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Decreasing falls in a medical surgical unit: A Quality Improvement Project

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Abstract

The purpose of the project was to decrease the number of falls occurring in the 48-bed medical-surgical unit by building standard work for hourly rounding and communication. Falls are a patient safety issue and are preventable. Since the Institute of Medicine has published "To Err is Human" in 1999, there have been a multitude of studies on falls, yet falls continue to be prevalent in health care organizations. The increase in patient falls adversely impact the patient's length of stay, discharges to nursing homes and the facility's reputation for providing safe care. The staff in this microsystem used the Schmid falls risk assessment and several other universal falls prevention practices. To decrease the patient falls and increase patient safety, these current practices were evaluated, to determine the most effective evidence-based practices. The unit achieved a 30% reduction in falls in six months after simulation training on the correct processes for hourly rounding. Concurrently the staff utilize the patient care board for communication between workers on the type of assistance and device the patient will need to get out of bed safely for toileting needs. Development of a method for training and educating new staff on the practice of standard work for hourly rounding and communication on patient's toileting is needed for continuous improvement.

Keywords: falls, hospitalized, prevention, work flow and evidence-based practice, fall assessment

Introduction

The rate of patient falls in the medical-surgical nursing unit doubled from October 2016 to September 2017. The increase in patient falls adversely impacted the patient's length of stay, discharges to nursing homes and the patient's satisfaction with our services. Additionally, staff morale was also negatively impacted, because patient falls had increased despite several universal falls prevention efforts. Falls are a patient safety issue and are preventable. Since the Institute of Medicine has published "To Err is Human" in 1999, there has been a multitude of studies on falls, yet they continue to be prevalent in health care organizations. At our facility we have implemented several universal falls preventive measures without any sustainable effect.

These falls not only cause physical injury to patient, but such incidents have an impact on the patient's emotional well-being and have a direct effect on our healthcare facility and our services – from increasing the cost of care to the loss of reimbursement. The Centers for Medicare and Medicaid Services (CMS) have listed falls as a never "event" and does not reimburse hospitals for expenses associated with the care for a patient's fall. The Institute of Healthcare Improvement (IHI) quote for one patient fall without injury cost $3,500, but if the patient falls a second time the cost is exponentially increased to $16,500 (Boushon et al., 2012). Due to the complexity of healthcare, the focus needs to change from individual blame to system process improvement (IOM, 1999).

Moreover, there is also the matter of impact to our facility's reputation, one which adheres to a mandate of providing quality care. This facility is part of a larger organization, whose priority is patient safety, and given the scrutiny of payers, from both public and private sectors, prevention of falls is a primary focus. Additionally, information on hospitals performance is public and drives the need for Patient Safety strategies.

Problem description

On the medical-surgical unit, there were twenty-eight falls that occurred during a 12-month period (October 2016 – September 2017), which had doubled compared to the previous 12 months. There was an urgency to understand why these events were occurring in this unit and to make changes to avoid harming the patients. This medical-surgical unit is a 48-bed unit with all single patient rooms. The unit is physically separated into two 24-bed sections, resulting in some challenges with communication regarding events occurring in the unit. Sixty percent of the patients receiving care here are participating in the enhanced recovery after surgery program, so many are up ambulating in a few hours after surgery. This unit is part of a 150-bed hospital located in a suburban setting, providing care to approximately 60,000 people in the community with a diverse population in a wide geographic area. Thirty-six percent of the patients seen at the facility are Spanish speaking. The staff is very diverse in ethnic background and educational level. There are sixty-five registered nurses and twenty-nine patient care technicians. The hospital is in a state that has a mandated staffing ratio for nurses.

Analysis of the falls data revealed most of the falls occurred on the day and evening shifts. Fifty percent of the falls were due to toileting needs causing patients to get out of bed unassisted, or the patient was left alone in the bathroom despite having a high risk for falls. Other falls were either due to patients not scored correctly on the Schmid falls risk assessment, or the patient had dementia or confusion. Chair and bed alarms, yellow arm band and yellow non-skid socks were used to identify patients with a high risk for falls Some of the patients who had dementia or confusion got out of bed on their own.

The unit management team did not consistently communicate information regarding fall, and a debrief was not done as early as possible after the incident to provide an accurate recall of

activities by the staff or patient prior to the fall incident. Although none of the patients had any serious injuries, the staff should have been aware of the actual problem of falls occurring in the unit. The staff related only to the incidents that occurred in the demographic section of the unit they worked in most of the time. The Master of Science in Nursing (MSN)-Clinical Nurse Leader (CNL) student's role as an outcomes manager was to provide the unit falls outcomes data. A bar graph (Appendix D-1) showing the medical-surgical outcomes data over twelve months compared to the other adult services units in the hospital was shown to the staff to emphasize the urgency of the situation. The MSN-CNL student provided a run chart displaying the rate of falls per 1,000 patient days (Appendix D-2) to the unit management team and the hospital leaders. The current performance as of June 30, 2018, showed a 30% decreased in falls was met. The falls improvement project will continue until September 30, 2018.

Approximately thirty percent of the nurses have their Bachelor of Science Nursing degree, and very few have their Master of Science Nursing degree. Fifty percent of the staff including the patient-care technicians have ten or fewer years of bedside nursing. The unit does not have a significant turnover of frontline staff but has turnover within the unit management team. The staff appears to be in two groups due to physical separation of the unit into two locations, despite one place used for shift huddles and staff meetings. The primary care nurses use the Schmid falls risk assessment that is in the electronic medical record within eight hours of a patient's admission to the unit and reassesses the patient within twenty-four hours.

Available knowledge

Would use of the Schmidt falls risk assessment on admission and reassessment within twenty-four hours (I) to identify patient with a high risk for falls decrease inpatient falls (O) in the medical-surgical unit (P)? (Appendix B). A literature review was conducted using PubMed

and Cochrane databases to determine what evidence-based practices would answer the PICO question to decrease inpatient fall in a medical-surgical nursing unit. Keywords such as *falls, hospitalized, prevention, work flow and evidence-based practice, fall assessment* were used to narrow the search. The MSN-CNL student retrieved several systematic reviews, non-experimental descriptive studies, consensus guidelines and quality improvement using evidence from a systematic review from the electronic databases. The systematic literature review done by Simpson, Rosentahal, Cumbler & Likosky, (2013) for defining the scope of the problem and identifying possible solutions that are evidence-based and they provided a step-by-step application for using quality improvement principles to decrease hospital falls, was relevant for this microsystem. This unit had already implemented several universal falls precautions, yet the falls had doubled. would guide how to decrease the falls.

A systematic review of the analysis done on three different types of falls risk assessment tools did not identify any one specific risk assessment tool as the best. This was because “risk stratification of falling patients is difficult, as the etiology of inpatient falls is multifactorial”, (Simpson, Rosenthal, Cumbler & Likosky, 2013, p.136). The risk assessment tools were essential in identifying those patients at greater risk for falls and could be used to stratify the patient population based on the common themes, thus being able to develop preventive measures to address those common themes. Some of the common themes that were also in the Schmid fall risk tool were mobility, mentation, elimination, prior history of falls and current medications. In the Simpson, et al. analysis, they indicated that the setting and the population of users should be considered when selecting a fall risk assessment tool. The MSN-CNL student determined that it would be beneficial and fiscally responsible to continue using the Schmid risk assessment tool

that's already available in the electronic medical record and includes staff training on how to perform a correct assessment of the patient.

The Agency for Healthcare Research and Quality (AHRQ) consensus guidelines and Miake-Lye, Hempel, Ganz and Shekelle, (2013) systematic review on inpatient fall prevention programs for falls, highlight the challenges for collecting data on the education and training of clinical staff to determine the effectiveness of preventing falls. Many of the studies stated training was done but did not specify the amount of time and the effectiveness of the training. No single intervention in the implementation of quality improvement has shown to be the most effective. However, in this case a structured method should be used to implement a quality improvement falls prevention program, as it has a multicomponent and one should avoid assuming that any intervention once proven effective will remain effective without ongoing monitoring (Cumbler, et al., 2013).

Rationale

Beer's Six Steps to Effective Change (2013) was used to provide a strategy to guide the implementation of the project in this microsystem. This framework would not contradict the current nurses' practice of using Watson Caring theory. It was critical to change the behavior of all the staff toward patient falls, so it was useful to apply Beer's theory by prescribing the six steps to effective change by task alignment: reorganizing employee's roles, responsibilities, relationships, self-reinforcing cycle of commitment, coordination, and competence (Beer, et al., 2013). A meeting with the unit management team was determined to be the first step to mobilize commitment for making a change to provide a safe environment for quality outcomes for the patients. All agreed change was needed and would promote the involvement of the frontline staff to be engaged in the improvement processes.

The hospital leaders and unit management team committed to ensure all the medical-surgical staff was given time to attend the educational sessions on the evidence-based practices for hourly rounding and communication among healthcare workers (AHRQ, 2013). It was imperative to include time in the plan to gain the commitment at the beginning of the project to get the staff to embrace their roles and responsibilities in developing standard work processes and commitment to execute. Explanation of the roles and responsibilities was critical when addressing the interventions for hourly rounding and communication among healthcare workers regarding patient's toileting needs. The roles and responsibilities needed to be defined for hourly rounding, as the nurses and patient care technicians were resistant to this concept. The educational sessions built a shared vision and willingness to make the changes required for improvement. The relationship built among the staff fostered consensus when the team started to see the small improvement made based on their collaboration and change in care processes.

The MSN-CNL student in the role of an advocate needs to be aware of what is occurring on the unit by interacting with the frontline staff and by using critical listening skills to learn of barriers which may be preventing the team from speaking up about the falls or other concerns that are hindering an environment for patient safety. Sharing the obstacles with the unit management and hospital leaders ensured a better process for improvement by getting the obstacles addressed. Some obstacles identified were equipment, such as walker or gait belt not readily available for staff to use to assist patient when they were ambulating to the bathroom.

Specific project aim

To decrease falls by 30% within the performance year (October 2017 to September 2018) in the medical-surgical unit compared to the previous performance year of twenty-eight falls required focusing on two evidence-based practices that could be built into the staff standard work

to achieve continuous improvement. Starting with a structured plan and having the hospital leadership support increased the success of improvement for patient care (AHRQ, 2013). Involving the leadership of the unit to ensure all the staff were able to attend the class on the evidence-based practices had been implemented was significant (Dunton, et al., 2004), as the rationale for the evidence-based practice must be understood to assure ongoing improvement and ownership in the strategies implemented (Miake-Lye, et al., 2013).

Methods

Context

The MSN-CNL student assessed the medical-surgical unit through interviews and observations of the unit management team, nurses, patient care technicians, unit assistants, house-based physicians and the support staff assigned to this unit. The support staff were environmental workers, patient care coordinators, dietary technicians, pharmacists, and physical therapists. These healthcare workers had various interactions with the patients, and it was essential to gain a broad perspective of the activities that occurred daily in the unit. The observations provided insights into some of the gaps in practices. The MSN-CNL student deferred interviewing patients and visitors until the analysis of the past falls was done.

On observation, the nurses were always in two groups, and each group was proud of their section of the unit. Whenever members of the group spoke, they gave the impression it was two units and not one, despite having the same management team and every shift it was only one assistant manager and one unit assistant for the unit. The two groups appeared to be due to the demographic split of the medical-surgical unit, even though at the beginning of the shift there is a five minutes huddle and the monthly staff meetings included all staff. Another observation was the interactions between the nurses and patient care technicians. There were no conventional

expectations based on roles and responsibilities between these two healthcare workers. Some nurses and patient care technicians had a good relationship and communicated appropriately for patient safety, while there was no collaboration among the other nurses and patient care technicians.

A needs assessment of this microsystem was performed using the strengths, weakness, opportunities, and threats (SWOT) analysis (Appendix G). The strength of the unit was the regular staff who had worked together for a few years and the hospital leaders who rounded regularly on the unit. The frequent changes in the management team and the lack of communication within the unit on the falls incidents was an identified weakness. This weakness was changed a few months after the improvement project was started when a new manager started. The new manager provided the direction for the unit management team and addressed the culture of the unit and implemented several changes that improved sharing of information.

Opportunities identified were to involve the surgical clinic staff and surgeons in providing information on exercise programs for elderly patients and informing the family members regarding the necessity of patients asking for assistance when getting out of bed after their surgery due to the potential gait and balance issues from medications, including anesthesia. The information for exercise programs was already available at this organization's members health education department: an opportunity to educate the community on the dangers of elderly falls. The threats were the poor patient safety rating received on the Leapfrog Report that is public information. This poor patient safety rating could have impact potential new members who would not choose the hospital for their medical care. Based on legislation the overall payment for the Medicare and Medical patients would be decreased due to the patient harm rating of the hospital.

The new medical-surgical unit manager set clear expectations with her assistant managers, frontline staff involved with the improvement project workgroup, and the MSN-CNL student. There were standards set for the immediate notification of a patient fall via phone call, text message and based on the situation, background, assessment, and recommendation (SBAR) incident documentation debrief format. Written communication for all staff on the processes trials tested and the current falls outcomes were posted in a specific location in the unit, where all staff were informed to check whenever at work. At the shift huddles, the assistant nurse manager communicated which patients were at a high risk for falls and the number of days since the last patient fall. The unit management team did random checks on communication methods agreed upon by staff, to evaluate staff awareness of any recent falls. As unit leadership did rounding, they communicated with staff on how to prevent patients fall by demonstrating with examples when speaking with patients and families.

The MSN-CNL student calculated the cost of implementing this project plan for this unit at this hospital (Appendix H). All the work the MSN-CNL student is during the paid work time, so there is no additional cost. Several other members of the workgroup also would not incur additional cost, as the meeting is during paid work time and any actions to be done would be on work time. The calculation for the cost of providing the simulation training for all the nurses and patient care technicians working in the medical-surgical unit is $6,281. The cost for hiring a media company to make a training video on standard work based on the simulation training would be $1,800. The cost for the nurses and patient care technician that attends the workgroup meetings for nine months cost $10,188.

The Institute of Healthcare Improvement (IHI) quoted the cost for one fall without injury as $3,500. The cost of the project would be less than the cost saved by decreasing the falls by

30% within the next twelve months, which is eight fewer falls by September 30, 2018. It has been nine months since the project has started and this goal has been achieved as of June 30, 2018. Continuous improvement on decreasing falls would increase the cost-benefit of this improvement project significantly as there are other benefits. The decrease in falls would improve patient safety thus improving patient satisfaction score, identified on the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAPHS). Another factor the MSN-CNL student could not quantify in dollars was the improved staff job satisfaction for the support and empowerment they could make together for patient safety.

Intervention

Using the Model for Improvement (IHI) as our quality improvement model, allowed us to demonstrate a clear understanding of what we are trying to accomplish and define how we will know that a change is an improvement. The MSN-CNL student role as a facilitator guided the workgroup to establish and monitor metrics to evaluate the improvement efforts and outcomes regularly. The team was confident using the IHI Model for Improvement, once the rationale behind the method was understood.

The workgroup listed all the universal falls prevention practices that are done by the nurses and patient care technicians. Then from the analysis of the twenty-eight falls, it was decided to collect data on two practices that the group felt could make a change immediately in preventing falls and then strategize other interventions that are evidence-based practices in reducing falls due to patient's toileting needs not met. The first practice was the chair or bed alarms and the second practice was providing yellow nonskid socks for all patients assessed as having a high risk for falls. The audit tool was simple, with only yes or no questions. The two weeks of audits were done on all three shifts on various days and hours for a total of twelve

times. The nurse printed the unit census with the Schmid score to find the patients to be audited. The denominator would be all the patients having a Schmidt score greater and equal to three on the census. The “yes” answer was the numerator indicating compliance for these preventive practices. The data was a percentage of compliance.

The workgroup identified three issues during the audits and wanted to work on improving these first. The first issue was some bed or chair alarms volumes were too low to be heard outside of the patient’s room, or the alarm was not connected to the new beds correctly. After a couple of Plan, Do, Study, Act (PDSA) cycles on the bed alarms the volume of the alarms was corrected by having the new bed company’s representative returned to provide more in-service on how to connect the bed and chair alarms, so if the patient attempted to get out of bed, staff on the unit would be alerted. There were some challenges with the in-service as all three shifts needed to receive the information. It was requested for the bed company to provide a video or other training media on how to use the bed, including the alarms.

The second issue was the yellow nonskid socks the unit had been only one size, so many of the male patients did not receive the socks because they did not fit their feet. The assistant nurse manager contacted the Materials department and requested the extra-extra-large (XXL) size be stocked in the unit’s clean supplies room. Once the XXL yellow socks were available, at every shift huddle the staff was informed for one week.

The third issue was incorrect Schmid scoring. The nurses identified the scoring was too low based on the patient current admission diagnosis. The Schmid Fall Risk assessment tool covers the clinical status of the patient’s mobility, mentation, elimination, current medications, and prior history of falls. Several PDSA cycles have been done to improve this assessment and learn what is the best method for training nurses on how to maximize the use of this clinical tool

that is available in the electronic medical. The workgroup nurses developed an educational power point with the steps on how to correctly assess the patients based on the Schmid falls risk assessment which is in the patient's electronic record and presented at Skill Days. The gaps the staff noted that different medications affect the patient's gait and balance and the need for reassessment within twenty-four hours of admission as patient's status could have changed. The assistant nurse managers currently do random monitoring with direct feedback to the patient's nurse.

Two evidence-based practices from the AHRQ inpatient falls toolkit were used as interventions to improve the care for addressing the patient's toileting needs. The first was purposeful hourly rounding and the second was the communication among healthcare workers addressing patient's toileting needs. The hourly rounding goal was to build it into the nurses and patient care technicians' regular workflows, making it standard work. Many of the nurses were reluctant at first, as the nurses suggested doing every other hour, and with the patient care technician doing the rounding on the different hour. Several PDSA cycles were done and showed the suggested process would not work: the primary nurses were responsible as the ratio of nurse to patients was 1:4, whereas for the patient care technicians it was 1:8 or 1:10. The unit management team and nurses in the workgroup used the hourly rounding education tool when coaching the staff on how to purposefully do hourly rounding with patients (Appendix E).

The second evidence-based practice was the communication among the healthcare workers. The workgroup performed several PDSA cycles and is currently testing using the patient care board in the room to communicate what assistance and equipment the patient needs for toileting. On the care board, there are specific sections to write what equipment and how

much assistance the patient requires to get out of bed. However, there are no standard verbiage used in the communication process on the patient care board.

Study of the intervention

Only by observations could several of the interventions for compliance be checked. I observed the bed and chair alarms, purposeful hourly rounding and communication documentation on the patient care board in the room. These are potential challenges when the project is over, as a resource for personnel to perform these observations would be required, even if it is random monitoring. Another challenge not only for this unit but other units in the hospital is that when decisions are made to bring new equipment in for patient care, there should be discussion on how new staff would be trained to use the equipment before purchasing it. The lack of educational material was a challenge when addressing the need for new staff to receive in-service training on connecting the bed and chair alarms. The dependence on the bed company's representative providing the training might result in a delay for staff training.

It is necessary to review the chart to monitor the intervention of the standardized risk assessment, as we learned that not all staff are competent in performing the Schmid Falls Risk assessment. Data on patients fall risk assessment documentation within eight hours of admission and reassessment within 24 hours was obtained from Crystal reports. The data was provided every week to the unit management team, to follow up with staff regarding noncompliance with the standardized process developed. The workgroup members reviewed cumulative data and reported out at the meetings and determined the next steps to be done. The report does not provide information if the scoring is incorrect, it only indicates completion of assessment within the time of admission or reassessment. The MSN-CNL student is reviewing some cases to determine if there is a possibility that clinical information on the patient can automatically

populate in the Schmid risk assessment to provide a more accurate scoring, instead of being person dependent.

It is also important to do authentic hourly rounding, by listening to how and what the staff is saying to the patient in order to ensure he or she is addressing patient's needs. Feedback provided to the staff at the same time as the observations are done. When done correctly, it could reduce alarm fatigue, and the staff would be aware they must make purposeful hourly rounding on these patients. A few nurses saw the benefits of hourly rounding they interacted with their patients more by staying in the room and doing their charting while the patient was in the bathroom. The nurse was nearby so he or she could hear when the patient needed assistance.

The team agreed to address their data by communicating verbally and writing, such as posting a "Days since last fall…" notice on the huddle board and on the falls poster board on both sides of the unit. Any knowledge of any fall is shared within twenty-four hours of the event by the assistant nurse manager or manager of the unit during shift huddles. Observations were done randomly, minimum twice per week, and the huddle board and falls poster board was checked for correct information posted. Communication on updated performance, both processes and outcomes was done monthly with hospital leadership team and reported quarterly to the Quality Assurance and Performance Improvement Committee.

Measures

The MSN-CNL student and the improvement workgroup selected two outcomes measures to monitor monthly. One of the outcomes measures was to determine if we are improving by decreasing the number of falls. The numerator is the number of falls that occurred in the medical-surgical unit and the denominator is the number of patient days for the same period. A monthly rate will be calculated per 1,000 patient days and displayed in a run chart. The

second measure draws data from the HCAPHS score card on the question of “Patients’ toileting need met”. An increase in this rating would indicate movement towards sustainability with interventions of hourly rounding.

The process measures for the Schmid fall risk scale improvement would indicate we are identifying the patient who are at a high risk for falls as early as possible to intervene before the patient fall. Assessments are done within eight hours of admission and reassessment within twenty-four hours of admission. The numerator is the number of completed assessments in the electronic medical records within eight hours of admission, and the denominator is the number of patients admitted in the same period. For the reassessment the numerator is the number of completed assessments within twenty-four hours of admission and the denominator is the number of patients admitted in the same period. The rate is calculated as a percentage. The data is collated through a Crystal report that automatically retrieves the information from the electronic medical records. These reports are sent monthly to the unit management team.

Observation audits were done during this improvement project to determine the percentage of staff using the standardized script when communicating with patient regarding toileting needs. The numerator is the number of staff observed performing hourly rounding correctly by communicating with the patient regarding toileting needs and the denominator is the number of staff observed. The rate is a percentage. The MSN-CNL student shares the findings with the unit management team.

A manual audit is done to check the communication between healthcare workers utilizing the patient’s care board. This information is useful for anyone responding to a patient’s call light or alarms if the equipment or assistance the patient needs are written on the care board, as it prevents further delay in patient care and reduce the potential for patient falls. The numerator is

the correct documentation on the board section for equipment and assistance, and the denominator is the total number of patients care board audited.

One balancing measure based on our goal to decrease falls was to selected mobilization to identify if staff was keeping patients in bed to avoid patient falls. The data on patients daily mobility showed no decrease, but actual increase (Appendix D) to assist patients to maintain their strength and independence. The patient's mobility also prevents several other complications that could occur if a patient is left in bed, such as skin pressure injuries, pneumonia, and deep vein thrombosis. This report is available daily, and the unit management team receives it. The numerator is the number of patients who had the highest level of mobility activity at least twice per twenty-four hours, and the denominator is the number of patients in the unit in the same period. The rate is a percentage.

Ethical considerations

Ethical considerations must address all healthcare workers, and healthcare facility leaders cannot allow patients to be harmed by falling, as these patients are putting their trust in us to provide safe care. The elderly are more prone to falling because of dementia, osteoporosis, lack of correct assessment of their mobility, and medications altering the bone strength, gait and balance. The patient's welfare should be safeguarded by protecting them from falling. The evidence-based practices should be shared, and staff educated on patient safety. The nurses' code of conduct requires the protection of patients under the nurse's care thus, preventing falls is part of providing safe care. The project was reviewed by faculty and is determined to qualify as an Evidence-based Change in Practice Project, rather than a Research Project, so institutional review board (IRB) review is not required.

Results

The medical-surgical unit has decreased patient falls by 54% as of June 30, 2018 (Appendix D-1b) compared to the previous performance period (October 2017 – September 2018). This improvement project will continue until September 30, 2018. A bar graph on the number of falls per month compared to the previous performance year is displayed in the unit, as requested by the workgroup nurses, to serve as a constant reminder to everyone the harm that is occurring. The active participation of the unit staff at the workgroup meetings and the continuous identification of gaps in care would continue decreasing patient falls.

Discussion

Summary

The outcomes measures showed improvement, especially when the new manager set the standards for communication methods for documenting any patient fall that occurred on the unit regardless of the time of day. The assistant nurse managers started to make it a priority and all staff started to focus on the patients who were high risk for falls. The team members are now speaking as one group, and this does make a difference, as everyone is more aware of the incidents on their unit. The staff is actively participating in improving the care there, and this is where the changes for patient safety need to be.

The unit management team are aware that the process measures still have inconsistencies in practices by both nurses and patient-care technicians. To successfully maintain improved outcomes after the MSN-CNL student has completed this project, another facilitator to guide the frontline staff on improvement processes will be required. Further investigation is needed to identifying barriers in practicing for the evidence-based of purposeful hourly rounding, to understand why staff is not performing this practice consistently. The simulation training for staff

needs to be available several times during the year to allow time for those who need to practice more, especially with using the right words at the right time when performing hourly rounding.

The MSN-CNL student learned there are multiple barriers when trying to change behaviors. Time is one of the main obstacles, and to adequately train adults to improve their practice it takes several rounds of rechecking with the individual before there is any change in behavior, as previous method may have been a habit. Inadequate time for educational training occurs frequently, as consideration for changing behavior is often forgotten.

Conclusions

Standard work is a new concept being applied to nursing care and many nurses are resistant to change, as each nurse have their own method of providing nursing care. The nursing profession has only promoted improving nursing knowledge by higher education in nursing. There are no mandates as to specific classes current bedside nurse should take to get their nursing licenses renewed. There are no requirements apart from the number of continuing education units needed every two years for license renewal. Classes that would increase the nurses' knowledge on improvement, preventing patient harm, or even about the changes in healthcare in the United States, could drive patient care improvement much faster.

Unless the bedside nurses have a recent nursing degree, they may not understand the need for using nursing evidence-based practices nor look for the processes that would improve the patient's outcomes much faster. It has been a slow journey to make changes, and the potential for spread is still there unless some other priority for the unit takes precedence before the standard work can be hardwired for sustainability. I believe the best evidence is the purposeful hourly rounding, as it will address all patients regardless of their diagnosis, thus hardwiring this in the staff standard work will result in continuous improving in decreasing falls.

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Appendix A

CNL Project: Statement of Non-Research Determination Form

Student Name: ANN CHETTY

Title of Project:

Leading improvement to prevent patients from falling on a Medical-Surgical nursing unit.

Brief Description of Project:

A) Aim Statement: Decrease the number of falls by 30% from the previous performance year (Oct 2016 – Sep 2017) by September 30, 2018.

B) Description of Intervention: (1) Assessment of patient's mobility within eight hours of admission and reassessment within 24 hours of admission. (2) Staff script when communicating with patient regarding toileting needs during hourly rounding. (3) Communication on equipment and assistance patient need for toileting on the patient care board in the room. using standardized

C) How will this intervention change practice? (1) Increase all staff awareness of patient's capabilities prior to moving for toileting needs, so patient is never placed in an unsafe position and potentially fall. (2) Standardized script ensures all staff correctly addresses patients' toileting needs regularly, to avoid patient attempting to ambulate on their own and potentially falling. (3) Communication not dependent on one individual sharing information, but written on patient's care board in the room.

D) Outcome measurements: The total number of falls on the medical-surgical unit is 20 or less by September 30, 2018.

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)

☐ 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.

☐ This project involves research with human subjects and must be submitted for IRB approval before project activity can commence.

Comments:

EVIDENCE-BASED CHANGE OF PRACTICE PROJECT CHECKLIST *

Instructions: Answer YES or NO to each of the following statements:

Project Title: Leading improvement to prevent patients from falling on a Medical-Surgical nursing unit	**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.		
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.		
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.		
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.		
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.		
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.		
The project has **NO** funding from federal agencies or research-focused organizations and is not receiving funding for implementation research.		
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.		
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 X hospital or agency and as such was not formally supervised by the Institutional Review Board."*		

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):

Signature of Student:

Ann Chetty **DATE: February 4, 2018**

SUPERVISING FACULTY MEMBER NAME (Please print):

Signature of Supervising Faculty Member

DATE

Appendix B

Evaluation Tables

PICOT Question
What are the evidence-based practices (I) that will decrease inpatient fall (O) on a medical-surgical nursing unit (P)?

Study	Design	Sample	Outcome/Feasibility	Evidence rating
Agency for Healthcare Research and Quality (2013). Preventing Falls in Hospitals: A toolkit for improving quality of care. Retrieved from http://www.ahrq.gov	Consensus guidelines	None	Provides a toolkit for setting up a falls reduction program in a hospital	Level IV A  Preventing Falls in Hospitals - A Toolkit
American Association of Colleges of Nursing (2013). Competencies and curricular expectations for the clinical nurse leader education and practice.	Consensus guidelines	None	Useful to CNL to develop the competencies that will increase the success of any improvement for patient care	Level IV  CNL-Competencies-October-2013.pdf
Miake-Lye, I. M., Hempel, S., Ganz, D. A., & Shekelle, P. G. (2013). Inpatient Fall Prevention Programs as a Patient Safety Strategy. Annals of Internal Medicine (2013)	Systematic review	14 studies across several countries with participants ranging from 199 – 271,095	Identified Leadership support as crucial and unit workers involvement for ownership in strategies implemented.	Level I  Inpt fall prevention program as a Pt Safe
Dunton, N., Gajewski, B., Taunton, R. L., & Moore, J. (2004). Nurse staffing and patient falls on acute care hospital units. Nursing Outlook. 2004 Jan-Feb;52(1):53-9	Non-experimental descriptive study	1751 hospital units in the National Database of Nursing Quality Indicators	Educational level of staff was more significant for better outcome. Although financial impact would hinder increase in staffing, which did not prove to eliminate falls.	Level III  Nurse_staffing_and_patient_falls_on_ac
Cumbler, E. U., Simpson, J. R., Rosenthal, L.D. & Likosky, D. J. (2013). Inpatient Falls: defining the problem and identifying possible	Quality Improvement using evidence	none	Provides a ten-step approach for an improvement plan to reduce falls.	Level V

solutions (Part II). Improving Health Care Quality: Review. 3(4) 203-208. doi:10.1177/1941874412470666	from Systematic review		Very useful to have a structure to apply improvement process	 Inpatient Falls_Part II[1747].pdf
Simpson, J.R., Rosenthal, L.D., Cumbler, E.U., & Likosky, D. J. (2013). Inpatient Falls: defining the problem and identifying possible solutions (Part I). Improving Health Care Quality: Review. 3(3) 135-143. doi: 10.1177/1941874412470665	Quality Improvement using evidence from a systematic review	Three different Fall Risk stratification: STRATIFY (n=548) MFS (n=2689) HFRM (n=338)	The evidence-based studies using the Morse Falls Scale a more sensitive assessment of the patients' potential for falling and this will lead to a more suitable intervention to reduce potential patient fall.	Level V  Inpatient Falls_Part I article[1748].pdf

Appendix C

Project Charter

Project Charter: Decrease Falls in the Medical-Surgical Unit

Global Aim: To standardize hourly rounding and communication between healthcare workers and patients for purposeful actions which will decrease patients falling when ambulating for toileting needs.

Specific Aim: By September 30, 2018, decrease the number of falls on the Medical-Surgical unit by 30% from 28 falls to 20 falls.

Background: This is a 48-bed nursing unit providing care for both surgical and medical patients with an age ranging from 18 to 92. There is a diverse healthcare care staff caring for patients including: house-based physicians (HBS); registered nurses (RN), and patient-care technicians (PCT). Analysis on this unit showed many falls occurred during toileting needs. Other falls occurred when patient attempted to ambulate on their own or staff lack of preparation and communication when assisting the patient.

The toolkit on inpatient falls by the Agency for Healthcare Research and Quality is being used to guide this quality improvement, along with the research findings in the articles of Inpatient Falls (Cumbler, E.U. et al.). Falls resulted in an increased length of stay in the hospital for patients, patients discharged to nursing home and poor patient safety reputation of the facility.

Sponsor(s): Chief Nurse Executive

Goals: Decrease the falls occurring by standardizing communication processes during hourly rounding and use of the Care Board in patient's room by performing the following:

1. Simulation training on hourly rounding with the RNs and PCTs, to standardize script when communicating to the patient and care team regarding assistance and equipment required for toileting needs.
2. Communicate performance improvement data for unit staff by providing information on the Falls Poster board and "Days since last" on Huddle board.
3. Provide feedback on process measures on Falls Poster board
4. Provide feedback on Daily Mobility achievements
5. Provide feedback on Hospital Consumer Assessment of Providers and Systems (HCAHPS) - toileting needs met question

Measures:

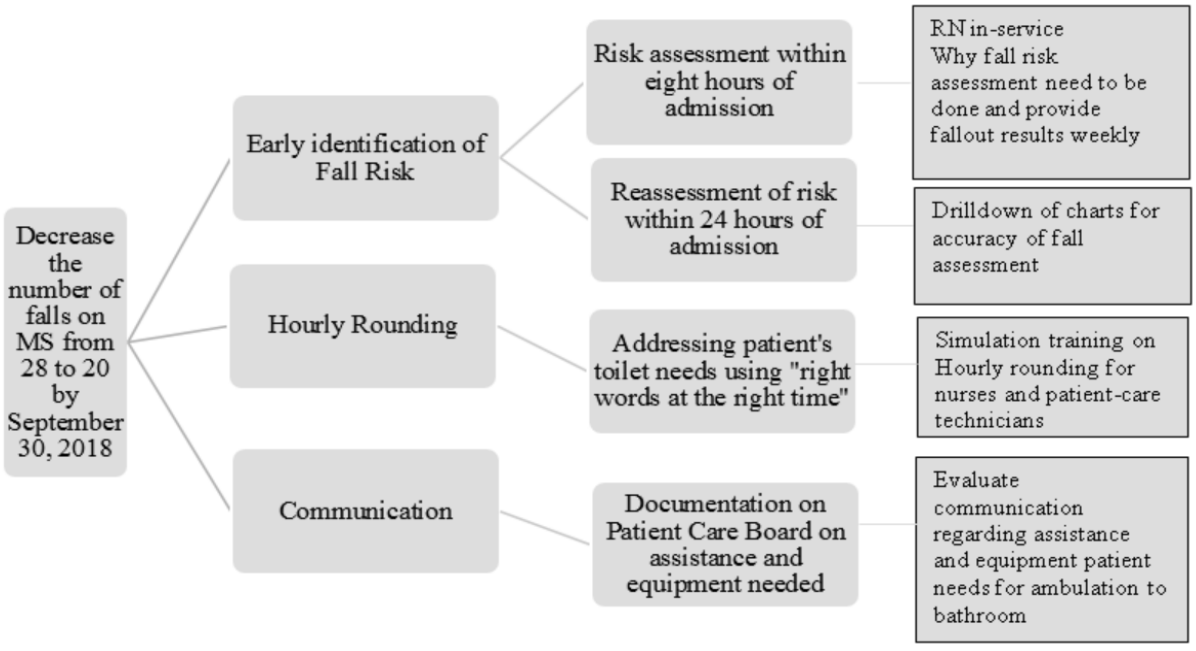
Measure	Data Source	Target
Outcomes		
Bar graph showing monthly the number of falls	MIDAS	Decrease by 10 falls
Process		

% patient assessed within 8 hours of admission	Crystal Report	≥ 95%
% patient reassessed within 24 hours of admission	Crystal Report	≥ 95%
% of patient whose toileting needs were met during hospitalization	HCAPHS – Toileting needs met	≥ 95%
Communication via Fall poster board and Huddle board	Visual audits	≥ 95%
Balancing		
Daily Mobility [average maximum mobility]	NCAL QOS Report	≥ 60%

Team:

Sponsor: Chief Nurse Executive	
Physician Champion	
Assistant Nurse Manager (s)	
Registered Nurses (3)	
Patient Care technician (2)	
Unit Assistant (1)	
Clinical Educator (1)	
Quality Nurse IA trained (1)	
Physical Therapist (ad hoc)	
Pharmacist (ad hoc)	

Driver Diagram



Measurement Strategy

Background (Global Aim) To standardize the process for performing the hourly rounding by all staff on the nursing unit based on the Agency for Healthcare Research and Quality Toolkit on Preventing Falls in Hospitals.

Population Criteria

The patients admitted to the Medical Surgical nursing unit during October 1, 2017 to September 30, 2018.

Data Collection Method

Data will be retrieved from several different databases: Crystal, Statit, MIDAS and the Tableau Reports.

Data Definitions

Data Element	Definition
Fall Risk Assessment	Completed Assessment within eight hours of admission in patient's electronic medical record
Fall Risk Assessment	Completed reassessment within 24 hours of admission in patient's electronic medical record
Toileting needs met	Patients' satisfaction based on the question in the HCAPHS – " was your toileting needs met".
Daily Mobility	Patients received progressive mobility activity at least twice daily
Communication on Fall	Number of falls for the current performance year compared to the previous performance year on Fall poster board. "Days since last fall" on the Huddle board.

Measure Description

Measure	Measure Definition	Data Collection	Goal
Number of falls	Patient fall on Medical-Surgical unit	MIDAS Report	1 or less fall per month
% patient assessed within eight hours of admission	Numerator = RN completed assessment in electronic medical record within eight hours of admit. Denominator = number of patient admit in same period	Crystal Report	≥ 95%
% patient reassessed within 24 hours of admission	Numerator = RN completed reassessment in electronic medical record within 24 hours of admit. Denominator = number of patient admit in same period	Crystal Report	≥ 95%

% of staff using standardized script when communicating with patient regarding toileting needs	Numerator = number of staff performing hourly rounding correctly Denominator = number of staff on unit	HCAPHS report - Toileting needs met	≥ 95%
Communication via PI poster board and GPS huddle board	Numerator = Correct number of falls on poster board and number of days since last fall on Huddle board	iRound audit report	≥ 95%
Maximizing Daily Mobility	Numerator= number of patients who had the highest level of mobility activity at least twice per 24 hours	NCAL Regional QOS report	≥ 60%

Changes to test

1) Provide feedback on data of the risk assessment within 8 hours, will result in improvement in fall risk assessment, thus early identification of those patients at risk for falling.

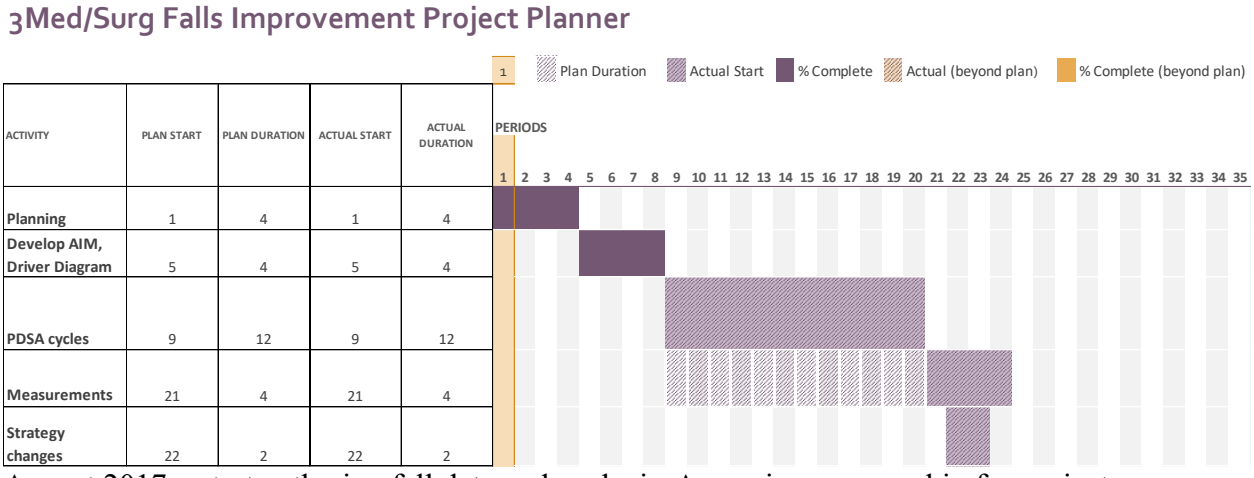
2) Provide feedback on data of the risk reassessment within 24 hours, will result in improvement in fall risk assessment, thus early identification of those patients at risk for falling.

3) Simulation training on authentic hourly visit, to increase all staff performing the correct processes, thus addressing the patient toileting needs.

4) Check if communication methods agreed by staff is successful and all staff of this unit is aware of any fall that occurs.

5) Check with Daily Mobility initiative there is no increase in falls

Project timeline



August 2017 – start gathering fall data and analysis. Arranging sponsorship for project.
September 2017 – Assemble team, determine day, time, and location for meetings.
October – December 2017 – Team works on defining the problem, aim and determine how to address the problem.
January – March 2018 – Start doing PDSA cycles and adjust as needed.

April – September 2018 – Measure both process measures and outcome. Communicate learnings.

CNL Competencies used

1. Data analysis- collecting the data and presenting it in an informative format using a run chart to show comparison between the past performance year and the current performance year to date.
2. Information and healthcare technologies – by collecting accurate data to generate evidence for nursing practice and identify gaps in the care to share with the unit staff
3. Communication assessment – develop reports for senior leadership and for direct care providers. Ensure everyone is working towards the same goal as agreed upon.

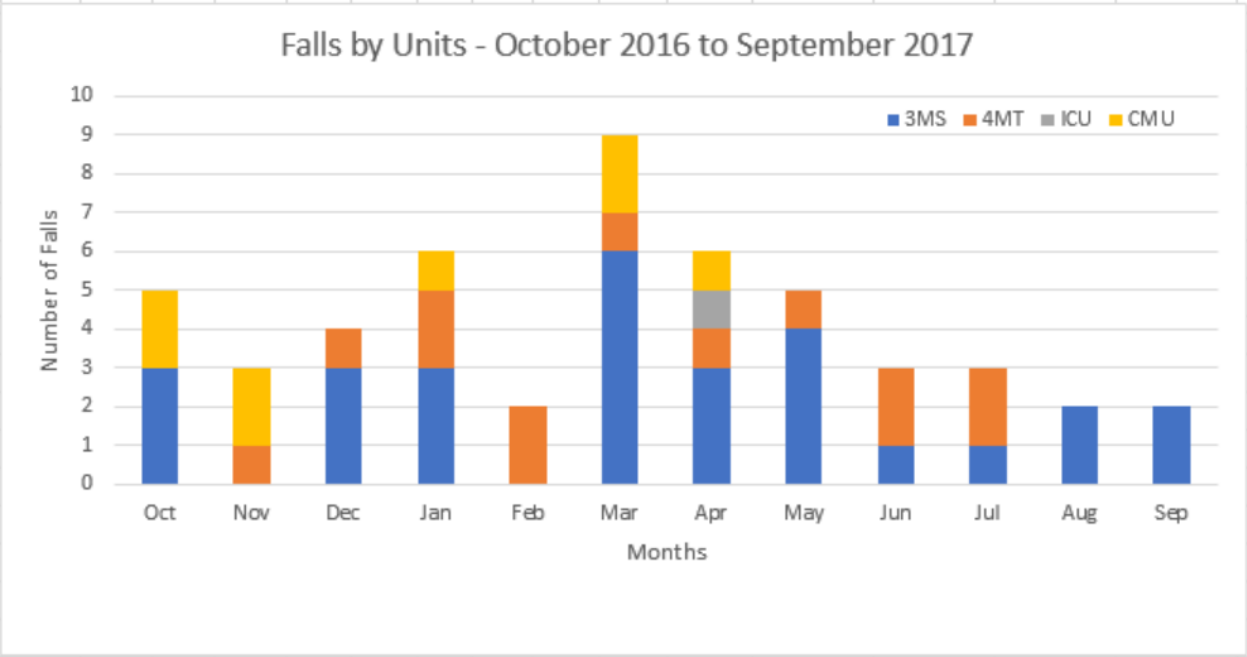
Lessons learned

I found it was very difficult selecting the measures for the processes that would provide the most impact for change in the outcome, as falls are multifactorial. Defining what and how the data will be collected, requires practicality and understanding that resources are limited.

There were challenges getting the staff to consistently attend the meetings, especially when the hospital census was high. This caused many delays as many attendees have missed the previous meeting, thus time was spend repeating what the team was doing. This was escalated to the unit Manager and later to the Clinical Nurse Executive. It is important to include the sponsor in all correspondence with the team, so she could see the progress and or barriers.

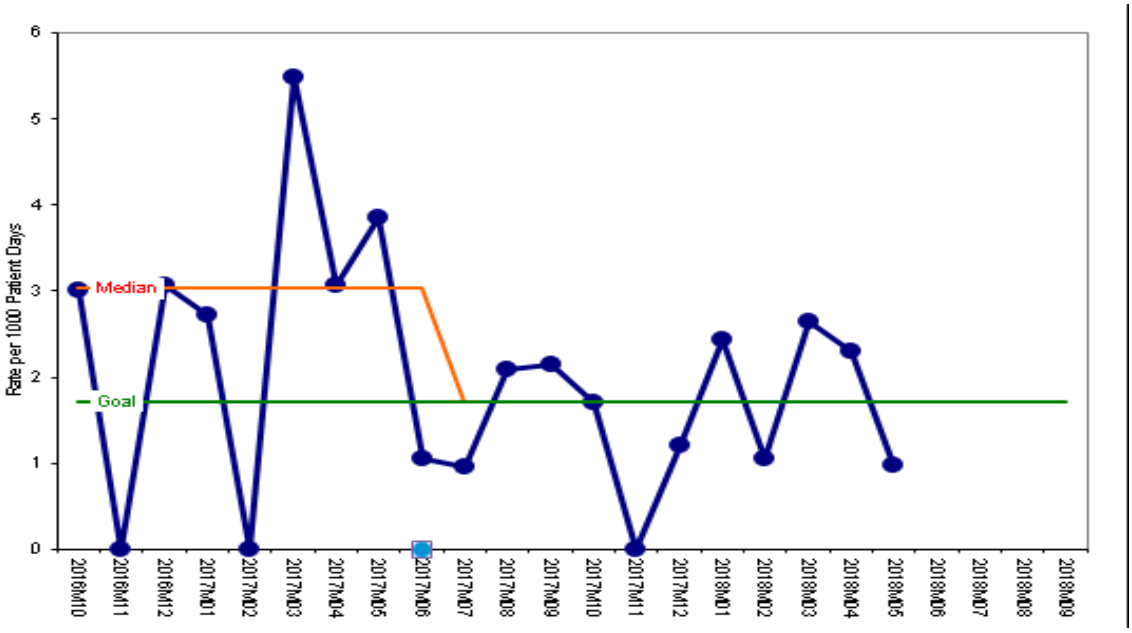
Appendix D-1a

Bar Graph with monthly falls by unit



D-1b

Run Chart for Medical-Surgical Falls outcomes



Appendix E

Hourly Rounding tool

Rounding for Outcomes:
Hourly Rounding Validation Form

PURPOSE: A Reliable Care Routine to Ensure Quality & Safety

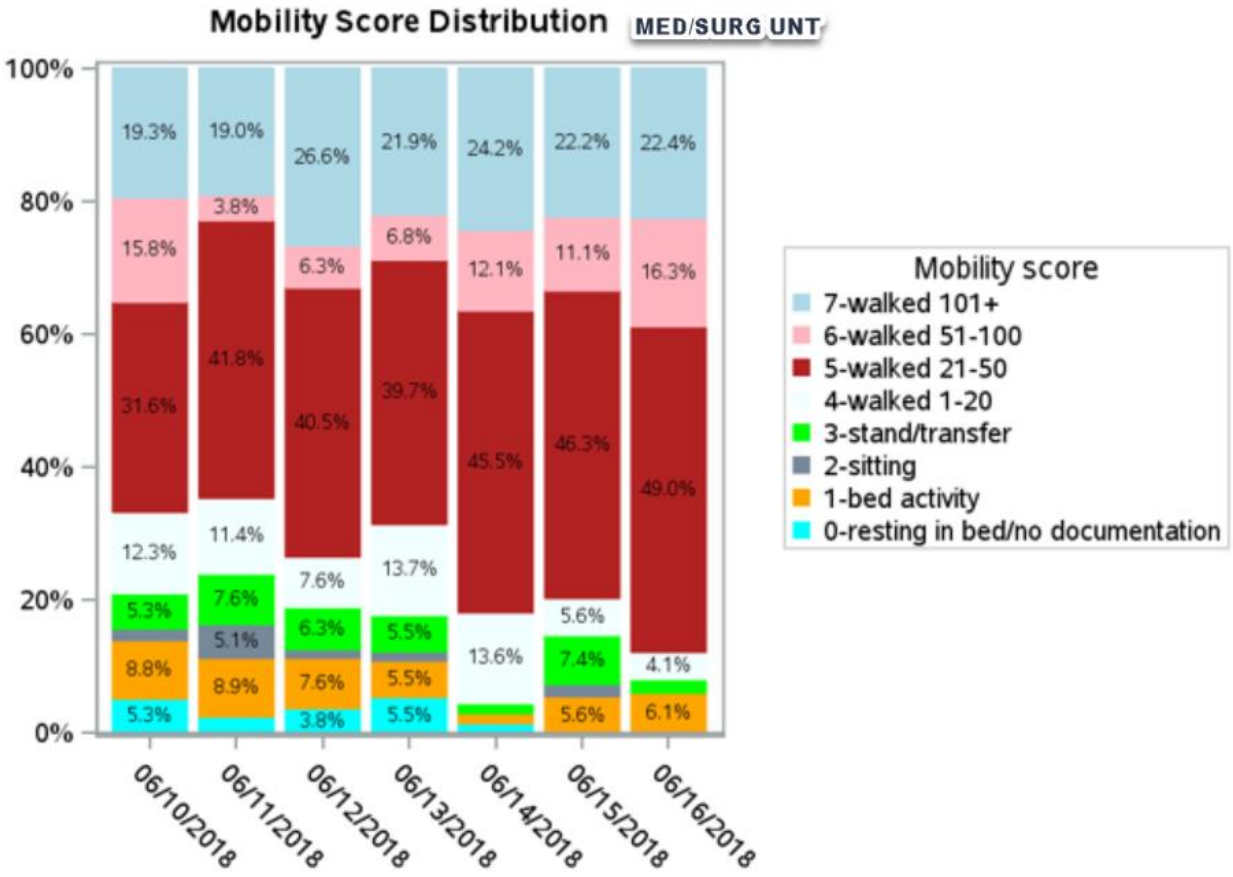
NURSE (Observed):	UNIT:	SHIFT:	OBSERVER:	DATE:

Instructions: Step 1) Your supervisor/coach will observe you either role playing or actually rounding with your patients and give you feedback. They will complete and give you a copy of this form after each observation. Step 2) Practice hourly rounding, integrating the suggestions from your supervisor/coach. Step 3) Your supervisor will re-observe you up to a total of 3 observations to validate you as competent in Hourly Rounding.

	Behavior Ratings: (Note suggestions for 1-2s, or things done well for 3-5s) 1= skills not demonstrated 2= skills partially demonstrated 3=skills proficiently demonstrated 4= excellent demonstration of skills 5= exceptional demonstration of skills and can mentor others N/A= not applicable	Observation 1 Date: All ratings 3+: ☐ Yes =competent ☐ No= repeat	Observation 2 Date: All ratings 3+: ☐ Yes =competent ☐ No= repeat	Observation 3 Date: All ratings 3+: ☐ Yes =competent ☐ No= create plan
Opening	▪ Foams in (uses key words, *for your safety*)			
	▪ Knocks and greets patient and any family present (introduce yourself and your skills if new pt)			
	▪ Explains purpose of visit (key words, hourly)			
Scheduled Tasks	▪ Explains "what" is being done (e.g. *I am giving you your antibiotic…*)			
	▪ Explains the "why" of what is being done (e.g. *so that we can treat XXX*)			
	▪ Includes and educates patient in their plan of care			
3 Ps & Additional Needs	▪ **Pain**: Has patient rate pain using pain scale			
	▪ **Personal Needs**: Asks about/assists patient with hygiene/bathroom needs			
	▪ **Position**: Explains need to change position and offers assistance			
	▪ Addresses patient's comfort needs (e.g. pillows, call light, water)			
	▪ Verbalizes environmental scan (assess general environment and bathroom)			
Close	▪ Asks if there is anything else patient needs			
	▪ Explains when someone will return (key words, *hourly*)			
	▪ Foams out			
Engagement	▪ Elicits patient's perspective & demonstrates compassion			
Comments				
When Competency Achieved:	**Supervisor Signature:**	**Employee Signature:**		**Date:**

Appendix F

Daily Mobilization Report



Appendix G

SWOT Analysis

STRENGTHS	**WEAKNESS**
• **Regular staff** • **Regular Facility Leader**	• **Frequent changes in unit management team** • **Lack of communication regarding falls**
OPPORTUNITIES	**THREATS**
• **Fall decrease** • **Improved staff morale** • **Improved patient satisfaction** • **Sustainability of fall prevention practices**	• **Potential for serious injury to patients that fall** • **Increase financial loss by facility** • **Ancillary staff non-compliance with falls preventive measures**

Appendix H

Return on Investment (ROI)

Costs	Approximate cost per fall without injury = $3,500	Cost of total number of falls (28) on the unit for performance year 2016-17 = $98,000
Training – Simulation	1RN approximate hourly pay = $85 65 RNs = $5,525 1PCT approximate hourly pay = $28 27 PCTs = $756	Cost for one hour of simulation training all staff = $6,281
Simulation lab	Available at hospital = $0	Cost for use of simulation lab = $0
Media Company	Cost of Video on the standard work for correct falls risk assessment, hourly rounding and communication on patient level of mobility and device required for patient's toileting needs = $1,800	Cost of video = $1,800
MSN-CNL student	Cost of MSN-CNL time = zero as this project is done during paid work time as a salary employee of the hospital	Cost of MSN-CNL student = $0
Fall Project meetings	3 RNs each 4 hour per month = $1,020 1 PCT each 4 hour per month = $112 9 months project	Cost of 3 RNs + 1 PCT attending workgroup meetings = $10,188
Other healthcare workers participating in project	Cost of other healthcare workers attending workgroup meeting = zero as this project is done during paid work time.	Cost of other healthcare workers attending workgroup meetings = $0
Savings	Aim is 30% decrease in falls = 8 fall	Savings = $28,000 in first year
Benefits	To Hospital/staff	To Patients
	• Reduced census, or bed availability due to no extra LOS because of fall • Staff morale increased • Staff working well as a cohesive team, providing safe patient care	• No extra hospital days, discharged on schedule • Patient satisfaction is high, feel safe