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Safety Culture and Fall Prevention: A Collaborative Effort

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Dr. Mary Ellen Roberts

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Submitted in partial fulfillment of the
Requirements for the degree of Doctor of Nursing Practice
Seton Hall University

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Dedications

To my very supportive and encouraging husband of 32 years, Joe, who gave up home-cooked dinners and learned to do the wash. He had total faith in me. To my two beautiful daughters - the kitchen table will soon be yours again. Thank you for understanding Mom's pursuit and for your encouraging words. In memory of my Dad, who was so proud of me from day one of nursing school and is looking down on us every day. And to my Mom, I know how proud you are of me. Thank you for your midday lunches to break up the day and for your constant encouragement.

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Executive Summary

Patient falls in the United States (US) range from 700,000 to one million annually and one third of those falls can be prevented (Du Pree, Fritz-Campiz & Musbeno, 2014). Twenty to 30% of falls are moderate to severe (Schimke & Schimke, 2014). As of 2009, The Joint Commission's (TJC) (2015) Sentinel Event databank held 465 reports of hospital falls with injury; deaths that resulted in those injuries were reported as 63 percent. Common denominators resulting in patient falls with injury are poor assessment, lack of communication, failure to follow protocols, insufficient training and supervision, staffing levels, unsafe environments and lack of leadership (TJC, 2015). The average cost per fall in hospitals is \$17,293.00 (Trepanier & Hillsenbeck 2014). CMS categorizes patient falls as a healthcare acquired condition (Du Pree et al., 2014). The cost of injuries from falls occurring in acute care facilities is not reimbursed by the Centers for Medicare & Medicaid Services (CMS) (Du Pree et al., 2014). Preventing patient falls is multifaceted and necessitates commitment from all staff within acute care facilities.

Care improvement is noted in the literature through use of a Safety Culture, thus this DNP project was designed to improve care by developing a falls prevention education program within a Safety Culture. The DNP project of discussion was piloted in a 475-bed acute care facility. The neurological-medical unit suffered higher fall rates than other units in the facility; therefore, it was an ideal candidate for a falls prevention education program within a Safety Culture framework. Three ancillary departments were chosen to participate in the pilot because they have continuous contact with patients and families.

Before implementation, educational methods were discussed with the stakeholders, as well as the importance of leadership's role in a Safety Culture. Once these were approved, dates

for the educational sessions were arranged. The goal of the project was to educate ancillary staff on the importance of patient safety within a Safety Culture framework.

Background

Based on a review of the literature and anecdotal information about the pilot institution's history of falls, fall risk for patients was identified as an area for quality improvement. With over 700,000 falls in acute care reported annually in the US, this is a critical area of patient safety that should be addressed. Several factors make patient falls a high-risk issue in the current health care environment, including: an aging population, increasing medication use by all age groups, patient conditions, and changes in healthcare reimbursement. Care improvement is noted in the literature through use of a Safety Culture, thus this DNP project was designed to improve care by developing a falls prevention education program within a Safety Culture at one organization. Developing a Safety Culture in the discussed institution was already seen as a priority by the nursing administration. Patient falls were increasing and the present use of standard interventions lacked safety mindfulness. A humanistic element was required to enhance the present safety interventions and, therefore, decrease patient falls.

In a Safety Culture, all employees in an organization are obligated to ensure safety through communicating and acting upon concerns. A Safety Culture embraces and learns from past oversights and strives to adopt new strategies to enhance safety (Bennett et al., 2014). Establishing a falls prevention program within a Safety Culture on a neurological-medical unit in a 475-bed community hospital is the subject of this discussion. The complexity of fall prevention requires multiple interventions conducted by all acute care staff members. Two of those mentioned by TJC (2015) were specific to the DNP project of discussion: fostering a

mindfulness of the importance of patient fall prevention to all staff and instituting a multidisciplinary falls injury prevention team. Mindfulness and multidisciplinary processes are key components to evolving an acute care organization into a Safety Culture. Educating clinical and non-clinical staff in patient fall prevention is essential to creating a Safety Culture.

According to the Agency for Healthcare Research and Quality (AHRQ) (2012) the best practices for fall prevention involve interdisciplinary teams to guide protocols and strategies for fall prevention, and a fall prevention team to review all falls and protocols. All employees, clinical or non-clinical, should be aware of the fall policies and procedures in place, as patient safety is not limited to nursing and bedside health-care providers. To change a culture, employees should be recognized for their importance within a group of many. Regardless of his or her job task, everyone is important in the fight for patient safety. The significance of this DNP project was based on similar pilots and studies that resulted in decreased patient falls and were directed at ancillary staff that are in frequent contact with patients, but may not understand their role in a Safety Culture.

A study conducted in a large New York Hospital demonstrated that ancillary staff members have concerns for patient safety (Stahl-Wexler, O'Neill-D'Amico, Foster, Cataldo, Brody, & Huang, 2011). An interdisciplinary committee for falls was created, including a pharmacist, nurses, educators, physicians, physical therapists, and risk and material management. The workers with patient contact were included for the study, including dietary, transport services, building services, and physician assistants. An expert in gerontological nursing conducted a fall-prevention educational session for three days. It was decided to identify patients at risk for falls with red slippers, thus coining this study the "Ruby Red Slipper Program." Six

months post-implementation, fall rates dropped on the oncology unit by 71% and in the orthopedics-neurology unit by 6% (Stahl-Wexler et al., 2011).

Acute care units that have patient populations with neurological conditions present a higher risk of falls (Saverino, Moriarty, Rantell, Waller, Ayes, & Playford, 2015). Rheaume and Fruh (2015) noted that higher fall rates occur in those with neurological conditions and in older patients, while Saverino et al. (2015) noted that patients in neurological-medical rehabilitation units younger than 60 years of age experienced one or multiple falls. Neurological patients have physical and cognitive changes that increase the risk of falls. The neurological-medical unit chosen for this DNP project had the highest rate of institutional falls, 38 falls in the first 6 months of 2015. The fall rate on the unit in 2015 was the highest in February and April, seven per month. For this reason, the neurological-medical unit was targeted for the pilot study.

Three types of classified falls are: anticipated physiological falls, unanticipated physiological falls, and accidental falls (Hill & Fauerbach, 2014). An anticipated physiological fall is defined as a fall resulting from a physical condition. Anticipated physiological falls are the cause of 78% of patient falls. A fall caused by weakness in a patient's gait, such as post-CVA, is an example of an anticipated physiological fall. An unanticipated physiological fall is defined as a fall that cannot be predicted before the first fall; unanticipated physiological falls account for 8% of patient falls. A fall from orthostatic hypotension as a result of a medication is an example of an unanticipated physiological fall. An accidental fall is defined as a fall caused by an environmental factor; accidental falls account for 14% of falls. Tripping on an equipment cord on the floor or slipping on spilt water is an example of an accidental fall (Hill & Fauerbach, 2014).

Although one in three persons over the age of 65 will fall each year (Schimke & Schimke 2014), all patients in the acute care setting are at risk. There are many reasons for this, including medications and patient conditions. Pharmaceuticals are a major contributor to falls. For example, medications given to treat lower urinary tract infections (LUT) conditions, such as alpha-reductase inhibitors, anticholinergics, and alpha-blocking medications cause orthostatic hypotension (Schimke & Schimke, 2014). Many other drugs and drug combinations also result in dizziness, drowsiness, and unsteady gait. Drugs, such as opioids for pain, can affect patients of all ages, but especially the elderly. Patients with conditions such as LUT may have urgency to void and may attempt to rush to the bathroom unattended and fall. Elderly patients with LUT are at an even higher risk for falling because of weakness or an unsteady gait.

Patients in the neurological–medical unit have conditions that affect gait, memory, and cognitive state which increase the risk for falls. Thus, assessing patients on an individual basis is imperative. The elderly especially, should be not placed into one category. The clinician’s assessment requires acknowledgment of the patient’s medication regime, diagnosis, gait, and cognitive ability (Quigley, 2009). It is essential that clinicians understand that all patients are at-risk for a fall and that a comprehensive, individualized risk assessment is needed.

According to Choi, Lawler, Boenecke, Ponatowski, and Zimring (2011) a safe physical environment is imperative to preventing falls. Substantial empirical evidence has concluded that a safe physical environment reduces falls and fall-related injuries. Environmental aspects of fall prevention include areas being clutter-free, having adequate lighting, wax-free floors, even surfaces, walking paths free of equipment, the absence of black or patterned floors, and close monitoring of patients in restraints. Although restraints have proven to cause falls, injuries, and

deaths (Hill & Fauerbach, 2014) they are still frequently used. Types of restraints include: having all four bedrails up, vests jackets, wristlets, and anklets.

Seven influences for patient safety are leadership, evidence-based practice, teamwork, communication, learning, a just culture and patient-centered care. To promote quality that reflects organizational commitments to performance standards, leaders are responsible for high-quality care; this includes continually assessing for safety, recognition of individual unit's issues, and increased safety awareness (TJC, 2010). A strong Safety Culture cannot be defined as the way things are done. The development of a specific culture through safety elements of leadership, evidence-based practice, teamwork, communication, and a patient-centered culture is vital (Sammer & James, 2011).

This DNP project's acute care organization currently has an admission process that entails a registered nurse assessment of patient fall risk using the Falls Risk Predictive Instrument (FRPI) II (Appendix A). To identify patients who possess high risk for falls, implemented interventions include: a falls sign outside the patient's room, a yellow falls bracelet, a green light under the bed indicating alarm activation, that the bed is in the lowest position when care to the patient is not being rendered, and a green light under the bed indicates a "on" bed lock. Other vital interventions include a call bell within reach, yellow non-skid socks, and, if appropriate, a Posey belt or vest restraint. Part of the educational process was to explain these tools to the ancillary staff for help in identifying at-risk patients.

The pilot organization currently reviews and assesses all falls occurring within the institution. The Commission Center for Transforming Healthcare (TST) tool is used as the post-fall occurrence tool (Joint Commission Center for Transforming Healthcare, nd.) (Appendix B).

The TST assists in developing a root cause analysis of each fall and helps to gather vital information that assists with planning additional interventions to prevent future falls.

Healthcare has become more complex, computer-driven, and time demanding. Patients have numerous comorbidities and the elderly population is growing. Patient safety is at risk daily. The financial consequences from falls equate to \$17,293.00 per fall (Trapanier & Hilsenbeck, 2014). It was estimated to cost \$31,595.71 for the institution to initiate the DNP project; less than the cost of two patient falls. From 2009 through 2015, the TJC databank recorded 465 falls with injuries and 63 percent of these resulted in death (TJC, 2015). This emphasizes the importance of being mindful of safety. It is now everyone's responsibility in the growing, complex healthcare system. Mindfulness from all employees will ensure better safety for patients. Nursing practice has quickly evolved with technological advances that have enabled real-time charting and accountability for nursing staff. Although technological advances ensure accountability for care, more eyes are needed to keep patients safe in the current healthcare environment. The combination of technology equipment, e.g., cameras and bed alarms, assists not only nursing staff, but also other employees to recognize a situation that requires immediate attention. Healthcare system changes have *reshaped not redefined* nursing. Nursing must utilize all available technology and staff to keep patients safe.

Literature Review

Theoretical Framework

The theoretical framework of this project was based on Jean Watson's theory of caring. Watson's theory embraces a humanitarian focus to nursing. Her theory describes that all things in the universe are metaphysically connected. Watson's theory is largely based on holistic approaches. Sitting with patients for a few minutes, holding their hand, or making eye contact assists in the healing process (Schub & Pravikoff, 2015). Although Watson's theory is a nursing caring theory, it can be applied to any person in the organization. The simple gesture of a dietary aide holding a patient's hand or reassuring them they will find help for his/her need is connected to the caring theory.

Caring behaviors are the basis for creating a Safety Culture. Therefore, individuals require a caring disposition for creating a successful Safety Culture. A caring environment enhances patient safety resulting from individuals taking the initiative in an unsafe situation.

Dudiewicz (2014) highlighted specific aspects of Jean Watson's human caring theory in a study that involved multiple disciplines. The human-caring model according to Dudiewicz (2014) increases staff communication among interdisciplinary staff, their roles, and values. The author focused on implementing a safe environment through caring to see if the caring approach improved patient satisfaction. The nursing staff and staff from four other departments in an acute care facility, who have daily contact with patients and families, participated. An in-service was provided to the staff discussing caring and non-caring attitudes. The study was conducted four weeks pre-intervention and four weeks post-intervention after staff initiated the caring behaviors. The results showed that patient and employee satisfaction increased as a result of

employee participation to help keep patients safe using a caring person-centered design (Dudiewicz, 2014).

Watson's 10 *Caritas Processes* relate to the nursing profession, but some of these processes can relate to all individual employees connected with patients. The first Caritas process describes the humanistic-altruistic process of caring. Helping and caring for others is unselfish; this is not limited to nurses. The second Caritas process describes faith and hope, enabling a deep belief system. Many employees in contact with patients and families can share faith and hope with patients and families. The third Caritas process discusses one's personal cultivation of spiritual practices that transcends to others with compassion (Schub & Pravikoff, 2015). Compassion and spiritual practices are not limited to nursing; they are human qualities anyone can share. These Caritas connect with more than just nurses. Jean Watson's theory can be applicable in an interdisciplinary sense and ancillary staff can play a role in the human caring theory.

Literature Review

Forty-five studies regarding safety cultures, patient falls, and multidisciplinary groups preventing falls were reviewed and 14 are reported on here. The studies emphasized the importance of leadership in the development and continuation of a Safety Culture, as well as the benefit of using a multidisciplinary approach. Leaders of an organization who initiate a Safety Culture yield successful results. A key factor in creating a Safety Culture depends on leaders and leadership style. Leaders at all levels are responsible for demonstrating safety through their own actions. Leaders who answer alarms and call lights help employees identify with the common cause of patient safety (Wales, Kelly, Wilson, & Crisp, 2013). Leaders who represent and

illustrate their passion for maintaining a patient Safety Culture are the key to sustaining a high-reliability environment. Wales et al. (2013) describe leadership as “developing a dynamic workplace culture in which change is embraced as the norm and is the holy-grail for those seeking to improve effectiveness, efficiency of clinical practice, and health services,” (p.178). Positive leadership style emphasizes employees’ chances to evolve to their full potential and therefore apply their job to its full effectiveness (Chen, Zhu, & Zhou, 2014).

Encouragement by nursing leadership during implementation of an innovative Fall Prevention Program is imperative in creating an environment of caring (Clement-O’Brien, Polit, & Fitzpatrick, 2011). They explored the connection of nurse leaders who pioneered and explored change through evidenced-based practice in acute care Magnet and non-Magnet facilities. Clement-O’Brien et al. (2011) used The Scale for the Measurement of Innovativeness to measure innovativeness among the different leaders. This scale measured an individual’s inclination for change and was distributed to Chief Nurse Officers (CNOs). Findings concluded that innovative CNOs greatly influenced change within the organization and that a CNO who is innovative disperses that influence on staff. Although this study did not discuss patient safety and falls, it provided valuable information that implementing a new culture involves major changes in the organization. The theory of human caring is comprised of different “mindsets” with which many employees are not familiar. The study discussed CNOs; however, for a Safety Culture to be successful, all organizational leaders must be innovative (Clement-O’Brien et al., 2011). Change starts at the top.

As part of a 12-month study, Wales et al. (2013) implemented a transformational practice development (tPD) program to help nursing leaders develop the knowledge and skills needed to

lead innovation in practice. “tPD is a methodology used to change a culture and context of practice in order to develop sustainable person-centered and evidence-based workplaces” (Wales et al., 2013, p.178). Facilitators supported learning groups during a series of three-day seminars. It helped leaders learn to focus on the process and establish trust with the groups they are managing (Wales et al., 2013). Continuous evaluation throughout the study showed that the participants were able to have a positive impact on clinical practice, nurses’ skills, and knowledge. Change can produce feelings of anxiety to employees; effective leaders transition change into a positive experience.

Chassin and Loeb (2013) define the development of a Safety Culture as “Collective Mindfulness.” Collective mindfulness is described as all workers who look for and report even the smallest problem that could pose a safety issue. Collective mindfulness by all employees promotes safety at every level. Organizational leaders mold the climate for their employees (Chassin and Loeb, 2013; Quigley, 2009; Rheume & Fruh, 2015).

Bennett et al. (2014) conducted a study to measure the falls prevention safety climate in an Australian hospital using the Safety Climate Survey (SCS). The surveys were given to 458 staff members from multidisciplinary backgrounds and units who are in direct contact with patients or who are involved in the support of staff (e.g., managers and administrators). Because healthcare employees’ generalized perceptions of a Safety Culture and patient fall prevention may be difficult to measure, the purpose of the study was to analyze if staff members connect fall prevention with a safety climate. Results showed that staff believed that communication and equipment were needed to improve patient safety. Lack of communication has been linked to

tragic events, causing patient harm. The survey suggested better teamwork and communication to prevent falls. It further suggested proper equipment is necessary to prevent patient falls.

As noted in the Dudiewicz study (2014), implementation of an interdepartmental caring-based approach improved patient and employee satisfaction. Communication and teamwork were improved. Although Dudiewicz's study did not emphasize patient falls it did discuss that caring behaviors are not limited to nursing and that they do help create a caring environment.

Choi et al. (2011) conducted a quantitative systematic review of 34 studies and determined three factors that should be included in a multi-intervention fall prevention framework. They are: the physical environment, the care process-culture, and technology. The authors noted that intrinsic factors that contribute to falls are age, vision, gait, and disease processes. Extrinsic factors include the environment and environmental causes such as socks, lighting, bedrails, walkers and other equipment in the healthcare setting (Choi et al., 2011).

According to Choi et al. (2011) the physical environment was not included in many of the reviewed studies as part of the intervention design for fall programs. The physical environment, however, has been found to be a definite factor when designing a falls prevention program (Choi et al., 2011).

The second factor Choi et al. (2011) discussed is the care-process culture. The care-process factor includes patient education and bedside volunteers. Patient education decreases falls, but education should be used in conjunction with other multifaceted interventions (Choi et al., 2011). Choi et al. (2011) discussed a volunteer program in an Australian acute care facility. Volunteers sat with geriatric patients at-risk for falls. Within the first four months of the program, fall rates decreased by 44 percent per 1000 patient days. The care-process was the

human element of caring which volunteers offered by just sitting, talking, and/or holding a patient's hand.

The third factor discussed by Choi et al. (2011) is technology. The only technology discussed was alarm equipment. The authors, however, stressed that technology is an important factor and that used in conjunction with other safety interventions, should be considered when designing a fall prevention program Choi et al. (2011).

In 2000, The Institute of Medicine published a landmark report that drew national attention to the dangers, injuries, and deaths that occur in the United States healthcare system (as cited in Kear & Ulrich, 2015). Although efforts were made to improve safety, by 2009 it was clear that cultural changes in healthcare systems were necessary. Kear and Ulrich (2015) conducted a qualitative study by distributing safe practice surveys to nephrology nurses. Six significant topics were under-reporting of events, unsafe staffing, long hours, unfriendly documentation systems, poor infection compliance, poor training, and poor communication. Nurses' complaints were successfully resolved after the unit adopted a Safety Culture. Creating a non-punitive, non-judgmental environment helped nurses use events as investigative issues to improve patient care. The nursing staff designed solutions to the issues they were experiencing. It was determined that falls were occurring when the staff weighed patients and when patients used the bathroom. A patient scale that is flush to the floor was purchased and the staff stayed with patients in the bathroom. After implementing these two changes, falls were eliminated. When staff felt they would not be penalized for an adverse patient event they were willing to openly discuss the issues and put forth strategies to correct the situation. The theory of a Safety Culture dictates a non-punitive environment (Kear & Ulrich, 2015). In addition, this study

illustrated how the staff assessed the specific patient they were caring for and the patient's vulnerabilities. Individual circumstances must be considered to prevent falls.

In April 2007, American and Canadian experts in fall prevention and research methodology met to discuss past research on patient falls. They believed it was insufficient (Quigley, 2009). They advocated that fall intervention methods should be patient-centered, multifactorial, and individualized and when creating protocols and interventions for those patients in high-risk groups, the assessment process should connect with particular interventions. They also identified that safety and quality of care start with leaders actively applying best practices and providing necessary tools to healthcare workers to implement these practices (Quigley, 2009).

Quigley (2009) discusses important research areas including: medications, interdisciplinary approaches to fall prevention, and clinical unit staffing patterns. There is a correlation between medications and falls and research on the specific regime of drugs and alternative drugs, i.e., sleeping medications, should be analyzed for each patient.

Interdisciplinary factors for fall prevention are another important area to research. Quigley advocates studying staffing patterns in correlation with falls and fall injuries, sitters with patients, and hourly rounding on high-risk patients in acute care settings. The ideal treatments for at-risk patients depend on the protocols put in place and treatments for each patient may differ. The intensity and frequency of the treatment may vary based on patient characteristics and condition (Quigley, 2009).

Multiple factors contribute to patient falls that must be addressed in a fall prevention program. Common elements that can be found in the literature that lead to patient falls are the environment, individual diagnosis, age, medications, unsteady gait, bathroom needs, inadequate

staffing, and disengaged leaders who do not display patient safety as a priority (Rheaume & Fruh, 2015). In a retrospective review of patient records in a 400-bed acute care facility, they found that higher fall rates occurred on neurology units. Eighty percent of falls occurred in patients aged 65 years and older. Thus, the combination of age and neurological diagnosis can increase the risk of a fall. Medicare/Medicaid deem falls preventable and in most cases they are. In a Safety Culture, every employee's goal is to prevent patient harm. Two commonalities were linked to 21 examined falls. All of them were not witnessed and all occurred when the patients were going to the bathroom.

Patient, family, and staff education are imperative to preventing falls. Some examples may include families shutting off bed alarms and the inability of aphasic patients to communicate through the intercom system. Evidence has shown that when families are educated through multimedia methods such as booklets, verbal communication, and videos pertaining to fall prevention, knowledge is increased (Rheaume & Fruh, 2015). Patients who are unable to communicate through an intercom system require special attention and in these cases, unit staff should be aware and staff must *go into the room* to answer the call light.

The benefit of multidisciplinary approaches to preventing falls has been shown in the literature. The Agency for Healthcare Research and Quality's (AHRQ) *Clinical Highlights* (2012) states that best practice results occur when there is organizational support from all disciplines. AHRQ recommends that all clinical and non-clinical staff be educated on fall policies and prevention procedures. AHRQ further states that education on fall prevention should be a continuous process throughout the institution (AHRQ, 2012).

A 500-bed, Level-1 trauma center hospital in New York City started a "Ruby Red Slipper" interdisciplinary program (Stahl-Wexler et al., 2011). Members of the falls committee

consisted of nurses, nurse leaders, the nursing education department, pharmacy, physical therapy, medicine, and risk management. Fall prevention and interdisciplinary participation education was conducted by unit-based fall prevention teams. Fifty-nine percent of the patients admitted to this trauma hospital were 65 years and over, with 40% over 75; a high-risk population. After implementation of the program, the fall rates on the oncology unit fell by 71% and 6% on the orthopedic-neurology unit (Stahl-Wexler et al., 2011, p. 132).

Interdisciplinary Safety Cultures have been implemented around the country successfully. Trepanier and Hilsenbeck (2014) discussed an interdisciplinary study for fall prevention that was conducted in 2009 over 11 states in the Midwest. Implementing education to multidisciplinary staff on fall prevention generated positive results. The 50 hospitals in the study reduced falls over 12 months by 41%, with an additional 31% reduction of patient falls by the second year of the program and a total decrease of patient falls in the acute care settings in which it was piloted of 58.3% per 1,000 patient days. This translated to \$776,064 in cost savings (Trepanier & Hilsenbeck, 2014). The literature points to the multifaceted circumstances that lead to patient falls. The commonalities in the literature point to the need for education of employees, patients, and families and the development of a Safety Culture.

According to Watson (2009) there has been a separation of nursing theories and academia within the past 10 years. Nursing has become focused on non-theory-guided practices. External forces are guiding changes in healthcare system, hindering nurses from practicing in a caring environment. Healthcare organizations are now recognizing the demand and need for a caring environment and are incorporating it into the institutional culture. Watson's theory of human caring is for nurses' philosophical and ethical guidance, but Watson's theory can also convert non-nursing employees into adopting a safe and caring environment (Watson, 2009).

Risks

The discussed project had several possible risks including, lack of leadership support, poor compliance of ancillary staff, and inadequate admission assessment for fall risk. The failure to initiate protocols might result in ancillary staff passing a room in which a patient is attempting to get out of bed, without the protocols being placed such as bed alarm activation, the individual would not venture into the room. Lack of participation might be difficult to track; only by individual observation by other employees can this be accomplished. Communication barriers are a standard problem. Non-English-speaking patients and families pose challenges to staff that are only versed in English.

Another risk is the availability of institutional financial resources to support the educational process. The educational component is an essential piece for the success of the project and lowering fall rates. Other local acute care facilities with lower fall rates pose competition. Patient families and visitors might not deem ancillary staff as being qualified to answer a light or alarm and may feel their quality of care is threatened.

Benefits

Decreasing falls will increase the public's trust in the organization, increase the organization's healthcare grade, and most of all, save patients from devastating injuries or even death. Support from within the organization includes the commitment and support of colleagues and executive staff in the development of a Safety Culture. A Safety Culture ideology encourages all staff, from ancillary to executive, to participate in keeping patients safe (Birk, 2015). In a "just culture" lack of participation is corrected through non-punitive measures such as re-education.

New technology is a benefit in communicating to patient and families that speak little or no English. The Cyber phone is a tool available for the staff that translates in any language. Clear communication is essential in preventing falls. Clinical support for staff is needed for success of the program. The unit the project was implemented on had an advanced practice nurse as a resource for education.

Methodology

Needs Assessment – Phase I

A literature review was performed pertaining to patient falls. The data collected were studies based on Safety Cultures utilizing ancillary staff to help prevent falls, fall rates through the United States, patients who are most at risk for falling, assessment tools for fall prevention, environmental and physical causes of falls, the cost of patient falls in acute care settings fiscally and physically, pharmaceuticals as contributing factors, and most importantly leadership for guidance. A common theme in the literature for fall prevention was the importance of strong leadership. The reviewed literature overwhelmingly concluded that multidisciplinary fall prevention programs are successful.

Patient fall data was collected from the institution in which the DNP project took place. The neurological-medical surgical unit had the highest rates in the organization. Literature indicates that neurological units have higher fall rates (Rheame & Fruh, 2015), thus the neurological-medical unit seemed like an optimal site. Individuals who have the most contact with patients and families in their job role were chosen for the educational process. The three departments targeted for the education of the safety program were environmental services, dietary, and transport services.

Support from Stakeholders – Phase II

In March 2015, a meeting was held with the Director of Cardiac Services, who is an APN and mentor for the pilot. The chosen mentor serves as the chairperson for the Falls Committee and was an excellent resource for this pilot program. Safety Culture principles of strong leadership, and a non-punitive environment were discussed. The design of the project, the target population, and the site were also discussed. PowerPoint (PPT) (Appendix C) and video were the agreed upon educational formats. The exact content of the PPT and video were not finalized at this time. In addition, the three departments targeted for the education and piloting of the safety program were discussed - they were environmental services, dietary, and transport services. It was determined that the neurological-medical unit had a high number of falls and would be the DNP project pilot site.

In April 2015, the Falls Committee was presented with handouts stating the project objectives. In attendance were the Director of Cardiac Services, Director of Patient Safety, members of the nursing staff, nurse managers, the neurological-medical unit APN, a physical therapist, a pharmacist, a patient care associate (PCA), and two former patients from the institution. Additional meetings were held with the project mentor in April 2015 to discuss the content of the educational tools.

In June 2015, communication regarding the project was initiated in the pilot unit staff meeting. Included in this meeting were nurses of the neurological-medical unit, patient care associates, the covering manager, and the APN from the pilot unit. Between May and June 2015, meetings with the managers of the three departments were held. All agreed to allow their staff to participate in the project.

In July 2015, the project was discussed at the Performance Improvement Committee meeting to communicate the plan for the pilot to the other departments. The purpose of the presentation was to communicate the pilot and possibility of a long-term plan to other disciplines. The Performance Improvement Committee consists of various departments, e.g., respiratory, nursing, physical therapy, each of which is required to identify a problem from within their department and propose a solution through the “Plan, Do, Check, Act” (PDCA) process. The opportunity to present the Safety Culture project to this group enabled the information to be disseminated throughout the hospital. Thus, this meeting was to share information that may involve their units in the future and perhaps lead to their choosing patient safety for their next quality improvement project.

Implementation Process - Phase III

In August 2015, the idea for the video was developed. It consisted of eight scenarios or situations that could result in a patient fall. The first scenario illustrated the wrong response by the employee and the second would show the correct response. The scenarios were emailed to the Falls Committee for consideration and changes were made as suggested.

In September 2015, the Falls Committee met to discuss the scenarios and the PowerPoint education. The Falls Committee was presented with a short pre-test of seven questions in a Likert scale format to be given to the ancillary staff. It was decided to change the test to a true and false format. The Director of Cardiac Services presented the idea to the Board of Trustees in September 2015 and received positive feedback.

At the end of September 2015, a Safety Fair was held in the institution and a poster relating to falls designed by the Falls Committee chairperson was presented. It revealed that many clinical and non-clinical employees were not aware of the falls prevention protocols

already put into place by the organization. Therefore, to ensure that the video education for the project was complete and address this lack of knowledge, it was decided to include illustrations of the signs, socks, restraints, and different alarms in the video.

In October 2015, arrangements were made with the institution's video technician to film. A night nurse from the pilot unit was the volunteer patient for the video. Emails were sent out to managers of the three departments asking for video volunteers. By the end of October, the managers provided the names of the departments' volunteers that would participate. By the beginning of November 2015, the video was filmed on two separate days on the pilot unit. It took two weeks from filming completion and meeting with the video technician to edit.

Arrangements to meet with the departments for instruction were scheduled in early December 2015 and in January 2016. Meetings were held twice in one day with environmental services and transport services so as to ensure education for all shifts. Meetings with the dietary staff were held on two separate days. The pre-test was given to each department employee before the education presentation. The results of the pre-test are as follows: 90 employees took the test and more than half scored 100% (Appendix D). The estimated institutional budget for implementation was \$31,595.71.

Creating, presenting, and implementing the fall prevention program were well supported and well received. However, for the larger program that will be initiated for all employees, education will include a video and PowerPoint at a higher level of cinematography, with additional professionals on the Falls Committee and sub-committee participating in developing the new video. Employees will be encouraged to share their fall prevention stories and will be given recognition when falls are prevented by their intervention. Recognizing individuals' actions and including all employees in the falls program ensures social identity. The attachment

to group re-ensures their commitment to the program (Chen et al., 2014, p. 513). Nurses on all units will require the same education and must understand the responsibility others have for their patients.

A recommendation for the sustainability of the falls program is to review policies with the nursing staff in an effort to reinforce their education and understanding. Therefore, other staff can participate in keeping their patients safe. Staff nurses' knowledge of the program is essential for its success.

Project Outcomes and Evaluation - Phase IV

With the guidance and full support of the organizations' leaders from the Board members to managers the project was implemented in a 475-bed acute care community hospital and piloted on a neurological-medical unit with 31 beds. The patient population consisted of neurological- medical and step-down critical care patients on ventilators. The evaluation will be an ongoing process and may require adjustments depending on the specific implementation issues. The first evaluation conducted before implementation was a seven-question, true or false questionnaire given to the departments of environmental services, transport services, and dietary; the average score was 91%. Therefore, moving forward with the project, there was confidence the ancillary staff members were prepared and had mindfulness of a Safety Culture (Appendix D). The final evaluation process includes feedback from the initially educated ancillary staff and the recorded number of falls with and without injury. One day after the initial education, the ancillary staff prevented two falls.

The initial ancillary staff's views will set the stage for the house-wide education in the future. Each of the three departments in the pilot has a representative who attends the monthly Falls Committee meeting.

The evaluation process is tracking whether the number of falls increased or decreased on the pilot unit. Falls are easily tracked through the institution's intranet of monthly quality indicators and the statistics. Falls with or without injury and aggregated falls data will be continuously evaluated. Employee feedback from those educated on Safety Culture and implemented interventions that have prevented falls are vital. The pilot is the corner stone for a house-wide educational plan. Discussion of a subcommittee for the educational process was considered after the pilot implementation.

The project was aimed at keeping patients safe and providing patients, family, and loved ones with a sense of trust in the caring and healing process. The reduction of falls on the pilot unit, and subsequently throughout the hospital, will inspire ongoing employee education and training for new hires to ensure the success and sustainability of the project. Falls are an organizational problem that is already being addressed by administrators, managers, advanced practice nurses, the quality assurance committee, and the board of trustees. This program offers employees a new awareness of their patient safety responsibilities. Implementing new beds with alarms, cameras, non-skid socks, alarm monitors that attach to patient gowns (TABS), signs for patients at high risk for falls, and 15-minute rounds are important, but they are not lowering the fall rates as desired. The immense change in the healthcare system has resulted in less bedside attention from nurses and patient care associates (PCAs). Thus, staff members who have frequent patient contact on the pilot unit were educated in how they could prevent falls. The educational component included success stories resulting from a caring culture. The goal of the project is for all employees to answer alarms and call lights.

After implementation of the Falls Program on the pilot unit, the managers, APN, and the Falls Committee monitored falls. All falls prevented by staff were reported to the Falls

Committee and employees were recognized for their efforts. This team effort will drive the future success and expansion of the program.

Summary, Conclusions, and Recommendations

Healthcare leaders are at the forefront of change. Without commitment from leaders, those who follow will fail. Transformational Practice Development (tPD) is a methodology that supports significant workplace cultural change and is able to sustain change. The methodology of tPD maintains a caring work place. The crucial elements of practice development are working with values, developing critical intent of individuals and groups, developing moral intent, focusing on the impact of the context on practice and practice itself, using self-reflection and promoting reflection in others, enabling others to see the possibilities, nurturing participation and collaboration by all involved, and change of practice (Wales et al., 2013, pp. 178-179). Leaders cannot change employees' habits without first understanding their self-identify. Self-identifying enables employees to achieve group identification and enhance performance. Leaders who demonstrate the concept of a Safety Culture by answering a call bell or alarm hope their employees will be motivated to do the same (Chen, et al., 2015, p. 513). Leaders are vital to the success of change, innovation, teamwork and building relationships on all levels is strategic to creating new ideas. Leaders must reflect on their actions about what they expect their staff to practice. Leaders who support and recognize challenges in a positive light help staff members adjust and accept changes. Staff requires resources to make changes succeed and leaders are responsible for giving them the necessary resources to achieve their goals (Clement-O'Brien et al., 2011). If a transport services aide takes a longer time to complete a call because of a fall prevention-intervention, that extra time is accommodated because of the prevention of the fall and the possibility of injury.

Positive organizational outcomes depend on the different knowledge, skills, and experiences of all employees, both healthcare and non-healthcare staff. Employees may be challenged to perform tasks out of their normal sphere of responsibility. Positive outcomes greatly depend on innovative changes. Simply educating employees on fall prevention will not guarantee success of the program. An essential piece of the education is promoting a non-punitive atmosphere. According to Kear & Ulrich (2015) misses or near misses are not reported because of the fear of punitive action. Communication and education is an ongoing process. “The main drivers of change are the characteristics of those driving the change: their motivation, leadership, and commitment” (Clement-O’Brien et al., 2011, p. 436).

As 21st-century nursing moves forward as a profession of caring, yet becomes even more technical, we cannot forget those who preceded us; the heroes of nursing who never stopped working for change when patient safety was at risk. Florence Nightingale washed the sheets, opened the windows, let the bugs out, and was an expert statistician. Civil War hero Clara Barton said, “I have an almost complete disregard of precedent, and a faith in the possibility of something better. It irritates me to be told how things have always been done. I defy the tyranny of precedent. I go for anything new that might improve the past.”

Nursing and healthcare systems in the 21st century must look for innovative ways to improve the safety outcomes of our patients and nurses lead the way. Jean Watson was a pioneer in nursing in the 20th and 21st centuries. A very true and meaningful quote from Watson narrows down the meaning of a human caring culture. She stated, “What if we began to pause and realize that maybe this one moment with this one person is the very reason we’re here on Earth at this time,” (Watson, n.d.).

Changes in the healthcare system have not changed nurses or our philosophy, but the new systems have changed how patient care issues are approached and managed. The science of nursing has been developed around those who paved the way during the direst circumstances. The responsibility for patient safety is shared among all and nurses like Florence Nightingale, Clara Barton, and Jean Watson remind us of whom we are.

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Appendices

Appendix A

Assessment Tool for Fall Risk Indicators

Fall Risk Predictive Instrument(FRPI) II		
Fall Risk Factor (6 total)	Score	p Value
Fall within the last year	4	0.001
Sensory/Motor deficit	2	0.014
Unsteady gait/Unable to ambulate independently	1	0.054
Bowel/bladder incontinence/urgency/frequency	1	0.031
Confusion/Delirium/Dementia	1	0.045
High risk diagnosis (Orthopedic, Cardiac, Oncology)	1	0.022
Total Possible Score:	10	
BASIC Risk	Score of 0-3	
HIGH Risk	Score of 4-10	©2011 The Valley Hospital p=0.05

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Appendix B

Post Fall Occurrence Tool



* indicates required field

Fall Event Data Collection Form					
Was the fall determined to be intentional? *					○ Yes ○ No
<i>(If Yes, please answer only pt ID, Room #, Date, Time and Additional comments / fall description)</i>					
Patient ID (Last 4 – 6 digits of MR#) *	Room Number	Date of Fall	Time	Time of Last Rounding	Staff : Patient Ratio
					1 :
Was the patient identified as a fall risk? <i>(If no fall risk assessment was performed on the patient, select NA) *</i>					○ Yes ○ No ○ NA
If Yes, were any fall risk identifiers used for the patient? *					○ Yes ○ No
If Yes, which fall risk identifiers were used for the patient? (check all that apply) *					
<input type="checkbox"/> Signs <input type="checkbox"/> Arm Bands <input type="checkbox"/> Gowns <input type="checkbox"/> Chart Indicators <input type="checkbox"/> Whiteboard <input type="checkbox"/> Socks <input type="checkbox"/> Fall Mats <input type="checkbox"/> Low Bed <input type="checkbox"/> Blankets <input type="checkbox"/> Other _____					
Was the patient discharged prior to fall? *					○ Yes ○ No
Number of staff required to assist this patient					
Did the fall occur during shift change?					○ Yes ○ No
Has the patient fallen previously during this hospital stay? *					○ Yes ○ No
Did the fall result in injury to the patient? *					○ Yes ○ No
If Yes, please indicate the injury level classification (developed by NDNQI) *					
<input type="radio"/> Resulted in application of a dressing, ice, cleaning of a wound, limb elevation, topical medication, bruise or abrasion. (Minor Injury) <input type="radio"/> Resulted in suturing, application of steri-strips/skin glue, splinting or muscle/joint strain. (Moderate Injury) <input type="radio"/> Resulted in surgery, casting, traction, required consultation for neurological (basilar skull fracture, small subdural hematoma) or internal injury (rib fracture, small liver laceration) or patients with coagulopathy who receive blood products as a result of the fall. (Major Injury) <input type="radio"/> Patient died as result of injuries sustained from fall (not from physiologic events causing the fall). (Death)					
Was a sitter (staff) being utilized at the time of the fall?					○ Yes ○ No
FALL LOCATION					
Where did the fall occur? *					
<input type="radio"/> Patient Room <input type="radio"/> Bathroom/Shower room <input type="radio"/> Hallway <i>(Go to related location below)</i>					
PATIENT ROOM					
What was involved in the Patient Room fall? *					
<input type="radio"/> Patient bed <input type="radio"/> Commode <input type="radio"/> Other _____ <input type="radio"/> Patient chair / wheelchair <input type="radio"/> Patient ambulation <i>(Go to related sub-section below. If related sub-section doesn't exist, skip to "Assistance")</i>					
PATIENT ROOM - Bed					
How did the fall occur? *					
<input type="radio"/> Patient slid out of bed <input type="radio"/> Patient was getting into or out of bed <input type="radio"/> Other _____					
If the patient slid out of bed:					
Was the patient reaching for something? *					○ Yes ○ No
If Yes, were the patient's belongings within reach? *					<i>(Skip to "Education" section)</i> ○ Yes ○ No
If the patient was getting into or out of bed:					
Were the bed wheels locked at the time of the fall? *					○ Yes ○ No
Was an alarm (personal, bed) being utilized at the time of the fall? *					○ Yes ○ No ○ NA
If Yes, was the alarm activated? *					○ Yes ○ No
Was the patient bed set at lowest height? *					<i>(Skip to "Assistance" section)</i> ○ Yes ○ No
PATIENT ROOM - Chair / Wheelchair					
How did the fall occur? *					
<input type="radio"/> Patient slid out of the chair/wheelchair <input type="radio"/> Other _____ <input type="radio"/> Patient was getting into or out of a chair/wheelchair					

Appendix B cont.

Post Fall Occurrence Tool

If the patient slid out of the chair/wheelchair:	
Was the patient reaching for something? *	<input type="radio"/> Yes <input type="radio"/> No
If Yes, were the patient's belongings within reach? * <i>(Skip to "Education" section)</i>	<input type="radio"/> Yes <input type="radio"/> No
If the patient was getting into or out of chair/wheelchair:	
Were the chair/wheelchair wheels locked at the time of the fall? *	<input type="radio"/> Yes <input type="radio"/> No
Was a chair alarm being utilized at the time of the fall? *	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> NA
If Yes, was the alarm activated? * <i>(Skip to "Assistance" section)</i>	<input type="radio"/> Yes <input type="radio"/> No
PATIENT ROOM - Commode	
How did the fall occur? *	
<input type="radio"/> Patient fell off commode <input type="radio"/> Patient was getting on or off the commode <input type="radio"/> Other _____	
Was the patient left alone while using the commode? * <i>(If the pt fell off commode, skip to "Education" section. Otherwise skip to "Assistance" section)</i>	<input type="radio"/> Yes <input type="radio"/> No
BATHROOM / SHOWER ROOM	
How did the fall occur? *	
<input type="radio"/> Patient fell off toilet/shower chair <input type="radio"/> Patient was ambulating/standing <input type="radio"/> Other _____	
Was the patient left alone while toileting or showering? * <i>(If the patient fell off toilet/shower chair, Skip to "Education" section. Otherwise skip to "Assistance" section)</i>	<input type="radio"/> Yes <input type="radio"/> No
HALLWAY	
How did the fall occur? *	
<input type="radio"/> Patient fell while sitting at the nurse's station <input type="radio"/> Patient was ambulating/standing <input type="radio"/> Other _____ <i>(If pt fell while sitting at the nurse's station, Skip to "Education" section. Otherwise continue)</i>	
ASSISTANCE	
Was the patient being assisted at the time of the fall? *	<input type="radio"/> Yes <input type="radio"/> No
If Yes, was the patient assisted by staff? *	<input type="radio"/> Yes <input type="radio"/> No
If Yes, what staff (role) assisted the patient? *	
<input type="checkbox"/> Chaplain <input type="checkbox"/> CNA <input type="checkbox"/> Food Service <input type="checkbox"/> Housekeeping	
<input type="checkbox"/> Maintenance <input type="checkbox"/> Nurse Manager <input type="checkbox"/> Occupational Therapy/OTA <input type="checkbox"/> Patient Care Tech	
<input type="checkbox"/> Physical Therapy/PTA <input type="checkbox"/> Physician/Resident/PA <input type="checkbox"/> Sitter <input type="checkbox"/> Staff Nurse	
<input type="checkbox"/> Transport <input type="checkbox"/> Other _____	
Was the patient required to use an assistive ambulation device? *	<input type="radio"/> Yes <input type="radio"/> No
If Yes, was the patient using the assistive device at the time of the fall? *	<input type="radio"/> Yes <input type="radio"/> No
If Yes, which assistive device was the patient using? *	
<input type="radio"/> Standard Cane <input type="radio"/> 3-4 pronged cane <input type="radio"/> Walker with wheels <input type="radio"/> Walker without wheels	
<input type="radio"/> Crutches <input type="radio"/> Gait Belt <input type="radio"/> Other _____	
Was the patient wearing no-skid footwear? *	<input type="radio"/> Yes <input type="radio"/> No
EDUCATION	
Were family members/friends present at the time of the fall? *	<input type="radio"/> Yes <input type="radio"/> No
If Yes: Did family members/friends attempt to notify staff that the patient needed assistance? *	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> NA
Did family members/friends receive education regarding falls and fall safety? *	<input type="radio"/> Yes <input type="radio"/> No
Did the patient receive standardized education regarding falls and fall safety? *	<input type="radio"/> Yes <input type="radio"/> No
If Yes, did the patient comprehend/understand the education? *	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown
MEDICATIONS	
Was the patient on any medication that could increase his/her risk for falls, including but not limited to the following: diuretic, analgesic, allergy medication (such as Benadryl), laxative, narcotic, anti-hypertensive, benzodiazepine, anti-seizure, or anti-psychotic? *	<input type="radio"/> Yes <input type="radio"/> No
If Yes, please answer the following questions as they pertain to the above medication types:	
Was the patient educated regarding the medication side effects specific to increased risk of falls? *	<input type="radio"/> Yes <input type="radio"/> No
Was the patient's medication changed w/in past 24 hours (new medication, dosing, and/or scheduling changes)? *	<input type="radio"/> Yes <input type="radio"/> No
Was the medication administered within 2 hours prior to bedtime? *	<input type="radio"/> Yes <input type="radio"/> No
Was the medication administered within 2 hours prior to fall? *	<input type="radio"/> Yes <input type="radio"/> No

Appendix B cont.

Post Fall Occurrence Tool

CALL LIGHT	
Did the patient use the call light prior to fall? *	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> NA
If Yes: Did the patient get up (or attempt to) prior to a staff member entering the room? *	<input type="radio"/> Yes <input type="radio"/> No
Was the call light functioning properly? *	<input type="radio"/> Yes <input type="radio"/> No
If No: Was the patient cognitively and physically able to use the call light? *	<input type="radio"/> Yes <input type="radio"/> No
Did the patient refuse to use it? *	<input type="radio"/> Yes <input type="radio"/> No
TOILETING	
Was the patient trying to get to or from the bathroom? *	<input type="radio"/> Yes <input type="radio"/> No
If Yes, Was a commode made available to the patient? *	<input type="radio"/> Yes <input type="radio"/> No
If Yes, Where was the commode located at the time of the fall? *	
<input type="radio"/> Next to patient bed <input type="radio"/> In patient bathroom <input type="radio"/> Opposite side of the room <input type="radio"/> Other _____	
If No, why wasn't the commode made available? *	
<input type="checkbox"/> Patient refuses to use commode <input type="checkbox"/> No commode available <input type="checkbox"/> Patient not identified as a fall risk <input type="checkbox"/> Commode removed from room <input type="checkbox"/> Other _____	
If Yes, was the patient on a toileting schedule? *	<input type="radio"/> Yes <input type="radio"/> No
PRIMARY CAUSE OF FALL	
What was the primary cause of the fall? *	
<input type="radio"/> Medical cause <input type="radio"/> Patient slipped <input type="radio"/> Patient tripped <input type="radio"/> Patient lost balance <input type="radio"/> Other _____	
If Patient slipped, what was the cause of the slip? *	
<input type="checkbox"/> Slick floor/tile <input type="checkbox"/> Wet floor <input type="checkbox"/> Slippery socks or footwear <input type="checkbox"/> Other _____	
If Patient tripped, What did the patient trip over? *	
<input type="checkbox"/> SCD tube <input type="checkbox"/> IV pole <input type="checkbox"/> Foley tubing <input type="checkbox"/> Other _____ <input type="checkbox"/> Phone cord <input type="checkbox"/> Loose linens <input type="checkbox"/> Oxygen tubing	
ADDITIONAL COMMENTS / FALL DESCRIPTION	

Joint Commission Center for Transforming Healthcare (nd). *Targeted Solutions Tool (TST)*

[http:// www.centerfortransforminghealthcare](http://www.centerfortransforminghealthcare)

Appendix C

Power Point Presentation for Educational Sessions

Cecilia Cortina

Safety Culture

- Dining Ambassadors
- Transport Personnel
- Environmental Personnel
 - Part of a “total harm” deterrence
 - Leaders must promote a “safety culture” for successful outcomes

Pilot

- Piloted on 4NB Neurology/Medical –Surgical
- Educational Seminar
 - Video describing all alarms and their meaning
 - Scenarios of how patients can fall
 - Scenarios of what you can do to prevent falls in those situations

Feedback

- Each month
 - Will ask employees if they were able to intervene and prevent a possible fall
 - Will keep a log each month
 - Will ask for your personal feedback

Time-Line

- Video in October 2015
- Education end October 2015
- Implement in November 2015
- End in March 2016

Appendix C (cont)

Power Point Presentation for Educational Sessions

Safety Culture	In Conclusion
<ul style="list-style-type: none">• Safety Culture: “The enduring value and priority placed on safety by everybody in a group at every level of an organization” (Bennett et al., 2014)	<ul style="list-style-type: none">• <i>“Maybe this one moment with this one person is the very reason we’re here on Earth at this time”</i><ul style="list-style-type: none">• Jean Watson 

