and injuries. Similar to a Step-Down unit, the MST unit is a highly specialized unit caring for a high-risk cardiovascular disease population. Giving safe and quality care to the patient population requires a highly skilled, competent nursing staff with a high level of teamwork. With the safety concerns on increase fall events, there is an opportunity to create a high functioning and reliable team. Therefore, a well-developed safety-focused fall prevention program provides an opportunity to create a highly functioning and reliable team in this MST microsystem.

Culture Assessment

Frequent leadership turnover rate has recently plagued the MST Unit. Although the MST staff are passionate about their work and wants to make a positive environment for their department, due to the lack of leadership, the staff has been forced to focus on managing their own assignments and nursing responsibilities, rather than patient-centered care. The lack of staff perceived resources may have caused a climate to increased risk management events in the unit.

SWOT Analysis

To be able to understand the challenges in reducing falls in the unit. The MST Inpatient Falls workgroup developed a Strength, Weakness, Opportunity, and Threat (SWOT) analysis (see Appendix G). The strength of the current falls program consists of a comprehensive falls policy and commitment to leadership. Opportunities for improvement identified include team building, effective staff communication, intentional rounding and consistent patient/family fall prevention education.

Cost-Benefit Analysis

The current healthcare cost for a patient fall is $30,000 per occurrence (CDC, 2016). In the hospital of interest, the number of reported inpatient falls for 2016 was 28 and 2017 was 27. The cost for these falls in 2017 was approximately $810,000 (see Appendix K). The proposed goal for this project is to reduce inpatient falls by 25%. The cost avoidance measure is calculated by multiplying the number of the event by 0.25. The difference between the cost of event in 2017 and the cost avoidance rate will determine the cost savings of the project. Therefore, if this project meets the goal of reducing fall events by 25%, the projected annual cost for future falls is $600,000; with an estimated cost saving of $210,000.

Intervention

The plan is to integrate a Clinical Nurse Leader (CNL) to establish an interprofessional team to reduce fall rate in the MST unit. The plan is to test this project that includes three components: 1) a quality improvement model, 2) a proactive risk assessment, and 3) standardized intentional rounding. This project is currently in progress. A project timeline is shared with the MST team for project deliverables and deadlines (see Appendix D).

Quality Improvement Model

Utilizing the IHI Model of Improvement, the team met and identified the root cause of fall events in the unit (see Appendix F). These events were reviewed against the Post Fall Assessment reports identifying common themes. A plan-do-study-act cycle (PDSA) will be used as a model to test changes in the unit to improve performance. These steps will include measuring the current state of fall event, analyzing and discovering causes, implementing change or targeted solutions, and, lastly, sustaining and spreading improvements. The team plan is to have a visual cue laminated poster (see Appendix M) to be developed that reminds the patient to

ask for assistance before standing or going to the bathroom. A daily monitoring tool will capture

the usefulness of the poster (see Appendix N). The creation of a patient and family falls

prevention brochure will be another intervention.

Proactive Risk Assessment

A proactive risk assessment has been developed to identify significant problems on falls

the hospital. This assessment will help the MST team identify focus areas on fall prevention. A

contingency diagram (see Appendix H) shows the four identified focus areas: a) Inconsistent

intentional rounding, b) Lack of Effective hand-off communication of high-risk patients, c)

Insufficient falls data and event communication to frontline staff, and d) Unreliable fall risk

assessment. Using the Post Fall Huddle Tool (Appendix M), the team can learn from the reasons

for the patient fall and focus on areas to prevent fall from happening in the unit.

Standardizing Intentional Rounding

The project solutions are based on the AHRQ guidelines which consist of multi-

intervention approach but will limit to two interventions – standardizing intentional rounding and

teaching patient and family on falls prevention. The MST team assumption is that

standardization of intentional rounding will solve the falls due to toileting issues. The plan is to

have Leadership rounding to patients' rooms and observe how well the staff able to communicate

fall prevention to the patients and their families. A leader rounding tool is developed to monitor

staff compliance.

Study of Intervention

The project charter (see Appendix C) provides a roadmap for the quality improvement

plan which identifies the project aim, team, project measures, measurement strategies,

definitions, and changes to test. The data collection will include a baseline and current falls data

to be obtained from chart review and facility quality databases. A fall is a sudden unexpected descent with or without injury to the patient that results in the patient coming to rest on the floor or against another surface, on another person or an object (The Joint Commission, 2013). The falls rate is defined as the percentage of fall events per 1000 patient days. Every fall event date will be collected and days between falls will be analyzed using a statistical control chart (G-Chart). The team will monitor any changes in the percent of fall risk assessments. The Unit Champions (UC) which comprise of nurses and patient care technician will be trained to complete the data collection form and the new work process. The staff competencies for patient rounding will be evaluated through nurse leader rounds. The CNL will gather the data and share the findings with the team. The review and analysis of the falls data will then have the team decide whether they will hold the gains, make changes, or plan another test of change.

Measures

The data collection will include the baseline and the current falls data to be obtained from chart review and facility quality databases. The project charter describes the measurement description and strategies (see Appendix C). The outcome measures to be evaluated will consist of the number of fall events in the unit per month. The days between falls will be calculated between the current event and the previous event. The process measures will be the number of compliance from each observation of staff on intentional rounding. The balancing measure to be reviewed is the staff's job satisfaction using a survey tool.

Ethical Considerations

The project was reviewed by faculty and is determined to qualify as an Evidenced-based Change in Practice Project, rather than an IRB review is not required (see Appendix A). The ethical considerations in this project involve the balance between patients' respect for autonomy

and their safety. Beauchamp and Childress (2012) regard autonomy as acknowledging the patient's capacity to make decisions about their care. Protecting the hospital patients from harm or injury is a duty of all the staff and leadership. The care providers need to respect the patient's autonomy by giving the patient information needs to understand the risk and benefits of the plan of care. The Nursing Practice Act dictates any negligence and incompetence of providing care for patients. Nurses should practice with absolute competence to diagnose and treat patients in response to their health and illness. It is imperative the patients and family must be educated about falls prevention and agree on the plan of care to reduce harm from falls.

Results

Intervention testing (implementation and evaluation) started on October 31, 2017. Currently, there is not enough data to establish a trend, but the results show a positive outcome. So far, the average days between patient fall events have increased from baseline (see Appendix I). The MST unit experienced a reduction of fall events and length of days between events during the intervention phase of the project. There were four fall events reported from January 1, 2018, to June 15, 2018 (See Appendix J). The range of days between patient falls was from 11 days to 56 days. The average days between falls from October 31, 2018, to June 2018 is at 30 days. The team will need to monitor the patient fall events for the rest of the year to ensure their improvement efforts is successful.

Using the visual management tool, the average patient's perception of the effectiveness of the tool is 80%. Patients also use the call light at an average of 71.%. (see Appendix K). Overall the patient's feels that the visual tool is effective, but patients uses their discretion when asking help from staff.

Standardization of intentional rounding process is the next step of implementation. The

staff were educated on standardization of intentional rounding; however, the monitoring and

coaching process was not initiated. Therefore, no data was available on the effectiveness of

intentional rounding. The expectation for this next step is to have the UC to assess the

effectiveness of rounds through direct observations and patient interviews. The CNL will

develop the champions to achieve this process so that the implementation is not reliant solely on

leadership. The sustainability of this project requires CNL's guidance and support. For the MST

staff to make changes to the way they provide care to patients, support and collaboration are

needed from all levels of the organization.

Discussion

Summary

The reduced episodes of falls in the initial stage of the intervention may be due to

increased awareness of fall prevention measures in the MST unit. The UC team was excited to

introduce the new processes to the staff. The UC engagement is critical to ensure the staff buy-in

into the change processes. The first cycle of improvement involved the creation of a post-fall

huddle form, which was tested with the Assistant Nurse Manager and the staff involved in the

event. The utilization of the adapted Post Fall Huddle sheet creates a learning environment for

the team and staff. Every fall event is discussed through the Unit Huddle board prompting the

group to examine each case. There was a new shift in the culture of how the staff addresses each

fall event. This change in the practice helps to build upon the second stage of the

implementation.

The group developed a visual management tool to give a patient and family reminder of

fall prevention. The poster creation underwent various revisions before adopting the final

product. The UC initially received unfavorable responses from staff. The staff perceived the

utilization of the poster as an additional task since the room has an existing care board that

provides patient care information. The team must learn to focus on the patient to be at the center

of the intervention to understand how the signage to be a useful tool. Most patients offered

positive feedback on the signage; however, some patients felt that they did not need an additional

reminder to call for assistance. The team found some fall events with patients with low-risk fall

score are the ones have an incidence of falls without injury. The initial outcome of the project

may be the result of this implementation stage. The new fall event findings brought a new level

of understanding on how to approach patient's independence and fall prevention. The visual

management tool provides a reminder and an educational reinforcement for patient and family on

fall prevention. Based on the results, the poster is now available in every room in the MST unit.

Initially, the frequent change in the MTS unit leadership, the standardization of the

intentional rounding was not fully implemented. Staff education on intentional rounding has

been completed but the Nurse Leader rounding phase will soon to be implemented to observe

staff adherence to steps in rounding. The frequent turnover in leadership is a constant in the unit.

This is the opportunity for the CNL to step up as the care outcomes leader in the MTS

microsystem and support the UC to continue its efforts for fall prevention. To sustain this

project, the CNL must train and guide the UC to have the intentional rounding as the objective of

the team rather than the responsibility of the assistant nurse managers. The expectation is that

the UC can assist the staff to enhance patient care experience and decrease risk events. This

rounding process can be reviewed and adjusted based on staff feedback on ways to improve

patient outcomes.

The results of the project show a reduction of fall events and an increase in the average days between fall events since the integration of a CNL and the start of the initial interventions. Project limitations include unidentified variables that may have contributed to reduced fall events. Further studies need to be done to understand the environmental conditions and patient behaviors that lead to inpatient hospital falls. The variables in the hospital and associated microsystem are too numerous and complex to control. The hospital leadership is reviewing the MST unit practices and starting to implement the "Call Don't Fall" poster. The project has begun to demonstrate reduced healthcare costs with only four patient falls in the past six months compared to 12 patient falls in the same 2017 timeframe. For 2018, the current MST unit cost savings since instituting the fall prevention intervention project is $240,000.00 or eight prevented patient falls.

Conclusions

The overall objective of the project is to reduce patient falls in the MST unit. The continued high level of fall events leads to a newfound unit awareness and a call to action from leadership. Integrating the CNL using quality improvement science with a proactive approach has assisted in reducing fall events in the MST unit. The expected standardization process of intentional rounding was delayed due to frequent leadership turnovers. However, the CNL learned that the project success cannot be dependent on constant support from leadership. The CNL needs to capitalize on developing unit champions to lead the staff in sustaining practice change in the unit. The team will need to continue post-fall huddles, intentional rounding, and discussion on various ways for preventing falls. Findings from this project may assist Clinical Nurse Leaders in translating evidence into practice.

References

Agency for Healthcare Research and Quality. (2013). *Toolkit for using the AHRQ quality*

   indicators: How to improve hospital quality and safety. Retrieved from www.ahrq.gov:

   https://www.ahrq.gov/professionals/systems/hospital/qitoolkit/index.html

American Association of Colleges of Nursing. (2013). *Competencies and curricular expectations*

   for clinical nurse leader education and clinical practice. Retrieved from

   file:///C:/Users/Joseph/Desktop/CNL-Competencies-October-2013.pdf

Beauchamp, T., & Childress, J. (2012). *Principles of Biomedical Ethics. .* 4th ed. New York, NY:

   Oxford University Press.

Finkelman, A. (2016). *Leadership and management for nurses: Core Competencies for Quality*

   Care. Upper Saddle River, NJ: Pearson.

Forde-Johnston, C. (2014). Intentional rounding: a review of the literature. *Nursing Standard,*

   28(32), 37-42. doi:10.7748/ns2014.04.28.32.37e8564

Hicks, D. (2015). Can rounding reduce patient falls in acute care? An integrative literature

   review. *MEDSURGE Nursing, 24*(1), 51-55.

Hutchings, M., Ward, P., & Bloodworth, K. (2013). Caring around the clock: a new aprroach to

   intentional rounding. *Nursing Management, 20*(5), 24-30.

John Hospkins Nursing Evidence-Based Practice Models and Tools. (n.d.). Retrieved from

   https://www.ijhn-

   education.org/node/1535/done?sid=25360&token=37e1ec1fcd45028844dce7d53d97d3c5

Kotter International. (2014). *8 Step Process for leading change*. Retrieved from

   www.kotterinternational.com:

   http://www.kotterinternational.com/kotterprinciples/changesteps

Krepper, R., Vallejo, B., Lindy, C., Fullmer, C., Messimer, S., Xing, Y., & Myers, K. (2012).

Evaluation of a standardized intentional rounding process (SHaRP). *Journal of Healthcare Quality, 36*(2), 62-69. doi:10.1111/j.1945-1474.2012.00222x

Lundsford, B., & Wilson, L. D. (2015). A systematic process to address patients' fall risk can decrease or nearly eliminate falls. *American Nurse Today*, 29-31. Retrieved from https://amercannursetoday.com/wp-content/upload/2015/07/ant7-Fall-630_FULL.pdf

Meade, C., Bursell, A., & Ketelson, L. (2006). Effects of nursing rounds on patient's call light use, satisfaction, and safety. *American Journal of Nursing, 106*(9), 58-70.

Morgan, L., Flynn, L., Roberston, E., New, S., Forde-Johnston, C., & McCulloch, P. (2016). Intentional rounding: a satff-led quality improvement intervention in the prevention of patient falls. *JOurnal of Clinical Nursing*(26), 115-124. doi:10.1111/jocn.13401

Quigley, P. A., & White, S. V. (2013). *Hospital-based fall program measurement and improvement in high reliability organizations.* (Vol. 18). The Online Journal of Issues in Nursing. doi:10.3912OJIN.Vol18No2Man05

Reid, K. B., & Dennison, P. (2009). The clinical nurse leader (CNL): Point-of-care safety clinician. *Online Journal Of Issues in Nursing, 16*(3). doi:10.3912/OJIN.Vol16No03Man04

Reid, K. B., & Dennison, P. (2011). The clinical nurse leader (CNL): Point-of-care safety clinician. *Online Journal Of Issues in Nursing, 16*(3). doi:10.3912/OJIN.Vol16No03Man04

The Joint Commision. (2013). *Preventing falls and fall-related injuries in health care facilities.* Retrieved from Sentinel Event Alert Issue 55: www.jointcommision.org

Appendices

Appendix A
IRB Non-research determination form

CNL Project: Statement of Non-Research Determination Form

Student Name:_____**Joseph C. Mojares**_____

Title of Project: Reducing Falls in a Medical-Surgical Telemetry (MST) Unit

Brief Description of Project: The MST unit has the highest reported falls event among the hospital departments in 2016 and 2017. The MST is a 24-bed telemetry unit with a complex patient population. The patient includes 65 years and older with high risk disease population such as myocardial infarction, respiratory diseases, stroke and sepsis cases. Falls reduction aligns with the facilities quality initiative priorities. The project will help improve patient safety and quality outcomes.

  A) Aim Statement: Widen the gap of days between falls from (2017) baseline of 12 days to 30 days by July 2018.

  B) Description of Intervention: Rethinking intentional rounding with proactive toileting of all patients. Creation of a patient-centered fall prevention tool kit that includes patient/family education and staff fall prevention resources. Structuring an effective evaluation learnings from all fall events.

  C) How will this intervention change practice? The fall reduction interventions will hope to have a better staff engagement to promote patient safety and ultimately reduce injuries from falls.

  D) Outcome measurements: Outcome - Number of days between falls events (increase number of days between fall events) **Process** – Percent of patients found to receive toileting with supervision **Balancing –** Staff Satisfaction (Increase or Decrease)

To qualify as an Evidence-based Change in Practice Project, rather than a Research Project, the criteria outlined in federal guidelines will be used: (http://answers.hhs.gov/ohrp/categories/1569)

X This project meets the guidelines for an Evidence-based Change in Practice Project as outlined in the Project Checklist (attached). Student may proceed with implementation.
X This project involves research with human subjects and must be submitted for IRB approval before project activity can commence.
Comments:

Appendix A
IRB Non-research determination form

EVIDENCE-BASED CHANGE OF PRACTICE PROJECT CHECKLIST *
Instructions: Answer YES or NO to each of the following statements:

Project Title:	YES	NO
The aim of the project is to improve the process or delivery of care with established/ accepted standards, or to implement evidence-based change. There is no intention of using the data for research purposes.	X	
The specific aim is to improve performance on a specific service or program and **is a part of usual care**. ALL participants will receive standard of care.	X	
The project is **NOT** designed to follow a research design, e.g., hypothesis testing or group comparison, randomization, control groups, prospective comparison groups, cross-sectional, case control). The project does **NOT** follow a protocol that overrides clinical decision-making.	X	
The project involves implementation of established and tested quality standards and/or systematic monitoring, assessment or evaluation of the organization to ensure that existing quality standards are being met. The project does **NOT** develop paradigms or untested methods or new untested standards.	X	
The project involves implementation of care practices and interventions that are consensus-based or evidence-based. The project does **NOT** seek to test an intervention that is beyond current science and experience.	X	
The project is conducted by staff where the project will take place and involves staff who are working at an agency that has an agreement with USF SONHP.	X	
The project has **NO** funding from federal agencies or research-focused organizations and is not receiving funding for implementation research.	X	
The agency or clinical practice unit agrees that this is a project that will be implemented to improve the process or delivery of care, i.e., **not** a personal research project that is dependent upon the voluntary participation of colleagues, students and/ or patients.	X	
If there is an intent to, or possibility of publishing your work, you and supervising faculty and the agency oversight committee are comfortable with the following statement in your methods section: *"This project was undertaken as an Evidence-based change of practice project at (Kaiser Foundation Hospital- Vacaville) hospital or agency and as such was not formally supervised by the Institutional Review Board."*	X	

ANSWER KEY: If the answer to **ALL** of these items is yes, the project can be considered an Evidence-based activity that does NOT meet the definition of research. **IRB review is not required. Keep a copy of this checklist in your files.** If the answer to ANY of these questions is **NO**, you must submit for IRB approval.

*Adapted with permission of Elizabeth L. Hohmann, MD, Director and Chair, Partners Human Research Committee, Partners Health System, Boston, MA.

STUDENT NAME (Please print): JOSEPH C. MOJARES

JOSEPH C.MOJARES_____ DATE___2/04/2017_____
Signature of Student:

SUPERVISING FACULTY MEMBER NAME (Please print):

Nancy Taquino
Signature of Supervising Faculty Member

_____**DATE_____**

Appendix B
Evaluation Table

Literature Review

Study	Design	Sample	Outcome/Feasibility	Evidence rating
Agency for Research Health and Quality (2013). Preventing falls in hospitals: A toolkit for improving quality of care. Ganz DA, Huang C, Saliba D, et al. Preventing falls in hospitals: a toolkit for improving quality of care. (Prepared by RAND Corporation, Boston University School of Public Health, and ECRI Institute under Contract No. HHSA290201000017I TO #1.) Rockville, MD: Agency for Healthcare Research and Quality; January 2013. AHRQ Publication No. 13-0015-EF.	Clinical Guidelines	none	Provides roadmap on setting up a falls reduction program and protocols	Level IV A fallpxtoolkit_0.pdf
Meade. C., Bursell, A., & Ketelsen, L. (2006). Effects of Nursing Rounds on patient's call light use, satisfaction, and safety. American Journal of Nursing.106,9,58-70.	Quasi-Experimental	Multisite -46 units, stratified based on type of units	Study describes reasons and frequency of call light use and the effects of regular rounding.	Level II A Effects of Nursing Rounds.pdf
Krepper, R., Vallejo, B., Smith, C., Lindy, C., Fullmer, C., Messimer, S., & ... Myers, K. (2014). Evaluation of a Standardized Intentional Rounding Process (SHaRP). Journal For Healthcare Quality: Promoting Excellence In Healthcare, 36(2), 62. doi:10.1111/j.1945-1474.2012.00222.x Retrieved from http://www.aacn.nche.edu/leading-	Two group Quasi-Experimental Design SHaRP process addresses the following: staff education, patient/family	Two 32 bed cardiovascular surgery nursing units	Using structured (SHaRP) process incorporating intentional rounding resulted in improvement in efficiency, quality, safety and patient satisfaction.	Level II A Krepper et al.

Study	Design	Sample	Outcome/Feasibility	Evidence rating
initiatives/academic-practice-partnerships/GuidingPrinciples.pdf	awareness, charting, coaching/monitoring		Difference in number of falls were not statistically significant. This study is useful in identifying standardized process in intentional rounding.	
Forde-Johnston, C. (2014). Intentional rounding: a review of the literature. Nursing Standard, 28(32), 37-42. doi:10.7748/ns2014.04.28.32.37.e8564	Literature Search	none	Provides a summary of an Intentional Rounding steps. Useful in ensuring providing a safe and comfortable environment to patient and staff.	Level V A intentional rounding.pdf
Hicks, D. (2015). Can Rounding Reduce Patient Falls in Acute Care? An Integrative Literature Review. MEDSURG Nursing, 24(1), 51-55.	Integrative review method From quasi-experimental and independent studies	None 14 studies of the use of rounding tool	Describes a intentional rounding utilization on decreasing fall rates. Useful ideas for CNL to initiate intentional rounding to improve efficiency and address potential benefits of decreased falls.	Level III A Hicks literature review.pdf
Weisgram, B., & Raymond, S. (2008). Military nursing. Using evidence-based nursing rounds to improve patient outcomes. MEDSURG Nursing, 17(6), 429-430.	Case report/Expert opinion	None	Demonstrate nursing adherence to a12-step intentional rounding program.	Level V B Using EB Nutrsing rounds.pdf

Study	Design	Sample	Outcome/Feasibility	Evidence rating
NICE guideline on falls prevention recommends personal assessments. (2013). Nursing Standard, 27(42), 11.	Expert Opinion	None	Article provides link to NICE guidelines in UK	Level V B NICE article.pdf
Dykes, P., Carroll, D., Hurley, A., Lipsitz, S, Benoit, A., Chang, F., Meltzer, S., Tsurikova, R., & Middleton, B. (2010). Fall prevention in acute care hospital: A randomized trial. Journal of American Medical Association., 304 (7), 1912-1918.	Randomized Trial	target sample was 5100 patients in each group (1275 patients in each of the 8 units)	Fall prevention tool kit (FPTK) using health information technology (HIT) decreases patient falls in hospitals.	Level I A falls randomizwed trial.pdf
Hutchings, M., Ward, P., & Bloodworth, K. (2013). 'Caring around the clock': a new approach to intentional rounding. Nursing Management - UK, 20(5), 24-30.	Expert Opinion	None	Describes "The Caring Around the Clock Model" and discussed leadership insights in change process in communication among staff and patients. Useful leadership approaches in providing coaching and supporting staff in intentional rounding process	Level V A around the clock a new approach to int
Nuckols, T. K., Needleman, J., Grogan, T. R., Liang, L., Worobel-Luk, P., Anderson, L., & ... Walsh, C. M. (2017). Clinical Effectiveness and	Quality Improvement	3 step down, 1 medical unit, 1 surgical unit	Evaluates clinical effectiveness of falls prevention	Level III A

Study	Design	Sample	Outcome/Feasibility	Evidence rating
Cost of a Hospital-Based Fall Prevention Intervention: The Importance of Time Nurses Spend on the Front Line of Implementation. Journal Of Nursing Administration, 47(11), 571-580. doi:10.1097/NNA.0000000000000545			Useful article to understand cost analysis of fall events in the hospital	clinical effectiveness and co
Zubkoff, L., Neily, J., Quigley, P., Soncrant, C., Yinong, Y., Boar, S., & Mills, P. D. (2016). Virtual Breakthrough Series, Part 2: Improving Fall Prevention Practices in the Veterans Health Administration. Joint Commission Journal On Quality & Patient Safety, 42(11), 497-AP12.	PDSA Model using the Virtual Breakthrough Series	59 Teams	Development of a change package based on evidence-based practice to address fall prevention.	Level V A Zubkoff VBS.pdf
Morgan, L., Flynn, L., Robertson, E., New., Forde-Johnston & McCulloch, P. (2016). Intentional rounding: a staff-led quality improvement intervention in the prevention of patient falls. Journal of Clinical Nursing, 26, 115-124. Doi.10.1111/jocn.13401.	Staff lead improvement Project Pre-Post intervention evaluation (three phases) Use 4 hospitals as control	75 bed neuroscience unit	Integrating team work training and staff led systems design where customized intentional rounding appears to be effective in reducing patient falls. Provides a global view of intentional rounding.	Level III B Intentional Rounding Article.pd

Appendix C
Project Charter

Project Charter: Reducing Falls in a Medical-Surgical-Telemetry Unit

Global Aim To prevent inpatient harm and injury from fall events in the Medical Surgical Telemetry Unit (MST) by developing a sustainable falls prevention program.

Specific Aim: To reduce 25 % of the overall fall events per 1000 patient days in MST from a baseline rate of 3.1% to 2.3% and to lengthen days between falls from an average of 12 days to 30 days by July 2018.

Background:

In the United States, falls affect around 700,000 to 1,000,000 people resulting in a serious injury that leads to increased health care utilization (Ganz, Huang, & Saliba, 2013). Falls affect not only the elderly population but anyone who are at risk due to various factors including changes in their physical and medical conditions that can leave them weakened and confused (The Joint Commission, 2013). Falls with severe injuries resulting in death are among the top 10 reportable sentinel events in hospitals (The Joint Commission, 2013). US hospitals' falls rate per 1000 patient days is at 3.53% (Bouldin et al.,2013). The average hospital cost for a fall injury is over $30,000 (CDC, 2016). Research has shown that one-third of fall events are preventable. Hospitals must evaluate the effectiveness of all fall reduction activities including assessment, interventions, and education as well as management of patient risk for falls (The Joint Commission, 2013). The facility has experienced increased falls from last year and has not proved a sustainable falls prevention program.

Sponsors

Chief Nursing Executive	Cherie Stagg
Area Quality Leader	Andrea Campbell
Director of Risk and Patient Safety	Natisa L. Dill

Goals

- To prevent patient harm and injury from falls events by developing a sustainable hospital falls prevention program.

- Engage staff to drive a culture of safety by improving communication and identify learnings from every fall events.

- To reduce cost for fall with injury and reduce exposure to lawsuits, regulatory fines, and negative public image.

Appendix C
Project Charter

Measures

Measures	Type	Data Source
% fall events per 1000 patient days	Global Outcome	Quality Data: Statit Reports; eRRF
# Days between Falls	Specific Outcome	MIDAS report
% patients found to receive toileting supervision	Process	Chart Review; staff reporting
% effective staff intentional rounding	Process	Chart Review; Nurse leader rounding results
% of completed fall risk assessments	Process	Quality Data: Info view Reports; eChart reports
Staff Satisfaction	Balancing	Survey on staff perception on Fall events reduction program

Team

RN Co-Lead	
Unit Manager Co Lead	
CNS/Clinical Educator	
Patient Care Technicians	
Unit Assistant	
Staff nurse champions	
Pharmacy Representative	
Physical Therapy Representative	
MIDAS Administrator	

Measurement Strategy

Background (Global Aim) To reduce the number of falls that occur in the MST unit within 6 months.

Population Criteria: Patients 18 years and older that is admitted to the MST unit.

Data Collection Method: Baseline and current Falls data will be obtained from chart review and facility quality databases. Chart review and observations will be a minimum of 20 -30 patient during the project. Data plan and collection will be evaluated as needed based on findings.

Appendix C
Project Charter

Data Definitions

Data Element	Definition
Fall Rate	Number of patient falls x 1000 over number of patient days.
Fall	A patient fall is a sudden, unintentional descent, with or without injury to the patient that results in the patient coming to rest on the floor, on or against another surface, on another person, or on an object.
Assisted Fall	A fall in which any staff member assisted the patient by slowing their descent to minimize the impact of the fall.
Intentional Fall	A fall that occurs when a patient on purpose or falsely claims to have fallen. These type of fall events are not falling in this project.
Toileting	Refers to activities intended to address patient elimination needs.

Measure Description

Measure	Measure Definition	Data Collection source	Goal

Fall rate: % fall events per 1000 patient days	N= # fall event
	D= 1000 patient days
		StatIt report	2.0%

Average # days between falls	Average of the number of days between every fall events	MIDAS report	30days

% patients identified to receive toileting supervision	N= # patients who received toileting with supervision
	D=# patients found with toileting needs as part of plan of care
		Chart review	80%

% Effective Intentional rounding	Improvement of staff competency on effective rounding	Nurse Rounding	TBD

% of completed fall risk assessments	N= # falls assessments completed
	D=# patients in the unit
		Inforview report
		Chart Review
			80%

Changes to Test

- Leveraging technology to identify patient's history of falls. Documentation of Falls history in the "Problem List".
- Introduction of multifactorial assessment to address patient fall risk.in the electronic chart.
- Implementing a scheduled toileting schedule for a patient with high risk for falls.
- Creating a patient and family educational tools.
- Developing a Falls toolkit that house equipment and fall resources.
- Plan-do-check-act approach in evaluating each fall events.
- Structuring an effective staff hand-off communication tool.

Appendix D

Timeline

Steps	10/17	11/17	01/18	2/18	3/18	4/18	5/18	6/18	7/18
Microsystem Analysis	X								
Topic and Goal Setting		X							
Baseline Data Collection			X						
Charter Development				X					
Project Proposal Presentation				X					
Kick-Off Meeting					X				
Measure/Analyze steps						X	X		
Improve (Test of Change Cycle) Evaluation of Outcomes						X	X		
Control – Develop sustainable Plan								X	X
Project Outcome Presentation									X

Appendix E

Letter of Sponsorship

October 19, 2017

Name
Chief Nurse Executive
Organization Name

Dear **Recipient Name**,
I am a MSN Clinical Nurse Leader (CNL) student, at University of San Francisco, as part of the_____. A CNL, when integrated into the healthcare system, can address many concerns and drives improvement in quality and patient care. The CNL role is to lead teams in their microsystem and help create sustainable performance improvements of patient-centered quality and safety outcomes.

Part of my current course requirement is to assess a microsystem and develop a project that will yield an improvement in quality metrics. I am collaborating with Patient Care Services and Risk Department to reduce inpatient falls events. I am happy to inform you that as of September 2017, there is a 13% rate reduction of overall fall events in the hospital. We have experienced significant success in reduction of 50% or greater in 3A, 3B, and ICU. However, year to date data reveals 45% of all inpatient falls reported in the hospital occurred in the 2B. Currently 2B is projected to surpass last year's numbers of falls. With this urgency in mind, I would like your support and sponsorship of my project to reduce fall events in 2B. My project will require a functional team that will include an assistant nurse manager, one nurse from all shifts, a patient care technician and a unit assist. The intended outcome of this project is to widen the gap of days between fall events, decrease overall fall rates and ultimately reduce patient harm.

Thank you in advance for your time and consideration. I am available to answer any questions and I look forward to hearing from you soon.
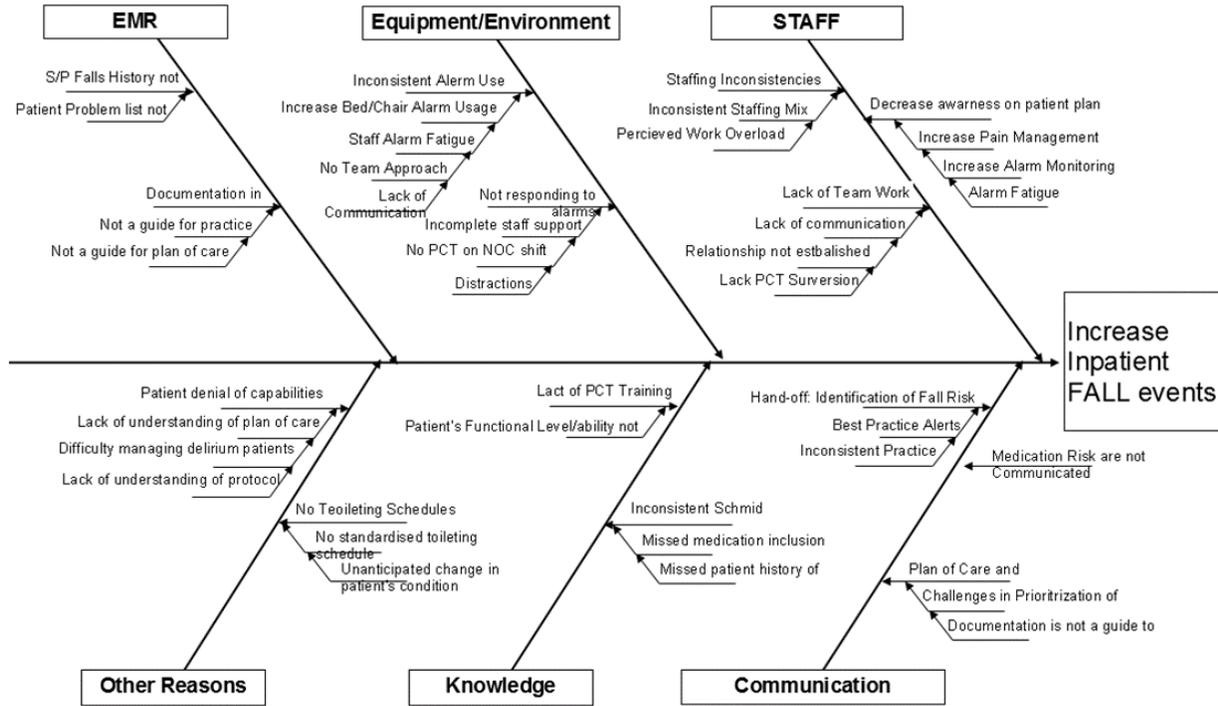

Sincerely,
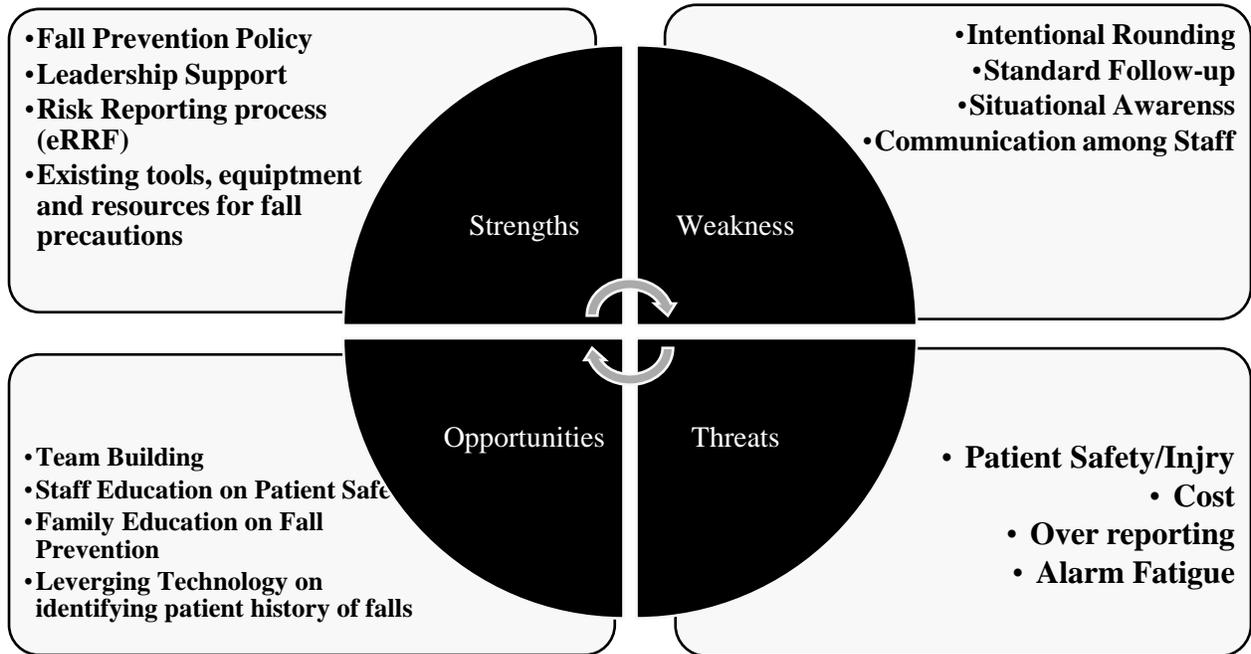Joseph Mojares

Appendix F

Performance Improvement Tools

Figure 1. Fishbone Diagram
Factors that contribute Inpatient Falls

EMR	Equipment/Environment	STAFF
S/P Falls History not	Inconsistent Alerm Use	Staffing Inconsistencies
Patient Problem list not	Increase Bed/Chair Alarm Usage	Inconsistent Staffing Mix
	Staff Alarm Fatigue	Percieved Work Overload
	No Team Approach	Decrease awarness on patient plan
Documentation in	Lack of Communication	Increase Pain Management
Not a guide for practice	Not responding to alarms	Increase Alarm Monitoring
Not a guide for plan of care	Incomplete staff support	Alarm Fatigue
	No PCT on NOC shift	Lack of Team Work
	Distractions	Lack of communication
		Relationship not estbalished
		Lack PCT Surversion

Increase Inpatient FALL events

Patient denial of capabilities
Lack of understanding of plan of care
Difficulty managing delirium patients
Lack of understanding of protocol

Lact of PCT Training
Patient's Functional Level/ability not

Hand-off: Identification of Fall Risk
Best Practice Alerts
Inconsistent Practice
Medication Risk are not Communicated

No Teoileting Schedules
No standardised toileting schedule
Unanticipated change in patient's condition

Inconsistent Schmid
Missed medication inclusion
Missed patient history of

Plan of Care and
Challenges in Prioritrization of
Documentation is not a guide to

Other Reasons	Knowledge	Communication

Appendix G

Performance Improvement Tools

Figure 2. SWOT Analysis

Strengths
- **Fall Prevention Policy**
- **Leadership Support**
- **Risk Reporting process (eRRF)**
- **Existing tools, equiptment and resources for fall precautions**

Weakness
- **Intentional Rounding**
- **Standard Follow-up**
- **Situational Awarenss**
- **Communication among Staff**

Opportunities
- **Team Building**
- **Staff Education on Patient Safe**
- **Family Education on Fall Prevention**
- **Leverging Technology on identifying patient history of falls**

Threats
- **Patient Safety/Injry**
- **Cost**
- **Over reporting**
- **Alarm Fatigue**

Appendix H

Performance Improvement Tool

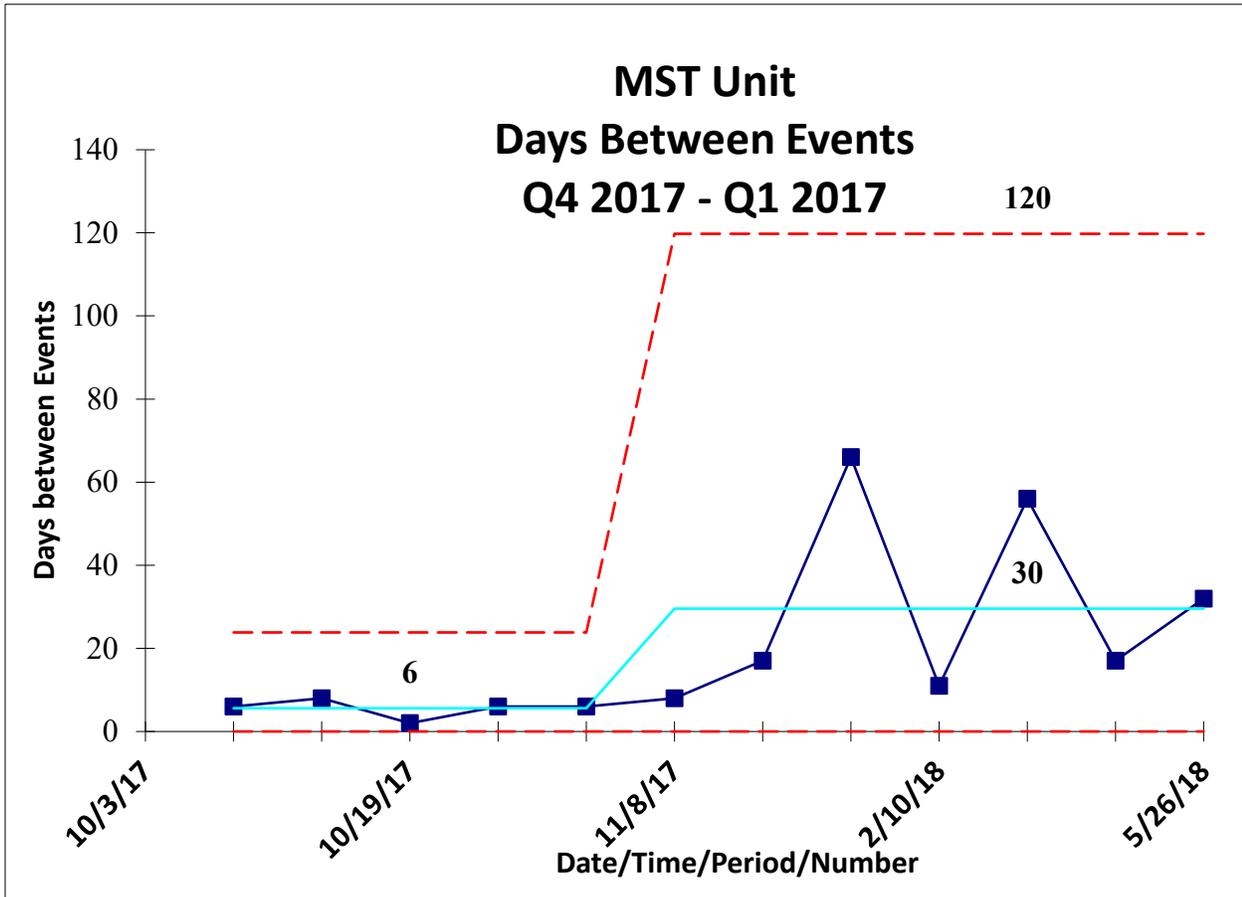Figure 3. Proactive Risk Assessment Tool

Contingency Diagram

Note: A Contingency diagram was created to decrease in the variation of fall events, standardize the team to communicate, and validate processes.
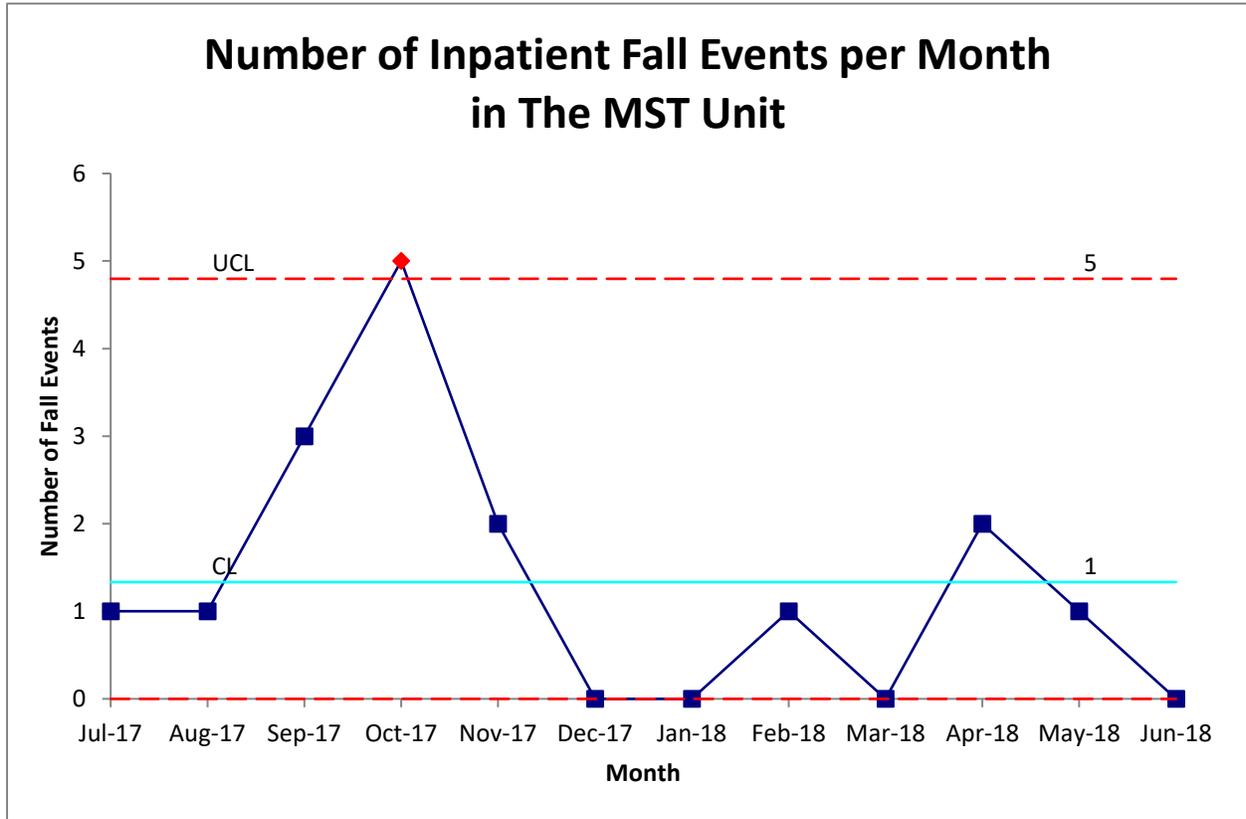
Appendix I

Results

Table 2
Days Between Events

Data Source: Hospital Electronic Reporting System
Analysis: The average days between fall events increased to 30 days after the intervention in October 31, 2017.

Appendix J

Results

Table 1
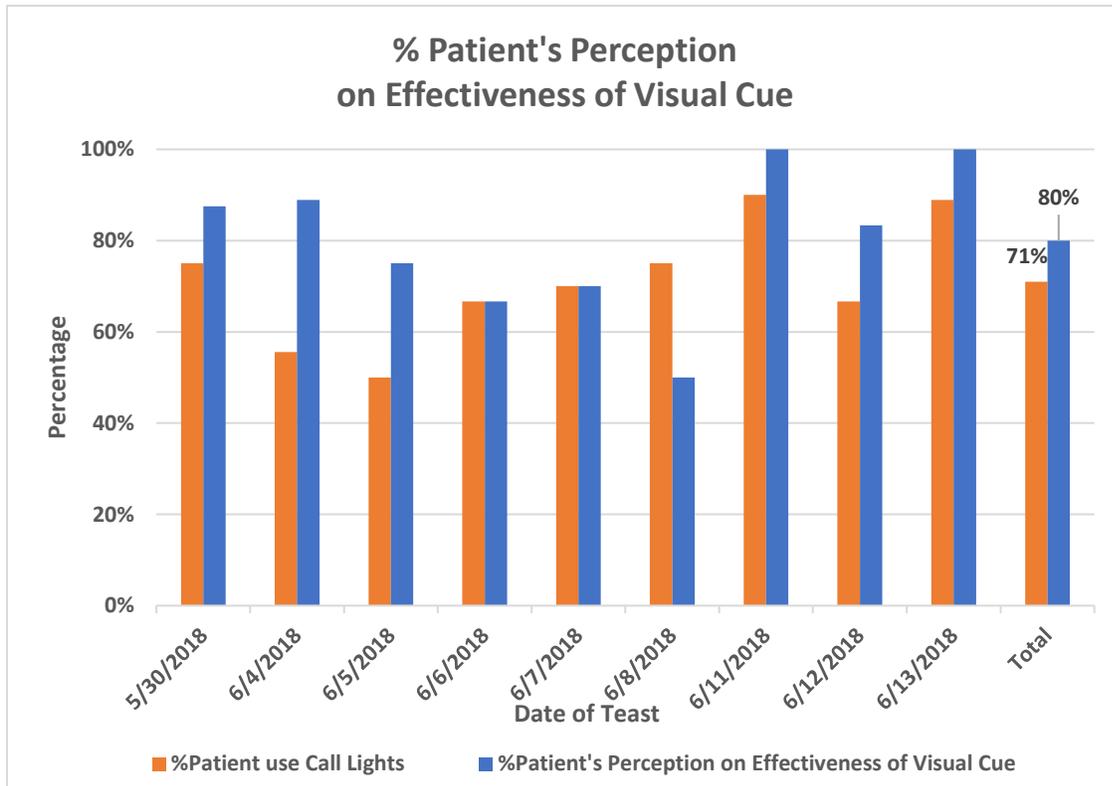Number of Inpatient Fall Events per Month in the MST Unit

Data Source: Hospital Electronic Reporting system.
Analysis: In last six months of 2017, there were 12 patient falls. In the next six months of 2018, the number of patient falls is reduced to 4 post intervention.

Appendix K

Results

Table 3

Results of PDSA Cycle- Visual Management Tool

Analysis: Overall the patient's feels that the visual tool is effective. The patient's feels that visual tool is effective 80% of the time. Patient's use the call lights 71% of the time when the tool is introduced.

Appendix L

Cost Benefit Analysis Table

Cost Description		
Item	Description	Cost
Revenue/Cost Avoidance	Number of Falls/1000 patient days	$ 30,000.00

Cost of Falls in the Medical Surgical Unit

2016		2017		Proposed Project	
Quantity	Amount	Quantity	Amount	Quantity	Amount
28	$ 840,000.00	27	$ 810,000.00	20	$ 600,000.00

Cost Savings

Description	Cost Avoidance Measure	Assume Reduction by 25%	Cost savings
Falls: 27 totals in 2017	Average cost added per admission $30,000	25% (27 x 0.25) = 6.75 or 7 Falls	$ 210,000.00

Appendix M

Implementation Tool

Post Fall Huddle Tool

POST FALL HUDDLE

Date_____ Time_____ Physician_____ Time notified_____

Fall witnessed? Y or N   Who witnessed? _____   Injury? Y or N (Describe:_____)

Any unusual condition in Unit Setting? _____

Post Fall Assessment (PFA) Completed? Y or N   Test results_____

Task list post fall:

□ Assess patient
□ Utilize *safe handling techniques* to assist patient back to bed
□ Notify Physician
□ Notify the supervisor and/or ANM/Manager
□ Family notified
□ Document findings in medical record (VS, Neuro, fall reassess, etc)

□ Complete orders if received
□ Document 'Apparent Fall this Shift' & *.fall note*
□ Revise Schmid Score and Update plan of care
□ Complete an eRRF
□ Nurses to Complete PFA form
□ ANM completes PFA in MIDAS

Questions	Lessons Learned
Briefly describe what happened? (From a staff point of view and/or patient/family point of view)	
Why did this patient fall? What could be the contributing factors and root cause of the fall?	
Was the patient at correct fall/injury risk level? Were the appropriate fall interventions in place?	
What accounted for the difference this time?	
What could we have done differently to prevent this fall if anything?	
What are the team agreements and care interventions to prevent patient from falling again?	

RETURN TO ANM/MANAGER

PATIENT LABEL

Appendix N

Intervention Tool

Visual Management Tool

Appendix O

Implementation Tool

PDSA Monitoring Tool

Inpatient Falls Work Group Project   Date of Test: _____

Staff Initials	Shift (AM/PM)	Patient Felt the Poster is helpful (Yes/No)	Patient call for assistant during Shift (Yes/No)

Instructions:

1. Identify patients who is alert and oriented capable, weak to get up from bed, or needs assistance during transfers; and/or family as caregiver able to transfer patients to chair or assist with ADLs.
2. Place the poster at the bathroom door facing the patient and family.
3. The intent of the poster is to ensure patient or family will seek assistance when getting up in bed. It is a tool for conversation on patient safety and prevention of falls in the hospital.
4. Complete findings after shift by asking the patient about the effectiveness of the tool and if the patient/or family did ask for assistance during the shift.