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Defying the Gravity of Falls on MSU

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Abstract

Falls are a leading cause of injury and death for adult males in the United States and have been an ongoing problem on the Medical Surgical Unit (MSU). Therefore, the aim of this project is to increase fall prevention education and communication on MSU in order to ultimately improve fall rates. Although there are currently fall prevention processes already in place, these may not be sufficient as demonstrated by recent fall metrics. Many RNs on MSU are fairly new nurses; and their enthusiasm and adaptability may be an advantage for this evidence-based project. Furthermore, the management team seems to be well respected and has already begun to facilitate a culture of safety over the last two years. Based on the gathered data and a literature review, it was obvious that staff and patient education and communication were the areas that needed to be addressed. Interventions were implemented in three phases that consisted of an educational in-service, a patient education sheet and contract, a communication board, and S.B.A.R. emails to staff. Pre-intervention data was gathered from multiple sources including the incident report system, the electronic health record (EHR), bedside audits, nurse surveys, and patient surveys. Data from the same sources will also be gathered post-implementation. There has been a downtrend of fall occurrences on MSU since the initiation of the interventions. The fall prevention team anticipates increased utilization of general prevention measures (bed alarm, patient belongings at bedside, etc.), increased staff awareness of the frequency of falls, improved nurse perception regarding the adequacy of patient fall education, and increased patient education. Through this project, the student was able to exercise the many different CNL roles in an environment he was unfamiliar with. By utilizing the proper

frameworks, and with guidance and support from leadership, he was able to facilitate change by converting evidence-based literature into practice.

Introduction

Problem Description

Falls are a leading cause of injury and death for adults, particularly for males. In 2016, there were 17,000 male adult deaths related to falls (Center for Disease Control and Prevention, 2018). Furthermore, in 2015, there were 480,000 nonfatal fall injuries with male adults leading to hospitalizations. Depending on the patient's condition at the time of their fall, falls can lead to complications including head injury, brain hemorrhage, fractures, and fear (Centers for Disease Control and Prevention, 2017). Additionally, the Centers of Medicare & Medicaid Services no longer reimburse hospitals for injuries related to falls, causing costly consequences for healthcare organizations around the country. For example, in 2015, the average cost for fatal falls was over 600 million dollars, and the average cost for nonfatal injuries was over 30 billion (Burns, Stevens, & Lee, 2016). Due to all of these reasons, the severity of falls in adult males should not be underestimated. Fortunately, the Agency of Healthcare Research and Quality (AHRQ, 2013) states that about a third of falls can be prevented through a collaborative and multidisciplinary effort.

The chosen microsystem for this evidence-based project is the Medical/Surgical Unit (MSU) in a Northern California Veterans Affairs (VA) hospital, where falls have been an ongoing problem. Pelczarski, Schoelles, Wallace, and Neumann (2013) recommend that fall rates are consistently measured on a monthly basis per 1,000 patient days. This is done by dividing the number of falls per month by the total occupied beds each day and then multiplying that quotient by 1,000. The Veterans Affairs monitors their fall rates through this method. Aside from November 2017, the acute care units in the hospital altogether met the fall rate goal of <4 over the last two quarters (N=40) (Nicoloudis, 2018). Unfortunately, MSU contributed to 50%

of the falls (n=20). Furthermore, MSU has had higher than desired fall rates in four of the last six months when compared to VA Sierra Pacific Network (VISN21) benchmark data (Appendix A). Also, based on a retrospective analysis, there were 35 total patient falls that occurred on MSU in 2017. Due to these findings, and the fact that the VA population is predominantly comprised of adult males, the problem of falls should be addressed on this particular microsystem.

Available Knowledge

PICO Framework. The PICO Framework is a well-known tool used to assist healthcare professionals in researching evidence-based practices (Huang, Lin, & Demner-Fushman, 2006; Schardt, Adams, Owens, & Fontelo, 2007). The four components of the framework include Problem, Intervention, Comparison, and Outcome. Based on this framework, a literature review was conducted on the CINAHL Complete database via the EBSCOhost Research Database reference system. The apparent problem on MSU was patient falls; therefore, accidental falls was an essential element of the literature search. Next, it seemed appropriate that the interventions would be associated with nursing protocols, staff education, and patient education. Due to the nature of the project, the comparison component of PICO was disregarded. Finally, the desired outcomes were fall prevention and decreased fall occurrences.

Literature Review. There were serval particularly relevant themes that were gathered from the review of literature, including fall prevention guidelines and the use of standardized tools; improving patient safety through transparency; targeted improvements; staff knowledge, motivation, and perceptions of fall prevention; and patient and family education.

In 2012, the Institute for Healthcare Improvement published guidelines (Boushon et al., 2012) that are now being used to prevent falls in hospitals across the nation. Divided into three

sections, the how-to guide discusses specific changes that could potentially reduce fall injuries, suggestions for implementation, and additional tools and resources. The six proposed microsystem improvements include: 1) fall risk screening upon admission; 2) fall-related injury and history screening upon admission; 3) psychological risk factor assessment; 4) fall risk communication and education; 5) standardized fall prevention interventions; and, 6) customized interventions for high fall risk patients. Appropriately, these concepts are consistent with the other themes revealed in the literature review.

In order to decrease fall rates, interventions must be individualized to the chosen microsystem. For example, Coppedge et al. (2016) described a pilot study that was implemented on a medical-renal unit in a nonprofit community hospital. Specific strategies included standardized interventions (e.g., a communication tool on yellow paper); collaboration between members of the falls committee (which was comprised of fall prevention champions, physical therapists, a clinical nurse specialist, a director of patient care, and an executive nurse), and evidence-based practice. The authors describe that a culture of safety was facilitated, and the unit's monthly fall rate decreased from 3.38 to 2.21 within nine months of implementation. The pilot study was later implemented on the oncology unit in the same hospital.

Next, Kachalia's (2013) perspective article suggests that health care organizations should promote an environment of transparency and a just culture in order to improve patient safety. For instance, in microsystems with just culture, staff may be more willing to communicate their errors or mistakes amongst each other and with leadership. Because of this transparency, the microsystem can subsequently adapt the necessary changes needed to improve patient safety.

Staff communication is an important factor in effective fall prevention. Kiyoshi-Teo, Carter, and Rose (2017) describe their fall prevention interventions on two Medical Surigcal

Units at the VA in Portland. By following the Plan-Do-Study Act (PDSA) methods, they began by gathering data from patient interviews, room audits, and chart reviews. It was discovered that there was a need for improvement of patient education and communication, the patient environment, and nursing protocols. The authors explain that improved communication between the falls committee and the units (via emails, falls champions, communication boards, and unit-based council meetings) was an essential aspect that allowed them to achieve a 57% decrease in fall rates.

In preventing falls, staff perception of falls and fall prevention should also be addressed. Hang et al. (2016) conducted a cross-sectional survey study that described nurses' knowledge and understanding of, and motivation for, fall prevention in their residential care setting. Less than one third of staff were unaware of or felt that their residents were at low risks for falls. Eighty percent were unable to describe more than three fall prevention interventions. From these findings, the authors suggest that in order to improve fall prevention behavior, interventions should be directed towards increasing staff knowledge and awareness.

Patient teaching was a major theme in the literature review. In one article, The Joint Commission Center for Transforming Healthcare's project—Preventing Falls Targeted Solutions Tool—was piloted at Community Medical Center (Nicolas, Gayanilo, & Bellas, 2016). Specifically, one recommendation was to utilize a standardized patient teaching tool and a signed agreement between the patients/families and nurses. This contract was printed on yellow paper. Through this and other patient teaching interventions, the fall rates decreased by 35% within three years of implementation. A retrospective, qualitative study was also performed by Zavotsky, Hussey, Easter, and Incalcaterra (2014) to investigate previously filed fall reports and the usage of patient fall contracts and education sheets. Utilization of the patient falls contracts

and education material correlated to a statistically significant decrease in fall injury in the Magnet-recognized urban hospital. In other words, more falls occurred with patients who did not receive the fall contract. Finally, in a quasi-experimental study by Opsahl et al. (2017), an education fall prevention video was utilized to decrease fall rates on an orthopedic and a medical/surgical unit in a Midwest hospital. Post intervention, the fall rates decreased from 2.86 in the orthopedic department and 3.27 in the medical/surgical unit to 0.88 and 1.2, respectively. The authors also described improved patient and staff knowledge regarding the fall prevention policy, and an upwards trend of educational video utilization was noted as the study progressed.

Rationale

The Clinical Nurse Leader (CNL) Role. The CNL role was introduced in 2003 and was developed to provide leadership and guidance for the inevitable changes in healthcare (American Association of Colleges of Nursing [AACN], 2013). CNLs are generalist leaders that have the ability to facilitate changes in various settings, including those such as MSU. The author of this paper is a CNL student, and this improvement project fulfills the eligibility requirements for his master's degree and to sit for the CNL certification exam. Most importantly, the different functions of CNL role are apparent throughout every aspect of this project. The CNL student was the primary leader, force of change, and the link between the latest fall literature and clinical practice on MSU.

Kotter's 8-Step Change Model. Kotter's (2012) 8-Step Change Model is a change theory that is commonly used by CNLs. The eight steps of this theory include: creating urgency, forming a team, creating a vision for change, communicating the vision, removing barriers, generating short-term wins, sustaining change, and anchoring change. Because revamping fall prevention interventions on MSU was no small task and would require several team members

and months of implementation, this change theory seemed to be the most appropriate. In addition, Kotter's 8-Step Change Model provides direct objectives compared to some of the other change theories; and therefore, seemed to be the most plausible, given: 1) the limited time permitted by the CNL student's internship, 2) the rate of staff turnover, and 3) the staff's limited amount of experience.

Specific Project Aim

The aim of this project is to improve fall prevention education and communication on MSU, to ultimately decrease fall rates by 50% within one year of implementation. The process begins with education of every patient upon admission along with consistent education of (and communication with) staff. The process ends with patient discharge, hopefully with a fall-free admission. Expected outcomes include: 1) a decrease in fall rates by 50% and 2) increased staff, patient, family knowledge and awareness of fall prevention. It is important to work on this now, because the substandard fall rates and poor fall prevention communication on MSU have been identified.

Methods

Contexts

Clinical Microsystem Assessment. The Dartmouth Institute Microsystem Academy (2005) inpatient microsystem workbook was used as a guide for the clinical microsystem assessment of MSU. According to the MSU nurse manager (M. Frias, personal communication, January 24, 2018), the purpose of the unit is to provide care to veterans requiring acute medical and surgical care in Northern California. MSU's scope of service adheres to the health system's mission, which is to "Honor America's Veterans by providing exceptional health care that improves their health and well-being" (U.S. Department of Veterans Affairs, 2016).

Frias (2017) describes that the most common diagnoses on MSU include pneumonia, urinary tract disorders, chronic bronchitis with acute exacerbation, cellulitis, and chest pain. The top five patient care needs are pain management, wound management, observation for behavioral needs, chronic disease medication management, and fall prevention. Given the nature of the unit's patient population and top diagnoses, MSU constantly experiences high amounts of patient turnover; often having several discharges throughout the day and close to the same amount of admissions by midnight.

Although the majority of MSU beds are currently located on the hospital's third floor, the unit is in a transitionary phase of relocating to a remodeled fourth floor. At the time of writing, there are 19 inpatient beds on the third floor and five on the fourth floor. Based on a maximum capacity of 24 beds (which MSU is generally at or near on most days), the unit requires a six Registered Nurses (RNs) and four Nursing Assistants (NAs) between the two floors on each 12-hour shift. There is a specific full time equivalent (FTE) position designated for a Charge Nurse on day shift, however there is not one for the night. Usually the most experienced RN on the night shift will adopt the role, provided that proper staffing persists.

The nurse manager has been in his current position for the last two years. Recently, an assistant nurse manager position was filled by an RN who previously worked in the hospital's ICU. The CNL on MSU was the preceding nurse manager before he stepped down to focus on quality improvement projects. There is a total of 30 benefitted staff RNs, 8 intermittent RNs, 12 benefitted NAs, and 11 intermittent NAs. A majority (approximately 75%) of the RN staff has less than five years of experience (M. Frias, personal communication, January 25, 2018). Most of these nurses are recent graduates from University of San Francisco and Sacramento State

University. There is a constant flow of nursing staff turnover. Nurses have cited reasons such as burnout, professional growth, or relocation as reasons for leaving.

Processes related to fall prevention include a system-wide fall prevention policy that provides the definition of falls, inpatient fall risk screening guidelines (MORSE Fall Score) (Morse, Morse, & Tylko, 1989; VA National Center for Patient Safety, 2018) (Appendix B), outpatient fall risk screening guidelines, the environmental rounds policy, multidisciplinary staff responsibilities, and post-fall procedures.

Regarding MSU's patterns, a monthly Falls Committee meeting is organized by the Fall Prevention Coordinator. During these meetings, the committee discusses quality metrics and implementation progress of fall prevention strategies such as the Banner Mobility Assessment Tool (BMAT) (Boyton et al., 2014) (Appendix C). Staff meetings and charge nurse meetings are held, although these are inconsistent.

SWOT Analysis. Humphrey's (2005) SWOT Analysis was used to determine the strengths, weaknesses, opportunities, and threats of the evidence-based project (Appendix D). As mentioned earlier, the microsystem assessment revealed that a majority of RNs on MSU are newer nurses. This is noted as a strength because newer nurses are generally enthusiastic and open to change. The nurse manager and assistant nurse are also fairly new to their positions. Several staff and upper management members described an enhanced culture of safety and improved quality metrics on MSU since Mario became the manager in 2016. These observed positive attitudes attest to the management team's ability to lead and provide support for necessary changes.

Unfortunately, the lack of experience of both staff management can be considered a weakness. During times of change, experience is usually necessary to provide strategic

direction. However, the Nursing Director of Acute Care has been in his position for over ten years and is heavily involved in unit operations in this hospital. The CNL on MSU also provides input and support from his experience as the preceding nurse manager. Another weakness is that MSU is in transition to moving to a new unit. Implementing new fall prevention measures in the midst of relocation may overwhelm the staff. Continuous reinforcement may be required so that the intervention is appropriately continued after the move.

Because the patients on MSU have lower levels of acuity when compared to the other acute care departments in the hospital, the unit is in an ideal position to pilot evidence-based projects. If this fall prevention project is successful on MSU, it may also be implemented on the Transitional Care and Intensive Care Units.

As with any other major change in policy, an anticipated threat is resistance to change. Also, constant patient (and staff) turnover will likely be challenges to implementing fall prevention interventions. Adequate communication between the fall prevention team and staff is going to be critical to the success of this project.

ROI Plan. In addition to the negative psychological effects of falls on older adults (Sander, 2009) and nursing staff (Choi & Boyle, 2013), falls can also produce unnecessary, exponential costs for the patients and health systems. For instance, in 2015, a total of $50 billion was spent by Medicare, Medicaid, and private payers for both fatal and nonfatal falls (Florence et al., 2018). It was also found that 30-35% of falls cause some sort of injury (Joint Commission Center for Transforming Healthcare, 2015); and that each fall that does result in an injury costs approximately $14,000 (Haines et al., 2013). Furthermore, a study by Dunne, Gaboury, and Maureen (2014) suggests that falls can cause complications leading to increased patient length of stays, averaging about 11.5 extra days. Moreover, as of 2008, the Centers for Medicare and

Medicaid Services (CMS) no longer reimburses hospitals for traumatic injuries that occur while patients are admitted into the hospital, which are often results of falls (CMS, 2015); leading to even more hospital costs. Based on these numbers, MSU may have accounted for approximately $147,000 to $171,500 as a result of the 35 falls that occurred in 2017.

The costs for the project involve a whiteboard (which was found unused in the manager's office and black vinyl letter stickers that were purchased for $10.00 from Amazon.com); patient contracts/education sheets consisting of three pages printed on yellow card stock for each admission (5,400 total sheets based on an average of 1,800 patient admissions per year at $10 per 50 sheets = $1,080/year); and RN labor costs for investigating and compiling post fall emails (approximately 30 mins per fall at $60/hour = 1,050/year) = $1,615 during the first year of implementation if the goal of 50% decrease in patient falls (total of 17.5 annual falls rather than 35) is met. If a 50% decrease of falls continues the subsequent year, the total fall-related costs should also be halved. Ultimately, the potential amount saved per year due to the decrease in patient falls will greatly outweigh the annual costs for interventions related to improving patient education and staff awareness, and not to mention the costs directly related to falls.

Intervention

The MSU Fall Prevention Team includes the CNL student, the Nurse Manager, the Assistant Manager, the CNL, a new-graduate RN Resident, and two fall prevention champions. Like in Kiyoshi-Teo, Carter, and Rose (2017), the intervention (Appendix E) began by gathering data from multiple sources including the incident report system, the electronic health record (EHR), bedside audits (Appendix F), nurse surveys (Appendix G), and patient surveys, which was done by the CNL student and new-graduate RN. Once a sufficient amount of data was collected, the information was analyzed by the CNL student to identify areas requiring

improvement. Based on the gathered data and a literature review, it was obvious that staff education, patient and family education, and communication were the areas that needed to be addressed.

The implementation plan was comprised of three phases: Phase 1, Phase 2, and an ongoing phase (Appendix H). The first phase targeted staff education. A 15-minute in-service was provided to all RN and NA staff by the CNL student and new-graduate RN. Topics that were discussed included the definition of falls, complications of falls (for both patients and organizations), MSU data findings, MSU's Fall Standard Operating Procedure (SOP), literature review information, and the proposed changes.

Phase 2 focuses on patient education and staff and patient communication. One intervention involves a fall contract and a patient education sheet (adapted with permission from Zavotsky, Hussey, Easter, & Incalcaterra, 2014) (Appendix I). In short, the fall contract is a form signed (on yellow paper) by each patient and their nurse, expressing the agreement that both parties have made to do their part in preventing falls. By presenting the contract, the nurse does not only provide patients with fall education, but also gives patients a sense of accountability regarding their safety. The signed contracts are then taped to the patients' whiteboards to serve as visual reminders of the made agreement. The other intervention is a communication board (Appendix J) that states the number of days since the last fall on MSU.

The ongoing phase also addressed staff communication and was inspired by Kiyoshi-Teo, Carter, and Rose's (2017) and Hang et al.'s (2016) articles. In this phase, the CNL student would reach out to the primary RN or NA that was involved after a patient fall occurrence to debrief on the incident. Afterwards, the CNL student would send an S.B.A.R. (Situation, Background, Assessment, Recommendation) email that included the discussed information to the

entire staff in order to share experiences and increase awareness of these incidents (Appendix K). To facilitate a culture of transparency as mentioned in Kachalia (2013), it was emphasized that the emails are not meant to be punitive, but rather a learning exercise.

Measures

Pre-intervention data was gathered from the incident reporting system, the EHR, bedside audits of moderate to high fall risk patients (defined by MORSE score greater than 60 [Morse, Morse, & Tylko, 1989]), nurse surveys, and patient surveys. There were several noteworthy findings from the incident reporting system and EHR data. First, 65% of all falls in 2017 occurred during night shift. Falls were also almost evenly distributed between patients aged 50-90. Although a majority were with patients that were fully alert and oriented, 68% of falls were interestingly due to patient impulsiveness or noncompliance. Most falls occurred in patient rooms. Twenty-nine percent had sitters ordered. Fifty percent of falls were related to elimination. Some of the injuries that patients experienced included: atrial fibrillation with rapid ventricular response, pulmonary embolism, hip pain, skin tears, a dislodged peripherally inserted central catheter (PICC), head impact resulting in swelling and lacerations, and lacerations to back and extremities.

From the bedside audits of patients with MORSE scores >60, it was found that: 7% had bed alarms on, and 64% had belongings that were within reach. Finally, through the nurse surveys (which were presented in Likert scales) it was found that: 33% were neutral or disagreed with being aware of the frequency of falls that occurred on MSU; 72% of the nurses felt that their workload prevented them from implementing fall precaution protocols; 33% felt neutral about their patients being properly educated on fall prevention measures. In addition, the three most perceived causes for falls were mobility/balance impairment, altered mental status, and

patient noncompliance. Finally, from patient surveys, it was discovered that only 62% of patients stated that they received fall prevention education. Four months post-initiation of the intervention, data will be gathered from the same sources.

Ethical Considerations

There main ethical concern in this intervention was the protection of patient privacy. Several measures were taken in order to prevent patient information including: patient names and identifies being coded during EHR data gathering, and no identifiers being used during room audits.

Preliminary Results

Since the initiation of the interventions, there has been a downtrend of fall occurrences on MSU (Appendix L). Because the intervention has only been active for less than three months, post-intervention has not yet been collected. However, as times goes on, the fall prevention team anticipates that there will be increased utilization of general prevention measures (bed alarm, patient belongings at bedside, etc.), increased staff awareness of the frequency of falls, improved nurse perception regarding the adequacy of patient fall education, and increased patient education. Ultimately, the team hopes that the decreasing fall rate trend continues. Altogether, these measures will demonstrate the effectiveness (or ineffectiveness) of the intervention.

Discussion

Summary

Based on data gathered from the incident reporting system, the EHR, nurse surveys, and patient surveys, it was apparent that staff and patient education and communication were areas that needed improvement with regards to fall prevention. A literature review demonstrated several appropriate interventions for the MSU microsystem. Ultimately, an educational in-

service, a patient education sheet and contract, a communication board, and S.B.A.R. emails to staff were decided to be the most fitting. Only preliminary results are available; however, they seem to be encouraging. Post-intervention data will be collected in August 2018 (3 months post-initiation).

Key Findings and Lessons Learned

The fall prevention improvement project was initiated in the midst of MSU's relocation. Times of such hectic conditions would generally be the most difficult to introduce any change; however, the preliminary results demonstrate the unit's adaptability and strong leadership. Since the move to the 4th floor will involve transitioning from a centralized department with shared rooms to a decentralized unit with private rooms, adequate fall precaution measures will be a critical element for patient safety. Perhaps the timing of the initiation of interventions being prior to the complete relocation may work in MSU's favor.

As expected, there were several barriers that occurred during implementation. For example, upon unofficial room audits, it was discovered that patient contracts were not being used consistently. Although some contracts were being taped onto patient whiteboards (as expected); some were being taped at the head of the bed, some were unsigned, while some were not being used at all. At this point, constant reinforcement by the CNL student, the Nurse Manager, the Assistant Nurse Manager, the CNL, and the fall champions was warranted. Ultimately, the charge nurses were the key factors in enforcing the contracts. Since they were responsible for handing report sheets to the nurses upon each new admission, it was decided that that an ideal time to hand contracts to the nurses as well. The Charge Nurses and Charge Nurse Reliefs are highly influential members on the unit, and in hindsight, it may have been beneficial to include them on the intervention from the beginning. This will be kept in mind for future

projects, however, these were great opportunities to practice Plan-Do-Study-Act (PDSA) methods (Institute for Healthcare Improvement, 2018).

Nursing assistants are also important members of the unit. Although they were included in the educational in-service, they unfortunately were not asked to complete pre-intervention surveys—therefore, NA perceptions of falls were not measured. Such data would provide important insight, since NAs spend a majority of their time providing direct patient care. Furthermore, as mentioned earlier, 29% of the patients that fell in 2017 had sitter orders. This is a considerable amount, being that sitters have one-to-one patient assignments. However, half of all NA staff are intermittent and are not consistently on the unit; therefore, it would have been difficult to gather an adequate representation of NA perceptions.

Conclusion

Through this project, the student was able to exercise the many different CNL roles in an environment he was unfamiliar with. By utilizing the proper frameworks, with guidance and support from leadership, he was able to lead and create change by converting evidence-based literature into practice. Although there were a few things that could have been done differently, the influence of the CNL role was still apparent in this project—which is demonstrated by the project's preliminary results. Ultimately, it was MSU's culture of safety and adaptability that made the unit a unique environment to facilitate changes at even the most difficult of situations.

Regarding sustainability, there is a plethora of fall prevention information that can be found in the literature. Although these specific interventions may be (preliminarily) successful on the MSU microsystem, the author emphasizes that individualized interventions are necessary for the success of fall prevention interventions, or any quality improvement project for that

matter. As demonstrated, the CNL role can facilitate identification of practice gaps, propose appropriate solutions, and support implementation.

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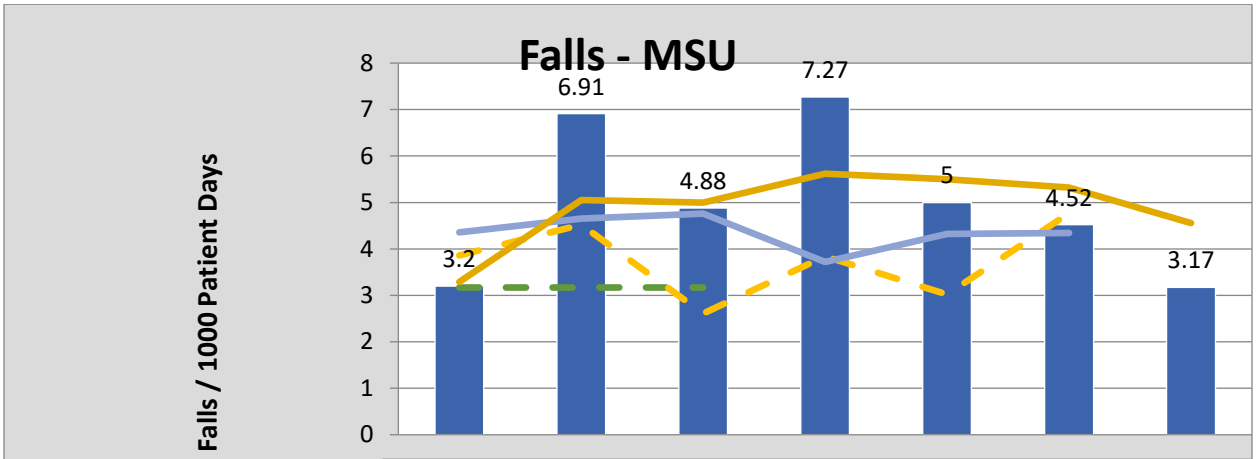
Appendix A

October 2017-March 2018 MSU Falls Data



	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18
MSU Fall Rate in Month	3.2	6.91	4.88	7.27	5	4.52	3.17
NDNQI Benchmark Med/Surg Falls Rate (TH)	3.17	3.17	3.17				
VISN21 Acute Med/Surg units	3.86	4.52	2.61	3.84	3.02	4.77	
1B Facility Complexity Nat. Aggregate3	4.36	4.65	4.76	3.72	4.32	4.34	
MSU Falls Occurrences	2	4	3	5	3	3	2
MSU YTD Rate	3.29	5.05	5.00	5.62	5.50	5.32	4.56

October 2017-March 2018 MSU falls data from: Nicoloudis, P. (2018). *EBQ Report/Action Plan: April 2018*. Sacramento, CA: VA Northern California Health System.

Appendix B

MORSE Fall Risk Assessment

A. Morse Fall Risk Assessment

This is one of the most widely used fall risk assessment scales available. It is a *reliable* and *valid* measure of fall risk.

Morse Fall Risk Assessment		
Risk Factor	**Scale**	**Score**
History of Falls	Yes	25
	No	0
Secondary Diagnosis	Yes	15
	No	0
Ambulatory Aid	Furniture	30
	Crutches / Cane / Walker	15
	None / Bed Rest / Wheel Chair / Nurse	0
IV / Heparin Lock	Yes	20
	No	0
Gait / Transferring	Impaired	20
	Weak	10
	Normal / Bed Rest / Immobile	0
Mental Status	Forgets Limitations	15
	Oriented to Own Ability	0

To obtain the Morse Fall Score add the score from each category.

Morse Fall Score*	
High Risk	45 and higher
Moderate Risk	25 - 44
Low Risk	0 - 24

* Based on most common scores used in VA

Note: Janice Morse recommends calibrating this high-risk score based on the patient population and acceptable fall rate. For more information see Janice Morse's book: *Preventing Patient Falls*.

The major advantages to this assessment are:
1. Research driven
2. Interventions are standardized by level of risk

The major disadvantages:
Not designed for the long term care setting, consequently nearly all patients will be at high risk

Morse Fall Risk Assessment from: VA National Center for Patient Safety. (2018). *Falls toolkit*. Retrieved from https://www.patientsafety.va.gov/docs/fallsToolkit/completebooklet.pdf

Appendix C

Banner Mobility Assessment Tool (BMAT)

Banner Mobility Assessment Tool for Nurses
Note: Always default to the safest lifting/transfer method (eg, total lift) if there is any doubt in the patient's ability to perform the task.
• Assessment Level 1 **– Sit and Shake** Task: From a semireclined position, ask patient to sit upright and rotate to a seated position at the side of the bed; may use the bed rail. Note patient's ability to maintain bedside position. Ask patient to reach out and grab your hand and shake, making sure patient reaches across his/her midline. Pass = complete Assessment Level 2 Fail = Patient is Mobility Level 1; use total lift with sling and/or positioning sheet and/or straps, and/or use lateral transfer devices such as rollboard, friction-reducing (slide sheets/tube) or air-assisted device. If patient has "strict bed rest" or "bilateral non-weight-bearing" restrictions, do not proceed with the assessment; patient is Mobility Level 1.
• Assessment Level 2 – **Stretch and Point** Task: With patient in seated position at the side of the bed, have patient place both feet on the floor (or stool) with knees no higher than hips. Ask patient to stretch one leg and straighten the knee, then bend the ankle/flex and point the toes. If appropriate, repeat with the other leg. Pass = complete Assessment Level 3 Fail = Patient is Mobility Level 2; use total lift for patient unable to weight-bear on at least one leg; use sit-to-stand lift for patient who can weight-bear on at least one leg.
• Assessment Level 3 – **Stand** Task: Ask patient to elevate off the bed or chair (seated to standing) using an assistive device (cane, bed rail). Patient should be able to raise buttocks off bed and hold for a count of five. May repeat once. Pass = complete Assessment Level 4 Fail = Patient is Mobility Level 3; use nonpowered raising/stand aid (default to powered sit-to-stand lift if no stand aid available) or use total lift with ambulation accessories or use assistive device (cane, walker, crutches). If patient passes Assessment Level 3 but requires assistive device to ambulate or cognitive assessment indicates poor safety awareness, patient is Mobility Level 3.
• Assessment Level 4 **– Walk** (march in place and advance step) Task: Ask patient to march in place at bedside, then ask patient to advance step and return each foot. Patient should display stability while performing tasks. Assess for stability and safety awareness. Pass = Patient is Mobility Level 4/modified independence = no assistance is needed to ambulate; use your best clinical judgment to determine need for supervision during ambulation. Fail = Patient is Mobility Level 3

Banner Mobility Assessment Tool (BMAT) from Boyton, T., Kelly, L., Perez, A., Miller, M., An, Y., & Trudgen, C. (2014). Banner mobility assessment tool for nurses: Instrument validation. American Journal of Safe Patient Handling & Movement, 4(3), 86-92.

Appendix D

S.W.O.T. Analysis

Strengths	**Weaknesses**
• Majority of RNs on MSU are newer nurses • The staff generally has a positive perception of management	• Newer nurses and management means less experience • MSU is in transition to a new unit
Opportunities	**Threats**
• MSU is in an ideal position to pilot evidence-based practices, due to the lower acuity compared to the other departments in the hospital	• Resistance to change • Constant patient and staff turnover will be likely challenges

Appendix E

Improving Fall Prevention in MSU – GANTT Chart

Improving Fall Prevention in MSU – GANTT Chart																															
	February				March					April				May					June				July				August					
Intervention	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Analyze current fall policies in place (microsystem assessment)																															
Develop Fall Prevention Survey																															
Develop GANTT Chart																															
Develop standardized audit tool																															
Develop spreadsheets for Incident Report, CPRS, and audit data																															
Gather Incident Report and CPRS data																															
Implement Fall Prevention RN Survey and Patient Survey																															
Audit RN adherence to current fall policy								*																							
Analyze data																															
Literature review																															
Discuss findings with Fall Committee and MSU Fall Prevention team**											*																				
Select RN fall champions																															
Develop interventions and implementation phases																															
Discuss decided interventions with Fall committee and MSU Fall Prevention Team													*																		
Orient RN fall champions to roles and responsibilities																															
Initiate phase 1 of intervention																*															
Initiate phase 2 of intervention																	*														

																	*													
Initiate ongoing phase of intervention																														
Encourage fall champions to support staff																														
Review post-intervention incident report, CPRS, and audit data																														
Implement post-intervention RN and patient surveys																													*	

*Milestones
**MSU Fall prevention team:
CNL student – Alvin Abad
MSU Manager – Mario Frias
MSU Assistant Manager – Daisy Chock
MSU CNL – Navdeep Sandhu
Post-Bacc Nurse Resident – Elizabeth Aguado
Fall prevention champion #1 – Rupinder Kaur
Fall prevention champion #2 – Atul Bhattarai

Appendix F

Bedside Audit Form

MSU Environment of Care Fall Prevention Interventions

	YES	No	NA
Bed alarm on			
Place patient/resident articles within easy reach			
Call light in easy reach and answered promptly			
Place bed in low position when in bed			
Lock bed wheels			
Provide proper lighting			
Keep floor free of clutter			
Clean up spills immediately			
Modify environment for safe transfers			
Use of non-skid slippers or gripper socks			
Yellow non-skid socks			
Yellow arm bands			
Yellow flag on ID band			

Notes:

Appendix G

Nurse Survey on Fall Prevention

1. I understand and am aware of our fall protocol on MSU
Strongly disagree Disagree Neutral Agree Strongly agree

2. I understand what the fall prevention precautions are
Strongly disagree Disagree Neutral Agree Strongly agree

3. I know when to initiate fall precaution protocols
Strongly disagree Disagree Neutral Agree Strongly agree

4. I am aware of the frequency of falls that happen on MSU
Strongly disagree Disagree Neutral Agree Strongly agree

5. I can differentiate between low, moderate, and high fall risk patients
Strongly disagree Disagree Neutral Agree Strongly agree

6. I assess for and implement precautions for high risk patients
Strongly disagree Disagree Neutral Agree Strongly agree

7. I take Fall Risk (MORSE) scores into consideration when caring for my patient
Strongly disagree Disagree Neutral Agree Strongly agree

8. Fall prevention is at the of my top of my priorities
Strongly disagree Disagree Neutral Agree Strongly agree

9. I conduct purposeful/hourly rounding on my patients
Strongly disagree Disagree Neutral Agree Strongly agree

10. My patients are properly educated on fall prevention
Strongly disagree Disagree Neutral Agree Strongly agree

11. Falls can be prevented
Strongly disagree Disagree Neutral Agree Strongly agree

12. My workload prevents me from implementing fall risk precautions
Strongly disagree Disagree Neutral Agree Strongly agree

13. How many years of experience do you have? _____

14. Has a patient under your care ever experienced a fall? _Yes _No

15. What do you believe are the most common causes of falls? (Select all that apply)

____ Toileting urgency

____ Medication side effects

____ Mobility/balance problems

____ Altered mental status

____ Noncompliant patient

____ Floor/environmental conditions

____ Bed alarms off

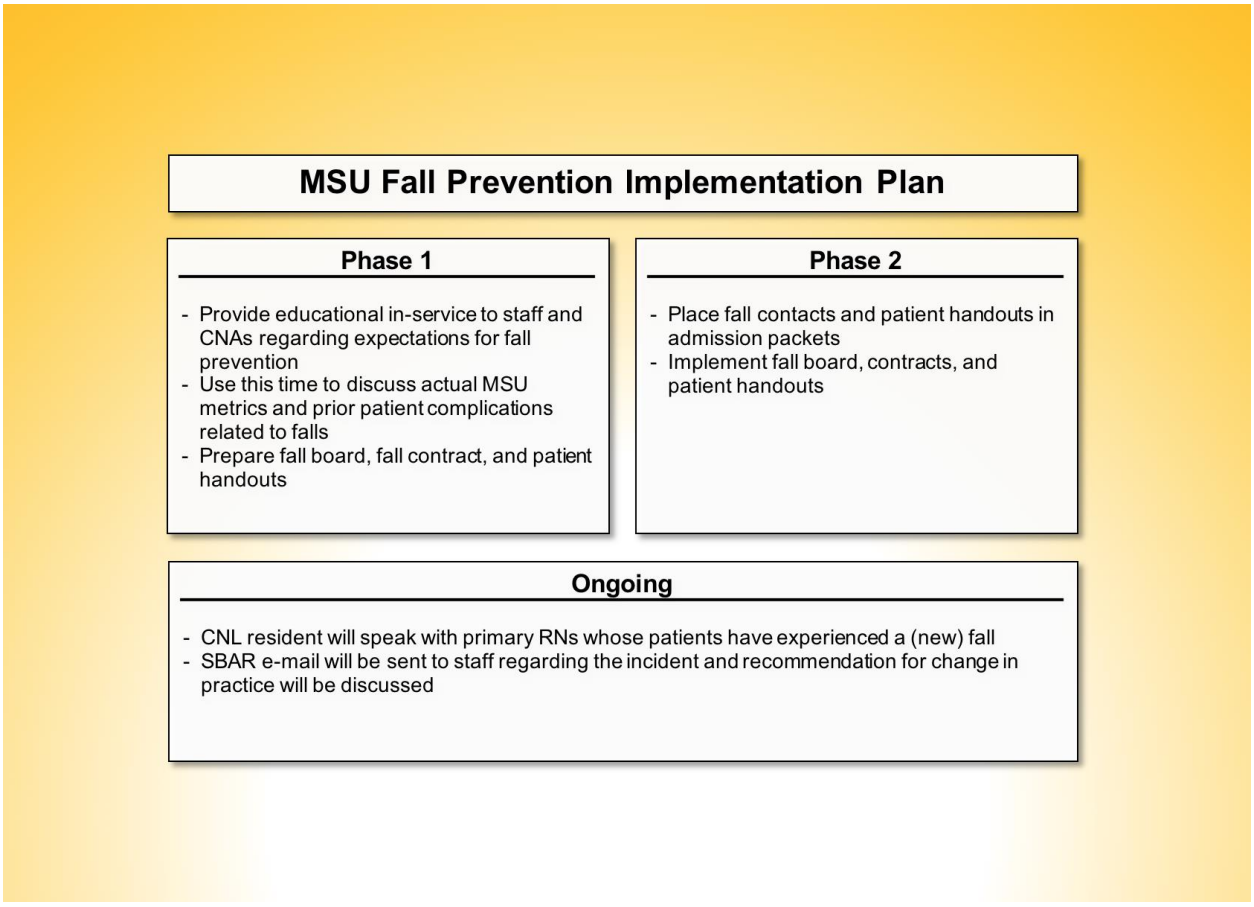
____ Patient reaching for belongings

____ Staffing issues

____ Other: _____

Appendix H

MSU Fall Prevention Implementation Plan Phases



Appendix I

Fall Prevention Patient Education and Safety Agreement Sheets

For Our Hospitalized Veteran Patients

Hospitalized patients are at risk for falls. Some of the risk factors are: age, illness, surgery, use of one or more than one medication, weakness related to bedrest, and unfamiliar surroundings.

We are committed to YOUR safety and offer these tips for reducing falls and protecting YOU:

Please Call … Don't Fall. Call for help when getting up. Even though you may feel strong, certain medications may change your balance. You may feel fine while you are sitting, but you may become weak or dizzy once you stand up.

We understand that some things are personal. Keep personal things close to you. Frequently used items such as phones, eyeglasses, and dentures should be kept close by and within easy reach.

Look…Listen…and Feel. Wear your eyeglasses and or/hearing aid(s) when you are awake. Wear non-skid socks. When you are getting up, sit at the edge of the bed for a few seconds, making sure you feel both feet touching the floor. Report to the nurse if you feel dizzy as this will let your nurse know that you need more time to adjust to position changes.

When it drops…We don't want you to flop. Do not pick up items that may have dropped (pens, eyeglasses, tissues, etc.). Reaching for these dropped items may cause dizziness due to a change in position.

Do not wait until the last minute to go to the restroom!

Adapted with permission from Zavotsky, K., Hussey, J., Easter, K., Incalcaterra, E. (2014). Fall safety agreement: A new twist on education in the hospitalized older adult. *Clinical Nurse Specialist, 28*(3), 168-172.

APP: 5/18 VHEI Committee

Our Commitment to You

To ensure the best possible care, all patients in this unit are visited at least every 2 hours by the nursing staff. On the rounding visit, the staff will perform these tasks for you:

- Check your pain level
- Offer help using the toilet
- Help you into a comfortable position
- Check medication and provide medicine if needed (RN only)
- Make sure that your essential needs are within reach (call bell, reading materials, etc.)
- Answer any questions you may have
- Let you know when a caregiver is coming back

Working together will help
decrease the risk of falls
providing you
Happy, Healthy, and
Safe Healing!

Adapted with permission from Zavotsky, K., Hussey, J., Easter, K., Incalcaterra, E. (2014). Fall safety agreement: A new twist on education in the hospitalized older adult. *Clinical Nurse Specialist, 28*(3), 168-172.

APP: 5/18 VHEI Committee

Falls Safety Agreement

1. I have been educated by my nurse, and now understand that many of the following factors may put me at high risk for falls:

- Medications that make me weak and dizzy (such as medications that treat pain, nausea, trouble sleeping, or needed before a blood transfusion)
- Weakness from long periods of bed rest
- Being in an unfamiliar environment
- Use of bulky patient care equipment (IV lines, IV poles and pumps, EKG wires, oxygen tubing, surgical tubes)
- Potential loss of control of stool and urine, as well as a need to go to the restroom suddenly and/or frequently due to continuous IV fluid

2. I understand that falling can cause serious injuries, including bruises, bleeding, head injuries, and broken bones, which can lead to a longer stay in the hospital and transfer to an intensive care unit.

3. I agree to do all I can to protect myself from falling, including:

- Use the call bell to ask for help when I need to get out of bed
- Wait for help before getting up from the bed, commode, or toilet
- Report feelings of dizziness or weakness to my caregiver immediately
- Keep my room free of clutter and unnecessary items
- Avoid leaning on items with wheels, such as my IV pole and bedside table
- Wear the non-skid socks provided by my caregiver

4. I understand that my care providers on the unit will also do all they can to protect me from falls:

- Answer my call bell promptly
- Check on me at least every 2 hours (help to the restroom, place my belongings and call bell in reach, and make sure that I am comfortable and not in pain)
- Assure that I use the restroom if I am getting medicines that make me weak or dizzy
- Assist me to the restroom in the middle of the night so that I don't awake with a feeling of urgency
- If I have been identified as at risk for falling, I will be helped to and from the bathroom. A care provider will also stay with me in the bathroom to make sure I don't fall.

Adapted with permission from Zavotsky, K., Hussey, J., Easter, K., Incalcaterra, E. (2014). Fall safety agreement: A new twist on education in the hospitalized older adult. *Clinical Nurse Specialist, 28*(3), 168-172.

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- Assure that I use the restroom if I'm on medicines that make me weak or dizzy
- Assist me to the restroom in the middle of the night so that I don't awake with a feeling of urgency
- If I have been identified as at risk for falling, I will be helped to and from the bathroom. A care provider will also stay with me in the bathroom to make sure I don't fall.

Patient/Family Signature	Time	Date
RN Signature	Time	Date

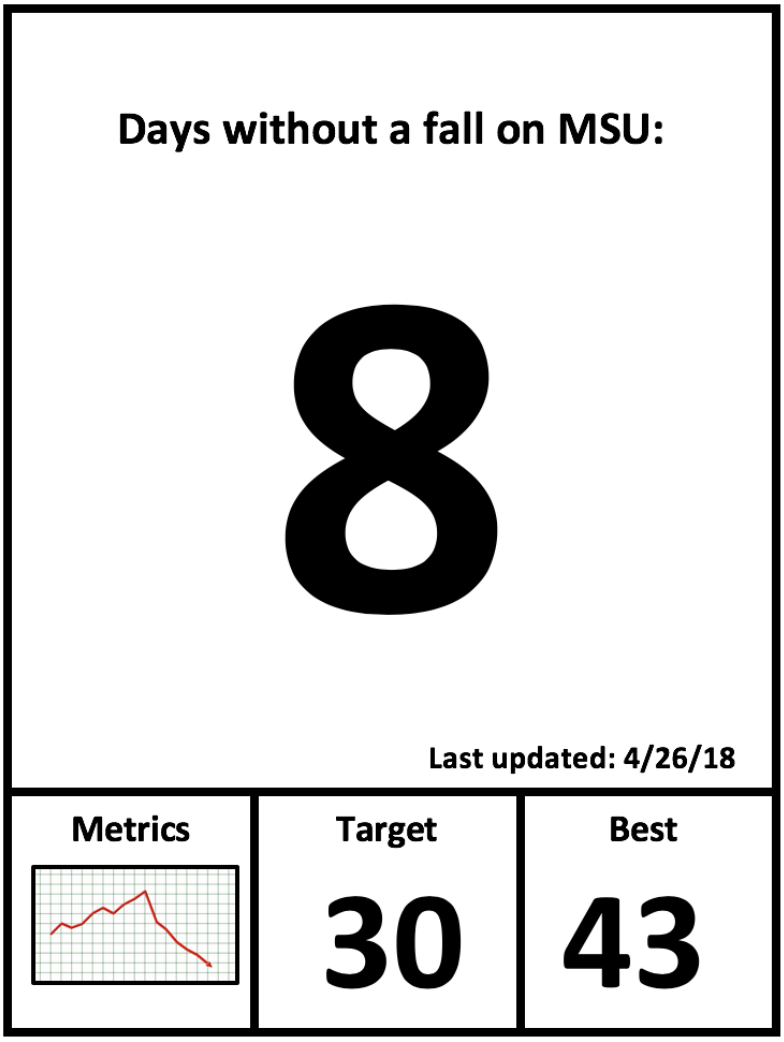
Adapted with permission from Zavotsky, K., Hussey, J., Easter, K., Incalcaterra, E. (2014). Fall safety agreement: A new twist on education in the hospitalized older adult. *Clinical Nurse Specialist, 28*(3), 168-172.

APP: 5/18 VHEI Committee

Fall prevention patient education and safety agreement sheets, adapted with permission from: Zavotsky, K., Hussey, J., Easter, K., & Incalcaterra, E. (2014). Fall safety agreement: A new twist on education in the hospitalized older adult. *Clinical Nurse Specialist*, *28*(3), 168-172.

Appendix J

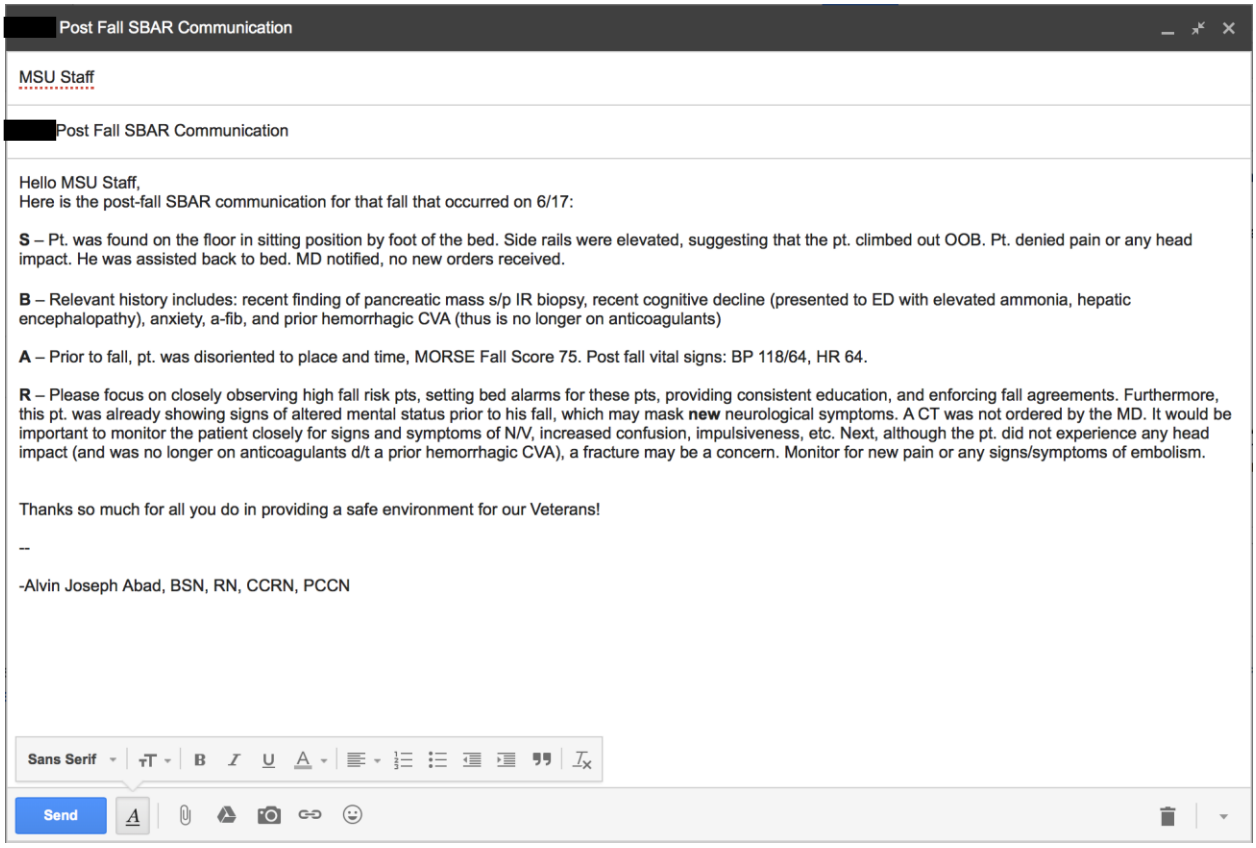
Fall Communication Board



MSU Fall Communication Board.

Appendix K

Post-Fall S.B.A.R. Communication Example



[redacted] Post Fall SBAR Communication

MSU Staff

[redacted]Post Fall SBAR Communication

Hello MSU Staff,
Here is the post-fall SBAR communication for that fall that occurred on 6/17:

S – Pt. was found on the floor in sitting position by foot of the bed. Side rails were elevated, suggesting that the pt. climbed out OOB. Pt. denied pain or any head impact. He was assisted back to bed. MD notified, no new orders received.

B – Relevant history includes: recent finding of pancreatic mass s/p IR biopsy, recent cognitive decline (presented to ED with elevated ammonia, hepatic encephalopathy), anxiety, a-fib, and prior hemorrhagic CVA (thus is no longer on anticoagulants)

A – Prior to fall, pt. was disoriented to place and time, MORSE Fall Score 75. Post fall vital signs: BP 118/64, HR 64.

R – Please focus on closely observing high fall risk pts, setting bed alarms for these pts, providing consistent education, and enforcing fall agreements. Furthermore, this pt. was already showing signs of altered mental status prior to his fall, which may mask **new** neurological symptoms. A CT was not ordered by the MD. It would be important to monitor the patient closely for signs and symptoms of N/V, increased confusion, impulsiveness, etc. Next, although the pt. did not experience any head impact (and was no longer on anticoagulants d/t a prior hemorrhagic CVA), a fracture may be a concern. Monitor for new pain or any signs/symptoms of embolism.

Thanks so much for all you do in providing a safe environment for our Veterans!

--

-Alvin Joseph Abad, BSN, RN, CCRN, PCCN

Sans Serif

Send

Appendix L

Number of Falls per Month on MSU