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Fall Prevention in a Neurological Care Unit

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,

and that any and all revisions required by

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Abstract

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MSN, Walden University 2011

BSN, Stevenson University 2008

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Patient falls are an ongoing concern for health systems in the US and in the setting where this project took place. Inpatient falls affect consumers and health providers because falls often result in patient morbidity and mortality, legal risk, increased length of stay, and increased costs. The purpose of this project was to evaluate the existing fall prevention protocol at the site where this project took place and to make recommendations for an evidenced-based fall prevention protocol. The professional practice model was the conceptual model that guided the exploratory descriptive project. A review of the site's fall prevention policies and procedures revealed a new fall prevention protocol was in place and included bed alarms, and chair alarms to ring on nurses' phones although observation of nurses revealed that there were problems maintaining the protocol the entire day and 66% of patient falls occurred when the bed alarms were not set. The resulting recommendation was for additional education and a bundled approach with nurse education, patient and family education and a fall risk assessment that was easy to use. Nurses were then surveyed before and after education on the current protocol and the Morse Fall Risk (MFRs) to determine their willingness to use the simpler version for fall risk assessment. Before education 18 nurses confirmed they would use the protocol and MFR tool and all 20 agreed to use it after the education session. An implementation of a bundled approach to the fall prevention protocol that nurses incorporate into their daily practice will lead to a positive social change and as a result may increase patient safety by reducing patient falls.

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Dedication

I would like to dedicate this project to all the nurses who worked so hard to keep patients safe by preventing them from falling. As a member of the Fall Prevention Committee at my hospital, I knew the work that was involved in fall prevention. It was important to keep current with the most recent evidence based fall prevention protocols. In addition, it was important to have a system in place to implement those recent best practices because nurses needed the necessary tools to keep current and to keep their patients safe.

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Acknowledgments

I would like to thank my mentor Dr. Linda Matheson and my preceptor for all their time that they spent to make it possible for me to complete my DNP studies. Dr. Matheson helped me put me thoughts into words and create a project out of my area of interest. As a nurse in the geriatric field, I was interested in fall prevention because older patients have the most falls and many are injured due to those falls. My preceptor also helped me to further my studies by allowing me to work under her leadership in the neurological unit at an East Coast hospital. She helped me to navigate fall data and related fall prevention protocols. I will always be grateful for all the guidance I received and for their help.

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Section 1: Overview of Evidence-Based Project

Introduction

Fall prevention is important to health care providers because many patients will fall during their hospital stay. Falls are the fifth leading cause of death among Americans aged 75 years and older (Cozart & Cesario, 2009). Hospitals have taken steps to prevent patient falls. Many hospitals have standard fall prevention protocols in place including signs, alarms, fall assessments, nonskid socks, and patient instructions about calling for assistance before getting up (Hoke & Guarracino, 2016). Falls could lead to longer hospital stays, injuries, or disabilities. Falls occur in 2% to 20% of inpatient stays and 10% to 30% of those falls result in injury (Spetz, Brown & Aydin, 2015). Patient falls are a significant concern for hospitals and the public because they result in patient mortality and morbidity, legal risk, and increased costs (Spetz et al., 2015). All health care facilities are expected to implement fall prevention protocols to keep patients safe. The Joint Commission has labeled patient fall prevention a priority and listed it as a National Patient Safety Goal, to reduce the risk of patient harm resulting from falls (Opsahl et al., 2016). Nurses and other health care providers are expected to implement fall prevention protocols in their daily practice. International accreditation standards for hospitals and a recommendation from the Joanna Briggs Institute stated that the first steps to fall prevention are to assess patients for risk of falling within 24 hours of admission, and identify and educate patients on their fall risk (Yip, Mordiffi, Wong & Kim, 2016). Therefore, nurses and other care providers need to address patient falls.

Problem Statement

A fall prevention program has been in place at an East Coast hospital (EC Hospital) since it opened; however, patient falls remain a concern. Over the last year an average of 17 patient falls occurred each month at EC Hospital, where some units have no falls and others have 4. The neurological care unit (NCU) had not been meeting their goal of zero falls per month as it has had an average of three falls per month (36 falls per year). The fall prevention protocol in place included the Johns Hopkins Fall Risk Assessment Tool (JHFRAT), the use of non-skid socks, the use of bed and chair alarm systems, and patient education. However, the average number of falls in the NCU had remained constant and was not decreased with the current fall prevention protocol. At one hospital, nurse leaders implemented a fall prevention program which decreased the number of falls per 1000 patients by 50% over 5 years during which the protocols were in place (Manojlovich, Lee, & Lauseng, 2014). However, the same results had not occurred at EC Hospital.

Purpose Statement

The purpose of this project was to reduce the number of falls in the NCU unit to their goal of zero falls per month. To help the unit to meet their goal, the current fall prevention protocol was evaluated. The purpose of the evaluation was to a) compare the current fall prevention protocol to the prior fall prevention protocol, b) determine whether the current protocol includes best practices based on evidence based practice (EBP), and c) make recommendations to promote fall prevention.

Evidence-Based Significance of Project

The NCU had not been meeting their goal of zero falls per month; therefore, an evaluation of the current fall prevention protocol helped to determine what other interventions should have been added. A review of literature allowed an exploration of EDP. In addition, a review of the data on patients that have fallen provided information on the nature of the patients that fell in the unit. An evaluation of this data facilitated the answer to the question regarding whether the best possible fall prevention protocol was in place.

Following the occurrence of 10 falls, including five with injuries, in the NCU during the first two quarters of calendar year 2016 (two falls during the first quarter and eight falls during the second quarter), a plan of correction was implemented. As part of a plan of correction, a new fall protocol was implemented in August 2016. However, there were two falls in September, one fall in October, and three falls in November of 2016 which called into question the effectiveness of the revised protocol. Those fall occurrences were reported to the Nationals Data of Nursing Quality Indicators (NDNQI). For the second quarter of 2016 for the NCU, there was an average of 6.35 falls per 1000 in-patient days (see Appendix A). The NDNQI report also showed that of the 6.35 falls 3.18 were falls with injuries (see Appendix B). The falls in the NCU were above the NDNQI national average for falls of 2.90 per 1000 in-patient days (see Appendix A) and for falls with injury of 0.67 per 1000 in-patient days (see Appendix B). These numbers reflected that more needed to be done to promote safety and prevent patients from falling in the NCU.

The NDNQI report for the hospital as a whole showed a second quarter average of 1.72 falls per 1000 in-patient days which was below the national average of 2.82 falls per 1000 in-patient days (see Appendix C). The corresponding average of falls with injury was 0.36 for the hospital compared to 0.64 for the national average (see Appendix D). The NDNQI data for the hospital further demonstrated that there was a need to prevent falls in the NCU because not only were the averages for falls above the national averages, they were also above the hospital's averages. It was helpful to determine what else could have been done to prevent falls in the unit and determined whether there was a reason for more falls in the unit.

Relevance to Practice

An evaluation of the current fall protocol was important to determine whether it was progressively better than the prior protocol and whether it was valid as an effective tool to patient prevent falls. A comparison of the outcomes under the new protocol was important to determine whether any changes related to patient falls occurred. In addition, a comparison of the current fall prevention protocol to evidence-based fall prevention protocols was needed for validation. Research had shown positive outcomes from the use of fall prevention bundled interventions by staff with a focus on educational engagement of patients and their families (Opsahl et al., 2016). The Joint Commission found that falls with injury or death in 2014 were the second most reviewed sentinel event and due to this the Center for Medicare and Medicaid Services (CMS) has labeled falls as a hospital-acquired condition that is subject to non-reimbursement (Opsahl et al., 2016). A sentinel event refers to an event that results in death or serious disability.

Implications for Social Change in Practice

A critical analysis of the information presented in the literature and the data collected at the practicum site resulted in a meaningful project that promoted social change. The focus of the project was fall prevention, and therefore, information on falls and fall prevention was collected, analyzed, and used to determine the best possible fall prevention protocol to implement. There were many options available to create a fall prevention protocol, but the implementation and the success rate varies greatly. In order to select the best options, attention was focused on the characteristics of the patients and the nature of the environment involved. After all of the data was sorted and analyzed, findings needed to be presented and recommendations made for a change in practice that would result in social changes for patients. A careful review of fall data and evidence based literature resulted in best practices being applied to everyday nursing practice and the promotion of better outcomes for patients. The Doctor of Nursing Practice (DNP) project allowed the application of relevant findings and the development of practice guidelines and improved practices and the practice environments (American Association of College of Nursing [AACN], 2006). The improvement in patient outcomes helped patients to feel better cared for and helped other hospitals to implement similar protocols in order to have similar patient outcomes.

Summary

Patient falls are a concern to all health care providers. Opsahl et al., (2016) reported fall rates ranging from 3.5 to 11.5 falls per 1000 patient days, with higher rates occurring in the elder care, neurology and rehabilitation units. In response to those

findings, hospitals implemented improved methods of preventing patient falls and injuries because of falls. Hospitals were also setting goals for the hospital as a whole and for individual units to reduce the number of patient falls. Hospitals had also implemented quality improvement measures with the use of benchmark data to assist them in reaching their fall prevention goals. Data collected at a Midwestern suburban hospital from 2011 to 2013 in the orthopedic and medical-surgical units showed fall rates above the internal benchmarks, which translated to performance rates above the national mean (Opsahl et al., 2016). An internal benchmark would be set at 2.0 falls based on an average of 3.5 falls shown on an NDNQI report for a similar unit.

Fall prevention was addressed by incorporating best practices into fall prevention protocols. A literature review was completed to find the current best practices. Once best practices for fall prevention were located through detailed research, findings were integrated by nurse leaders. Nurse leaders integrated any new findings after developing an understanding that change was needed. Managing change theory required identifying people with resistance to change and reducing their resistance through practical examples for them to accept new ways of practice (Bowers, 2011).

Section 2: Review of Scholarly Evidence

Introduction

This section further developed the need to address the practice problem of fall prevention. Fall prevention has become a significant problem and state and federal agencies have begun to address the problem. Therefore, an effective fall prevention protocol should be included in patient safety programs. Over 800,000 patients a year are hospitalized because of a fall, most often because of a head injury or a hip fracture (Centers for Disease Control [CDC], 2016). Opsahl et al., (2016) found that due to the nature of in-patient falls, the CMS has labeled falls as a hospital-acquired condition that is subject to non-reimbursement. A literature search was conducted to locate the best practices for fall prevention. Fall data for the NCU was gathered, articles within peer-reviewed journals were researched, and relevant government web sites were reviewed. The information obtained from those sources were used to provide justification and relevance for the project.

Literature Search

A detailed literature search was conducted using databases available through the Walden University Library. First, a search was conducted using the Academic Search Complete database for full text and peer-reviewed scholarly journals; a search using the keywords *falls* and *patients* from 2012 to 2016 resulted in 192 citations. The results were broken down into the following areas: medical records, Parkinson's disease, accidental falls, benign paroxysmal vertigo, bones, and some other individual diagnoses. Next a search was conducted using the Ovid Nursing Journal database using the same keywords

which returned 662 citations for the past 5 years. A further refined search to the last 3 years returned results of 80 citations. Next a database search was conducted using the same keywords in ProQuest, which resulted in 78 peer-reviewed citations. The final search was conducted from pertinent Internet sources such as the CDC and American Nurses Association (ANA).

The focus of the research was to gather information on what other hospitals within the United States have implemented to promote patient safety and prevent patient falls. Articles that presented specific interventions and discussed outcomes of those interventions were of interest. Other articles that presented some of the known interventions, such as those found in the current fall prevention protocol, were also of interest. The known interventions were compared to information on other interventions found in the literature. The results of the literature research were used to inform this DNP project on fall prevention. The themes found in the literature included: the promotion of a culture of safety, the use of an easy to use protocol, promotion of accountability, implementation of a bundled approach to fall prevention, the use of patient education, and the use of fall assessment tools.

Culture of Safety

Fall prevention was effective once it was relevant for the population involved. At one hospital where a fall prevention protocol was implemented, falls per 1000 patient days decreased by over 50% over the 5 years that the protocol was in place (Manojlovich et al., 2014). The fall prevention protocol was not only implemented but evaluated and changed each year based on feedback generated from a fall assessment tool that was built

into the fall prevention protocol. A large New York hospital also implemented a fall prevention protocol, which resulted in a significant decrease in falls from 12 months before compared to 4 years after the intervention (Manojlovich et al., 2014). The changes implemented in the fall protocol were sustained by appointing a hospital's fall committee to review and evaluate each fall and to train staff on fall prevention. Providing educational training to increase fall risk awareness among staff in organizations is vital to creating a culture of safety that will ultimately produce ongoing optimal patient health outcomes (Bamgbade & Dearmon, 2016). The findings that were described as unintended consequences of the implementation of a fall prevention protocol, were an increase of staff involvement in fall prevention and in safety awareness. A positive occurrence because of the fall prevention protocol, was increased vigilance of patients at risk for falls (Manojlovich et al., 2014).

Easy to Use Protocols

For fall prevention programs to be effective, they must be easy to use. A simple model that was implemented by nurse leaders was a typical fall prevention program that involved multiple interventions including fall risk assessments to target interventions, patient and family education, toileting rounds, clutter free environments, medication reviews, low bed, easily accessed call lights, alert signs in patient rooms and notes in patient records, and nonskid footwear (Spetz, 2015). A program that involved those interventions was easily implemented by nurses and incorporated into their daily practice. The ease of use of a fall prevention protocol was important to nurses because they were responsible for assessing patients, developing care plans that included fall prevention

approaches, and working with all staff who interact with patients to ensure patient safety (Spetz, 2015). Spetz, (2015) said that nurses' knowledge and motivation related to fall prevention programs has been identified as having a significant impact on the success of a fall prevention program. Education of staff was foundational to the success of any practice change because staff education enhanced assessment of fall risk awareness and patient education (Bamgbade & Dearmon, 2016). Staff members who had an understanding of how to use tools had an easy time incorporating them into their daily practice.

Promotion of Accountability

For a fall prevention protocol to be effective, nurses should be held accountable for patient falls. The adoption of a fall risk assessment tool helped to increase nurses' accountability for falls due to heightened identification of patients' fall risk (Bamgbade & Dearmon, 2016). In a hospital where patient falls were increasing from 2.2 to 3.1 per 1000 in-patient days, patient falls decreased to 0.75 to 1.24 per 1000 in-patient days because of a nurse driven accountability model (Hoke, 2016). A nurse driven protocol is a set of guidelines created by nurses to guide their daily practice. In the nurse driven protocol, nurses evaluated each fall by reflecting on what caused the fall and what could have been done to prevent the fall. The typical fall prevention program includes: fall risk assessment, patient and family education, toileting rounds, clutter free environment, medication reviews, low beds, easily accessed call lights, alert signs, and nonskid footwear. Patients that fell were interviewed by nurses to investigate the cause of the fall. Lessons learned indicated that there may be a need for utilizing communication tools

such as motivational interviewing to teach and encourage behavior changes in patients (Bamgbade & Dearmon, 2016). After the interviews, nurses wrote a reflective email about their findings and what could have been done better. Post fall reflections increased staff awareness of falls and identified ways to prevent them in the future (Hoke, 2016). The post fall emails were sent by the nurses caring for the patient. This practice increased nurses' accountability and awareness of patient falls.

Bundled Approach

For a fall prevention program to be successful, the causes of the fall must be evaluated. Patient falls occurred due to patient specific factors, whether it's environmental factors, or medical. A bundled approach to fall preventions includes interventions related to both internal and external factors that affect falls. A recommended component of a bundled fall prevention program is a medication review because several medications have been reported to increase the risk of falls (O'Neil et al., 2015). The causes of inpatient falls were multifaceted, and therefore a bundled focused on strategies was needed to prevent patient falls while promoting patient safety (Coyle, 2016). The bundled focused on fall prevention interventions resulted in a protocol that was suited for a hospital and a particular unit. The bundled focused strategy included the use of bed and chair alarms for high fall risk patients, the use of a no pass zones, remaining with high fall risk patients during toileting, hourly rounding, diversionary-activity bags for confused patients, creation of visual aids, daily rounding, and continuous education for staff (Coyle, 2016).

Patient Education

Once fall prevention protocols are evaluated, a determination needed to be made about what should be included in them. The use of a valid fall risk assessment tool heightened the likeness identified patients most at risk for falls and provided a basis for implementing fall prevention strategies (Bamgbade & Dearmon, 2016). One hospital chose to include an education video in their fall prevention protocol. The education video was geared towards patient and family members. In addition, all staff members were required to view the video prior to its implementation. The video included a fall prevention portion and bundled information such as sample room signage, demonstration of nurse call system, and demonstration of the correct method of nurses assisting a patient to the bathroom with emphasis on always toileting with a nurse present (Opsahl et al., 2016). Patients and family members were required to review the video within 24 hours of the patients' arriving to an inpatient unit. In addition, all surgical patients were required to view the video prior to admission for surgery. Compliance with viewing the education video along with the number of falls was tracked during the yearlong implementation period. The results showed that as compliance with viewing the video increased from 73% during the initial two months to 87% after six months, falls decreased from 2.86 in the orthopedic unit and 3.27 in the medical-surgical unit to 0.88 and 1.2 falls per 1000 patient days respectively (Opsahl et al., 2016).

Appropriate Fall Assessment Tool

To implement the most effective fall prevention protocol for a patient population, the best interventions must be included in the protocol. The best fall protocol interventions were chosen from those outlined in best practices. For example, included in

a typical fall prevention protocol was a fall risk assessment that was completed by the nurse at admission. At one hospital, the facility fall prevention protocol included the assessment of each patient's fall risk upon admission and during every shift using the Morse Fall Scale (MFS). The MFS was identified as the preferred fall risk assessment tool of the hospital system due to its proven reliability and validity as recommended by the National Center for Patient Safety (Opsahl et al., 2016). Patients that were determined to be a high fall risk by the MFS were placed on fall precautions. Research on fall risk screening concluded that MFS was comparable to nurses' clinical judgement and that it was very effective in correctly classifying patients as high fall risks (Harrington et al., 2010).

Some hospitals included in their fall prevention protocol the JHFRAT. EC Hospital had included the JHFRAT in their fall prevention protocol. The JHFRAT was appealing to researchers as a tool that includes specific interventions based on a patient's fall risk (Harrington et al., 2010). The JHFRAT was based on existing evidence significantly associated with fall risk, and it assessed seven risk factors, including patient age, fall history, mobility, elimination, mental status changes, medications and patient care equipment (Klinkenberg & Potter, 2016). Klinkenberg & Potter, (2016) found that the majority of the patients that fell were classified under JHFRAT as a moderate or low fall risk which reflected poor predictive validation. As an assessment tool predicting risk for falling, it was not clear that JHFRAT was adding significant value in the clinical setting (Klinkenberg & Potter, 2016).

Conceptual Models

The professional practice model (PPM) and shared governance are practiced for the implementation of new policies and procedures at EC Hospital. It was, therefore, useful to use the same models to design and implement a DNP project. The nursing PPM was developed to illustrate the alignment and integration of nursing with the mission, vision, and values that is the foundation of nursing (Morgan, 2015). At EC Hospital nurses form committees to discuss findings and make decisions on changes in practice. The mission, vision, and values were outlined by the organization's leaders and were centered on providing safe, and effective family centered care. Shared governance was a structural model through which nurses could express and manage their own practice with a higher level of professional autonomy; in shared governance staff nurses, not managers, made patient care decisions at the staff levels (McEwen & Wills, 2014).

Professional Practice Model

The PPM was appropriate to promote a DNP project on fall prevention because it had been used successfully in nursing to communicate, collaborate to advance clinical practice, and promote professional development to advance the nursing profession. The PPM engaged point-of-care nurses in the process of evaluating outcomes while ensuring buy-in from a variety of stakeholders (Morgan, Bjorkelo, Sullivan, McIntosh-Wint, & Ely, 2015). To implement an evidence-based project, it was necessary for stakeholders to buy-in to the project. Once stakeholders buy-in to a project they were more likely to accept the recommendation and were more likely to implement the recommendations.

Under PPM, referred nurses are gathered and use information to facilitate better outcomes. Better communication was promoted through cultivating active listening along with effective exchanges of ideas to facilitate positive interactions with patients, families, and colleagues. Communication and effective exchanges of ideas to facilitate positive interaction was important for effective use of a fall prevention protocol. Effective written communication was needed to gather and disseminate EBP and effective exchanges of ideas were needed between nurses and other caregivers to promote best practices to facilitate better patient outcomes. Enhanced communication was needed to promote interaction among and between colleagues. Active participation in shared governance fosters enhanced communication among colleagues within and across nursing units (Morgan et al., 2015).

Collaboration results from using enhanced communication to promote relationships which lead to partnerships with patients, families and multidisciplinary health care team members. Nurses were encouraged to collaborate through membership in hospital and unit based committees in addition to participation in national and international nursing organizations. Nurses collaboration in these committees results in better outcomes for patients. Nurses collaborated through clear communication, respectful interaction, and dialogue for the mutual purpose of excellence in patient and family care (Morgan et al., 2015). To promote collaboration many committees were formed by nurses to assist in the development of knowledge in different specialty areas.

Clinical practice under the PPM means nurses will use the best practices to provide safe and effective care to patients and families. Nurse leaderships created venues

to ensure the use of current best practices while keeping nurses current. Venues included professional conferences and educational seminars. Remaining current is important under the PPM because the nursing practice is professional and should be evidence-based, individualized, and consistent with established standards and protocol. (Morgan, et al., 2015). Recommendations from research were used to facilitate an evidence-based fall prevention protocol. Nurse leaders were instrumental in the implementation of an EBP protocol for fall prevention. Nurses were expected to practice autonomously according to the full scope of their education license level.

Professional development is tied to nurses practicing according to full scope of their education and license, where additional certification is encouraged in specialty fields along with continuing education. To increase nursing knowledge and competency, nurse leadership provided opportunities for continuing education credits and studies for advance nursing degrees. Nurses participated in fall prevention training to become unit champions for fall prevention. The creation of unit champions had been used to promote initiatives and protocols in nursing units. In addition to promoting education, nurse leaders provided opportunities for nurses to be promoted to leadership roles after receiving advanced nursing degrees and national certifications. Some organizations also have special recognition programs for nurses who obtain advanced degrees and choose not to take leadership roles but instead remain a bedside nurse. Such programs allowed all nurses to participate in professional development.

Shared Governance

Shared governance is a professional practice model used in nursing to promote multidisciplinary collaboration for the purpose of producing better patient outcomes. The promotion of shared governance is often demonstrated in the creation of different committees, where bedside nurses and nurse leaders collaborate to facilitate better patient outcomes. An introduction of a fall prevention protocol or recommendations for changes to an existing fall prevention protocol needs to be made by members of the fall committee. The fall committee meets once per month to review patient falls for the prior month. The committee reviewed patient falls for causes and to find ways to prevent it. An introduction of a fall prevention project was viewed as a possible way to reduce falls.

Shared governance is described as a model founded on the cornerstone principles of partnership, equity, accountability, and ownership that forms a culture of empowerment for sustaining excellent patient care (Fisher & Hubbard, 2015). The empowerment came from participation in decision making and participation in informal lines of communication; such a structure creates a culture where all members in an organization felt that their input and ideas were important. In such an environment, a bedside nurse could create an evidence-based project and have it implement as protocol. Other committees under shared governance, such as the research and quality council committees, were instrumental in validating and implementing a fall prevention protocol. The research committee had to approve all new protocols based on validation of the research while the quality council had to validate all protocol based on relevance and ease of implementation.

Summary

The literature review revealed that fall prevention protocols were relevant to nursing practice and important to have in place to reduce patient falls. To promote patient safety and prevent falls, fall prevention protocol should be relevant for the individual patient population. For example, fall prevention protocols for orthopedic unit should be developed based on best practices implemented on a similar unit. In addition to fall prevention protocols being relevant, they should also be easy to use. The creation of a simple fall prevention protocol that is based on input from end users is more likely to be adhered to. A protocol that is easy for nurses to follow is important because fall prevention programs intensively engage nurses (Spetz, 2015). Due to nurses being engaged in fall prevention programs it was important to hold them accountable for patient falls. Nurses learned to understand why patients fall in order to prevent future patients' falls. Due to the multifaceted nature of patient falls, fall prevention protocols needed to be tailored to create different protocols for different patient populations. For example, for a population where certain types of medications are usually administered nurses needed to take extra precautions to prevent falls because a fall for such a patient is more likely to result in injuries. Medication review has been recommended as a part of a multifaceted fall prevention program for hospital inpatients because sedatives, benzodiazepines, psychotropics and hypnotics have been reported to increase the risk of falling (O'Neil et al., 2015).

Section 3: Approach

Introduction

The purpose of this DNP project was to evaluate the current fall prevention protocol and make recommendations for an evidence-based fall prevention protocol. The models chosen to complete this project were the PPM along with the shared governance model. The use of shared governance allowed active participation of staff nurses in decisions that affect patient outcomes. A combination of staff nurses and nurse leaders working together changes the process of creating. In addition, under shared governance, policies and procedures needed to implement the recommended changes.

Project Design

First, the current fall protocol was compared to the prior protocol along with the corresponding outcomes to determine whether there were any significant changes that needed to be included. Also, the reason for the change in protocol was reviewed to determine what needs were addressed in subsequent protocols. A review of fall prevention protocol was necessary to establish trends in current practices. Next, an evaluation of the current protocol was completed where the current protocol was compared to current best practices. Staff members were observed for a period of two weeks to determine whether they were following the guidelines outlined in the protocol. Observations were done to see if they were following the guidelines completely, or partially. Other observations included answering questions like, was the protocol being followed at all times or only some of the time. The unit's fall data was then compared to

other units' data from the hospital to determine whether any specific types of patients were falling.

The nurses in the NCU were surveyed to gather information on their perception of the fall prevention protocol and patients' falls. It was especially important to survey nurses that had a patient fall, as this enabled a comparison of the nurses' perceptions compared to the patients' perception of each fall. Patients' perceptions were listed on the post fall data documentation as well. A survey tool was created for this phase of the project which allowed the collection of unbiased, and relevant data.

An information session was held to inform nurses about the MFS which allowed them to compare the JHFRAT and the MFS. The MFS was identified as the preferred fall risk assessment tool of the hospital system due to its proven reliability and validity as recommended by the National Center for Patient Safety (Opsahl et al., 2016). The JHFRAT is currently a part of the fall prevention protocol in the NCU.

Data was then tabulated and reviewed for completeness to ensure that all elements had been considered and included. Once all the data had been determined to be accounted for, the review of findings was completed. Findings were compared to EBP on fall prevention. Finally, data was analyzed and a conclusion was drawn for presentation of recommendations to the Fall Committee.

Population and Sampling

Three months of fall data before the current fall protocol was compared to three months after the implementation of the fall protocol to determine whether the new protocol had any effect on patient falls in the NCU. The data was compared to determine

whether there was a change in the type of falls. Many people who fall, even if they are not injured, become afraid of falling which leads to weakness and an increase of their chances of falling (CDC 2016). Therefore, it was important for fall protocols to include a goal to reduce injuries from falls.

Twenty nurses in the NCU were surveyed to obtain their perspectives of the current fall prevention protocol (see Appendix E). The survey questions were used to address the requirements that an effective fall prevention tool easy to use and appropriate for the NCU population. In addition, the survey provided information on the need for a bundled approach or for additional patient education. Finally, the survey allowed an assessment of nurses' perceptions of the current fall prevention protocol.

Twenty nurses attended an information session to learn about the MFS risk assessment tool (see Appendix F). Nurses were assessed for knowledge about the MFS risk assessment tool, then they were taught about it. Nurses that were knowledgeable about the MFS risk assessment tool could attend the information session because they were able to compare the effectiveness of the JHFRAT to the one they used in the past. After the information session, the nurses were asked to compare the MFS risk assessment tool with the currently used JHFRAT (see Appendix G).

Summary

A review of fall data enabled an analysis of the frequency and types of patient falls; and nurses' survey results provided an opportunity for them to provide their perception of the current fall prevention protocol. Gathering both types of information on patient falls was useful for making recommendations for changes. The information from

within the facility provided a basis for reviewing and recommending specific types of EBP. The recommended changes had to be relevant to the facility and easy for the nurse to implement. The ease of use of a fall prevention protocol is important to nurses because they are responsible for assessing patients, developing care plans that include fall prevention approaches, and working with all staff who interact with patients to ensure patient safety (Spetz, 2015).

Section 4: Findings and Recommendations

Introduction

The purpose of this DNP project was to reduce the number of falls in the (NCU). A comparison of the two most recent fall prevention protocols was completed to obtain a better understanding of the direction that the facility was taking with their attempts to reduce falls. The current protocol was evaluated for best practices and staff members were observed to determine whether they were following the guidelines outlined in the protocol. Fall data was compared from the NCU to another unit to determine whether any specific types of patients were falling in the NCU. Finally, nurses were surveyed to gather their perceptions of the fall prevention protocol and an assessment of their perceived use of the MFS risk assessment tool was completed.

Findings

Comparison of Fall Protocols

An evaluation of the current fall prevention protocol compared to the prior fall prevention protocol revealed some major differences. The first difference was the implementation of a new nurse call system. The new call system allowed bed alarms and chair alarms to ring on the nurses' phones. Before the chair alarms operated independent of the call system and only prompted a response from anyone who heard the alarm sounding from the patient's room. The chair alarm did not activate the light above a patient's door or sound an alarm at the nurses' station. In addition, the chair alarms did not ring any phones. With the new system in place, the chair alarms worked the same way as the bed alarms and therefore prompted a timelier response. The second difference

was the addition of a requirement to remain with high fall risk patients who were assisted to use bed pans. Before there was only a requirement to remain with high risk patients that were assisted to the toilet or bedside commode. This requirement was added because a patient fell out of bed who was left unassisted with a bed pan.

Evaluation of Protocol for Best Practices

An evaluation of the current fall prevention protocol revealed that a bundled approach to fall prevention was needed. O'Neil et al., (2015) described best practices as a use of a bundled approach to prevent patient falls. O'Neil et al., (2015) described positive outcomes from the use of fall prevention bundled interventions from staff. The bundled approach included patient education, assessing patients' fall risk, the use of nonskid footwear, chair and bell alarms and signage. Signage was placed in patients' rooms to remind patients to call for assistance before getting up. In addition, signage was placed outside of patients' rooms to remind staff members to re-set bed and chair alarms.

Staff Observation

Nurses were observed using the current protocol that was in place. They were observed assessing patients' fall risk upon admission or transfer to the unit while initiating the necessary fall precautions based on fall risk assessment scores. However, after the initiation of the fall prevention protocol, there were problems maintaining the protocol for the entire stay. As more healthcare team members became involved in patients' care, the chance of a patient falling increased. For example, 66 % of patients fell after returning to the unit because their alarms were either not set or not set correctly. Those patients had left the unit via escort to go to another department, such as radiology

or cardiology. Other patients fell after being assisted to the bathroom but got up unattended after returning to their bed or chair where the alarms were not set.

Comparison of Fall Data

The NCU had four falls in the three months before the implementation of the most recent protocol in August 2016; they also had five falls in the three months following the implementation (see Appendix H). These falls were compared to the number of falls in the acute care for the elderly (ACE) unit which had three falls before and eight falls after (see Appendix H). In comparing the number of falls in each unit, the NCU had a total of nine falls for the period mention above, while the ACE unit had a total of eleven falls; however, the NCU had more falls with injuries. The NCU had four injury falls while the ACE unit had two injury falls (see Appendix H). The increase in falls in both units that occurred after additional interventions were added to the fall prevention protocol indicated that the additional interventions did not help to reduce the number of falls in either unit.

After reviewing the number of falls from the two units, the types of patients that fell were reviewed. A review of patient falls from the NCU revealed that seven out of the nine patients had a history of seizures. One patient had a recent fall before admission and the remaining one had been admitted for dizziness (see Appendix I). A review of the patient falls from the ACE unit revealed that seven out of eleven patients had a diagnosis that led to altered mental status, two patients were blind, one had a diagnosis of syncope, and one had a diagnosis of arthritis (see Appendix J). The similarities between the patients that fell in these two units indicated that patients with neurological disorders

including seizures and altered mental status were more likely to fall. Therefore, patients in the NCU are not at an increased risk of falling, instead patients with neurological disorders are at an increased risk of falling.

Survey of Nurses

Twenty nurses were surveyed using the survey tool in Appendix K. In response to the first question, all twenty nurses perceived that the current fall prevention protocol was easy to use. In response to the second question on whether there was anything that they would change in the protocol, three nurses recommended changes while seventeen indicated that they would not make any changes. The changes recommended were related to the JHFRAT being replaced with a more reliable and less ambiguous tool. On the third question of whether they had used a different fall assessment tool, four nurses indicated that they had used a different tool while sixteen indicated that they had not used a different fall assessment tool. On the fourth and final question of what was useful in the different fall risk assessment tool, of the four nurses that indicated that they had used a different tool, three nurses indicated that the tools were easier to use and involved less questions than the currently used JHFRAT; while the fourth nurse indicated that the protocol had more physician involvement.

Information Session

Twenty nurses attended an information session on using the MFS for assessing patients' fall risk. A pretest was completed before nurses were taught about the MFS followed by a post test (see Appendix J). The results of the pretests completed by the nurses indicated a preference for the JHFRAT. Eighteen out of the 20 nurses indicated that they preferred to use the JHFRAT as part of a fall prevention protocol and they could easily incorporate it into their daily nursing practice. However, the 18 out of the 20 nurses also indicated that they had not used another fall risk assessment tool other than the JHFRAT that was currently in place. The remaining two nurses chose MFS as their preferred tool because they had used it before and found it to be more direct and easier to use than the JHFRAT. After the information session, the post test results revealed that 20 out of the 20 nurses indicated that they preferred to use the MFS and they could easily incorporate it into their daily nursing practice. The reason for the preference for the MFS varied slightly but they all involve the fact that the tool was more relevant and easier to use.

Recommendations

The research on fall prevention protocol revealed that a bundled approach to fall prevention is necessary because patient falls occur as a result of many different circumstances. Opsahl et al., (2016) described positive outcomes from the use of fall prevention bundled interventions by staff with a focus on educational engagement of patients and their families. The survey of 20 nurses revealed that they perceived the

current fall prevention protocol was easy to use. A tool that is easy to use is important to nurses because they are often responsible for the difficult task of helping prevent patient falls due to the complex nature of health care and the activity level of patients (Opsahl et al., 2016).

Participation in the education session allowed nurses to be informed about the MFS and provide feedback to stakeholders about the tool. With shared governance stakeholders use input from staff nurses to make decision about daily nursing practice. Shared governance is widely recognized in acute care as a best practice for a professional nursing environment because it allows nurses to be empowered to make decisions regarding practice, quality improvement and research (Allen-Gilliam et al., 2016). Results from the education session provided stakeholders with the necessary information to buy into the idea of implementing a new fall risk assessment tool. The goal of engaging point-of-care nurses in decision making with shared governance was to ensure buy-in from a variety of stakeholders which is key to successful implementation of any change (Morgan et al., 2015). PPM would be utilized to implement the change of a new fall risk assessment tool after the end of this project. Shared governance is described as a foundation for the PPM which is based on the principles of partnership, equity, accountability, and ownership that a culturally sensitive and empowering framework (Fisher & Hubbard, 2015). Through the use of PPM, the Fall Committee would be instrumental in disseminating, implementing, and assessing reductions in falls following the implementation of the MFS assessment tool. The Fall Committee in addition to

assessing the number of falls, assess any changes that resulted from any new fall prevention interventions.

Summary

Research revealed that a bundled approach was best practice for preventing falls. Standard fall prevention bundles include nonskid socks, alarms, patient instructions and fall prevention education (Hoke & Guarracino, 2016). However, research also revealed that fall prevention protocols should include an effective fall risk assessment tool. A meta-analysis on fall risk assessment screening tools concluded that the MFS was comparable in accuracy to clinical judgement and that the JHFRAT has insufficient published research to be validated (Harrington et al., 2010). In addition to an effective fall prevention assessment tool, fall prevention protocols need to be tailored to individual setting and units. Fall data revealed opportunities to transform to a culture of safety and to transform attitudes surrounding patient falls (Coyle & Mazaleski, 2016). The transformation would involve all staff members becoming involved in promoting patient safety and preventing patients from falling. All employees needed to be a part of the process to promote buy-in and ensuring sustainability of safety protocols (Coyle & Mazaleski, 2016). Patients' fall risk assessments need to be tailored for individual settings, units and at times, patients. Medication review has been recommended as part of a multifaceted fall prevention program for hospital patients (O'Neil et al., 2015). For example, patients, on benzodiazepines have a higher risk of falling. Patients with a history of falls and medication regimen need to be considered when assessing their fall risk.

Section 5: Scholarly Product for Dissemination

Internal Dissemination

PowerPoint and a poster board presentation were used to disseminate the findings of this DNP project to the hospital where the project was completed. It is vital for nurses to use evidence to support development activities and translate EBP into daily nursing practice (Windey, 2017). The PowerPoint presentation was used to present the information to the Fall Committee while the poster board was used as a display at an EBP fair. The two different forums were necessary for two different audiences. The strength of the PowerPoint presentation was that it was tailored for a specific audience and allowed more information to be presented. In addition, the PowerPoint presentation also allowed questions about presented information to be addressed. The strength of a poster board display, was that it was used to present information to a wide audience. The format of the poster board allows for basic information to be presented in an easy to follow format.

External Dissemination

An abstract was submitted for presentation at the 2018 Nursing Education Research Conference. The conference is being hosted by Sigma Theta Tau International and the National League for Nursing. Members of Sigma Theta Tau International were asked to submit abstracts for poster or oral presentations for any of these suggested topics: multi-site/multi-method studies, instrument development and testing, meta-analysis Studies, technology to improve nursing education and practice or innovations in collaborative practice. This DNP project was submitted under the suggested topic of

Innovation in Collaborative Practice. The submitted abstract followed the outlined guidelines and was submitted by the required deadline.

Summary

Many skills had to be developed in order to complete this DNP project. Many of the skills were learned and developed while completing practicum hours. The skills that were needed included; written and oral communication, leadership, advocating and negotiating. Written communication skills were needed to present research findings and share feedback from multidisciplinary teams. Oral communication skills were needed to present research data in a cohesive manner to nurse leaders and community members. Leadership skills were needed to navigate the policy framework in order to understand how policies were created. Advocating skills were used to understand staff nurses' needs and to create interventions to address their needs. Negotiation skills were used to address nurses' needs with nurse leaders. The development of these skills allows nurses to be leaders and to advance the nursing practice. Such advanced nursing skills enables DNP prepared nurses to translate EBP into daily nursing practice. AACN (2006) stated in Essential VIII that foundational practice competencies that cut across specialties are required for DNP practice; where DNP graduates are expected to demonstrate refined assessment skills and nursing science as appropriate in their area of specialization. DNP prepared nurses are essential for promoting the use of EBP in order to advance the nursing profession while promoting the best outcomes for patients.

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Appendix A: NCU Falls

NDNQI
A Press Ganey Solution
East Coast Hospital

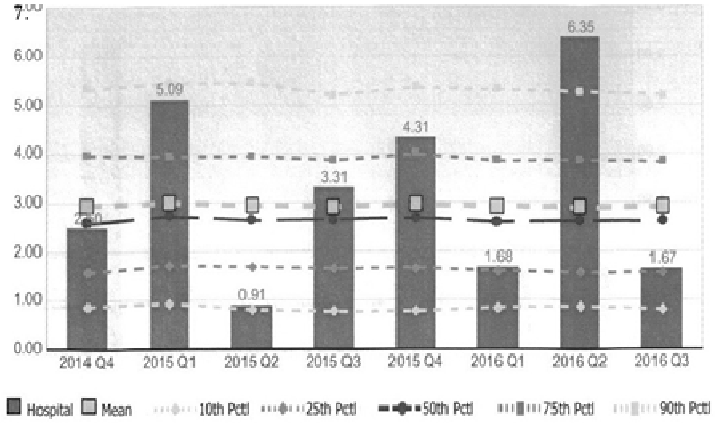
Compared by: Teaching Status

Peer Group: Non-Teaching Facilities

Unit Type: Adult Med-Surg Combined

Unit: Neuro Care Unit

Measure: Total Patient Falls Per 1,000 Patient Days



Quarter	2014 Q4	2015 Q1	2015 Q2	2015 Q3	2015 Q4	2016 Q1	2016 Q2	2016 Q3	Average
Unit	2.50	5.09	0.91	3.31	4.31	1.68	6.35	1.67	**3.23**
Mean	2.95	3.00	2.94	2.92	2.97	2.92	2.90	2.90	**2.94**
Standard Deviation	1.99	1.84	1.89	1.97	1.93	2.11	1.85	2.00	**1.95**
10th Percentile	0.88	0.94	0.82	0.78	0.79	0.86	0.88	0.82	**0.84**
25th Percentile	1.58	1.72	1.69	1.66	1.67	1.61	1.57	1.57	**1.63**
50th Percentile (Median)	2.59	2.73	2.64	2.66	2.69	2.61	2.64	2.61	**2.65**
75th Percentile	3.97	3.93	3.94	3.67	3.99	3.85	3.86	3.82	**3.90**
90th Percentile	5.30	5.42	5.42	5.18	5.33	5.29	5.24	5.19	**5.30**
# Units	1,253	1,278	1,292	1,300	1,296	1,331	1,328	1,270	**1,294**

Permission given by the Director of Nursing Research of East Coast Hospital to include NDNQI reports for this DNP project.

Appendix B: NCU Injury Falls

NDNQI

A Press Ganev Solution

East Coast Hospital

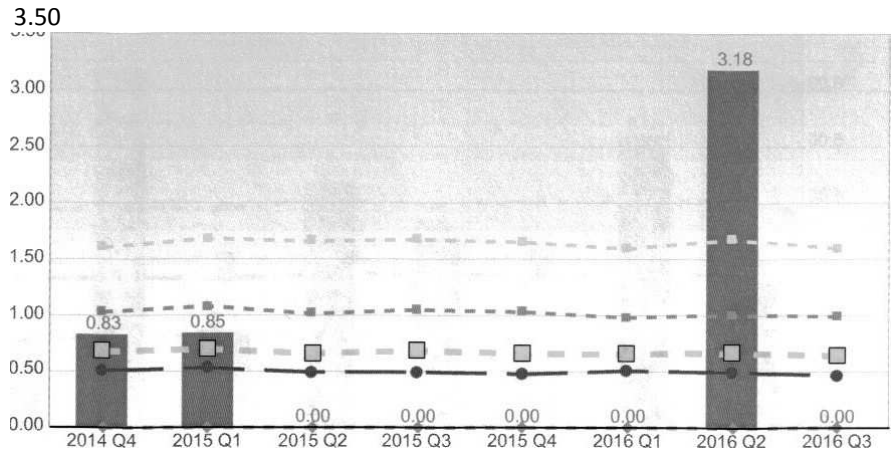
Compared by: Teaching Status

Peer Group: Non-Teaching Facilities

Unit Type: Adult Med-Surg Combined

Unit: Neuro Care Unit

Measure: Injury Falls Per 1,000 Patient Days



Quarter	2014 Q4	2015 Q1	2015 Q2	2015 Q3	2015 Q4	2016 Q1	2016 Q2	2016 Q3	Average
Unit	0.83	0.85	0.00	0.00	0.00	0.00	3.18	0.00	**0.61**
Mean	0.68	0.70	0.66	0.68	0.66	0.66	0.67	0.64	**0.67**
Standard Deviation	0.86	0.78	0.77	0.86	0.88	0.75	0.84	0.86	**0.83**
10th Percentile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
25th Percentile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
50th Percentile (Median)	0.51	0.53	0.49	0.49	0.47	0.51	0.49	0.47	**0.49**
75th Percentile	1.03	1.08	1.01	1.05	1.03	0.98	1.01	0.99	**1.02**
90th Percentile	1.60	1.68	1.66	1.67	1.65	1.59	1.67	1.60	**1.64**
# Units	1,253	1,278	1,292	1,300	1,296	1,331	1,328	1,270	**1,294**

Permission given by the Director of Nursing Research of East Coast Hospital to include NDNQI reports for this DNP project.

Appendix C: EC Hospital Falls

NDNQI

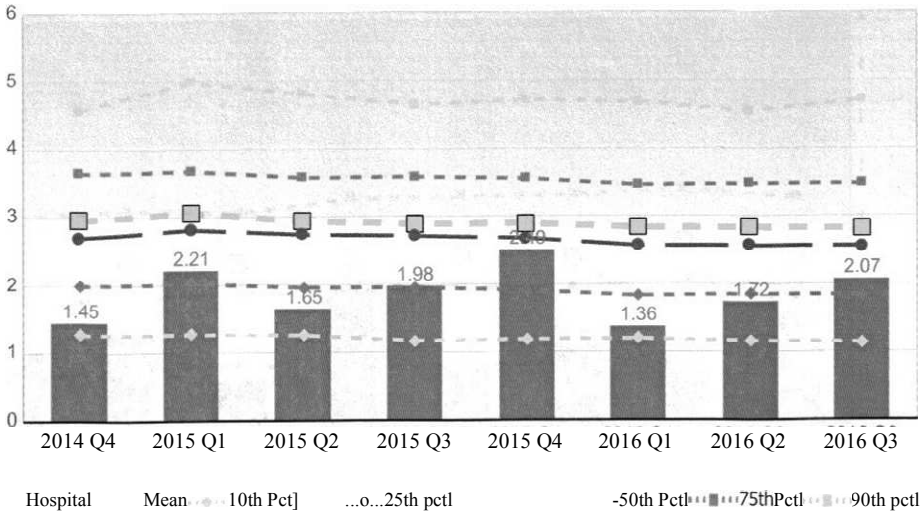
A Press Ganey Solution

East Coast Hospital

Compared by: Teaching Status

Peer Group: Non-Teaching Facilities

Measure: Total Patient Falls Per 1,000 Patient Days



Metrics	2014 Q4	2015 Q1	2015 Q2	2015 Q3	2015 Q4	2016 Q1	2016 Q2	2016 Q3	Average
Hospital-Unadjusted Measure	1.45	2.21	1.65	1.98	2.49	1.36	1.72	2.07	**1.87**
Mean	2.95	3.05	2.93	2.88	2.89	2.83	2.82	2.81	**2.90**
Standard Deviation	1.86	1.89	1.65	1.66	1.64	1.65	2.00	1.72	**1.76**
10th Percentile	1.27	1.27	1.25	1.17	1.19	1.20	1.16	1.14	**1.20**
25th Percentile	1.99	2.02	1.96	1.96	1.91	1.83	1.85	1.83	**1.92**
50th Percentile (Median)	2.69	2.81	2.73	2.71	2.67	2.56	2.56	2.55	**2.66**
75th Percentile	3.64	3.67	3.57	3.58	3.55	3.46	3.47	3.47	**3.55**
90th Percentile	4.57	4.98	4.80	4.64	4.70	4.68	4.54	4.70	**4.70**
# Hospitals	912	927	936	936	924	962	962	931	**936.25**

Permission given by the Director of Nursing Research of East Coast Hospital to include NDNQI reports for this DNP project.

Appendix D: EC Hospital Injury Falls

NDNQI

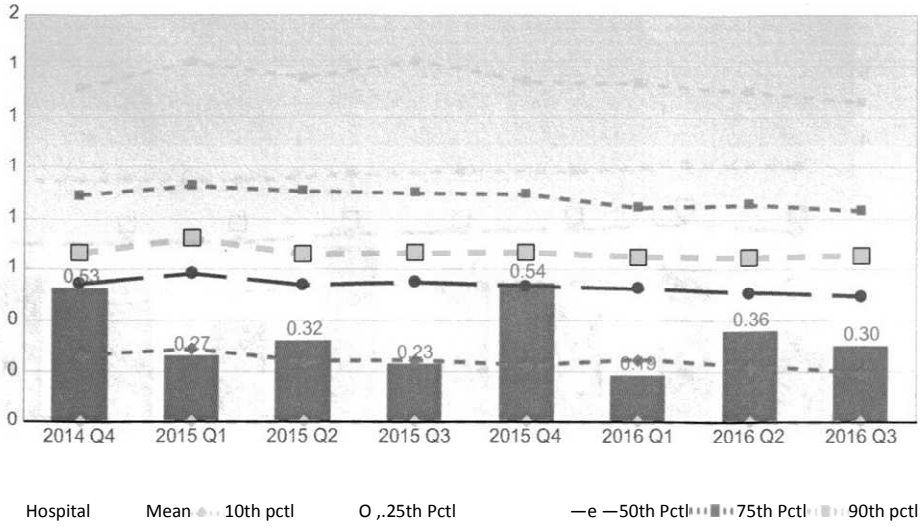
A Press Ganey Solution

East Coast Hospital

Compared by: Teaching Status

Peer Group: Non-Teaching Facilities

Measure: Injury Patient Falls Per 1,000 Patient Days



Metrics	2014 Q4	2015 Q1	2015 Q2	2015 Q3	2015 Q4	2016 Q1	2016 Q2	2016 Q3	Average
Hospital-Unadjusted Measure	0.53	0.27	0.32	0.23	0.54	0.19	0.36	0.30	**0.34**
Mean	0.66	0.72	0.66	0.66	0.68	0.65	0.64	0.65	**0.66**
Standard Deviation	0.68	0.75	0.65	0.62	0.79	0.66	0.73	0.91	**0.72**
10th Percentile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
25th Percentile	0.26	0.29	0.24	0.25	0.22	0.25	0.22	0.20	**0.24**
50th Percentile (Median)	0.54	0.58	0.54	0.55	0.53	0.52	0.51	0.49	**0.53**
75th Percentile	0.89	0.93	0.91	0.90	0.89	0.84	0.85	0.83	**0.88**
90th Percentile	1.31	1.41	1.35	1.42	1.34	1.33	1.30	1.25	**1.34**
# Hospitals	912	927	936	936	924	962	962	931	**936.25**

Permission given by the Director of Nursing Research of East Coast Hospital to include NDNQI reports for this DNP project.

Appendix E: Fall Protocol Nurse Survey

1. Do you find the current protocol easy to use?

   Yes _____

   No_____

2. Would you change any part of the fall protocol?

   Yes _____

   No_____

3. Have you ever used a different fall assessment tool?

   Yes _____

   No_____

4. If yes, did you find any part of that fall risk tool useful for preventing falls?

   Yes_____

   No_____

Appendix F: Morse Fall Assessment Pre-Test

1. Which tool would be more effective for preventing falls?

_____John Hopkins Fall Risk Assessment Tool

_____Morse Fall Risk Assessment Tool

2. What is the reason for your choice? _____

_____

_____

3. Which tool would you find easier to use in your daily practice?

_____John Hopkins Fall Risk Assessment Tool

_____Morse Fall Risk Assessment Tool

4. What is the reason for your choice? _____

_____ _____

_____

Appendix G: Morse Fall Assessment Post-Test

1. Which tool would be more effective for preventing falls?

_____John Hopkins Fall Risk Assessment Tool

_____Morse Fall Risk Assessment Tool

2. What is the reason for your choice? _____

_____
_____

3. Which tool would you find easier to use in your daily practice?

_____John Hopkins Fall Risk Assessment Tool

_____Morse Fall Risk Assessment Tool

4. What is the reason for your choice? _____

_____ _____

_____

Appendix H: Comparison of Fall Data

NCU Fall Data

Month	Falls w/o Injury	Falls w/Injury	Total Falls
May	0	3	3
June	0	1	1
July	0	0	0
August	0	0	0
September	2	0	2
October	1	0	1
November	2	0	2
Totals	5	4	9

ACE Fall Data

Month	Falls w/o Injury	Falls w/Injury	Total Falls
May	1	1	2
June	1	0	1
July	0	0	0
August	0	0	0
September	5	0	5
October	1	1	2
November	1	0	1
Totals	9	2	11

Appendix I: Types of Falls (NCU)

NCU Patient Falls

Date	Time	Age	Reason	DX
5/13/16	0520	79 YOM	Alarm not set	Seizures
5/21/16	1748	80 YOM	Got up too fast	Seizures
5/31/16	0325	80 YOM	Impulsive	Seizures
6/11/16	1720	71 YOF	Low Alarm	Seizures
9/16/16	1100	33 YOF	Up unattended	Seizures
9/18/16	1115	33 YOF	Up unattended	Seizures
10/09/16	0140	58 YOM	Became dizzy	Dizziness
11/14/16	0120	39 YOF	Legs gave out	Recent fall
11/15/16	0001	84 YOM	Up unattended	Seizures

Appendix J: Types of Falls (ACE)

ACE Unit Patient Falls

Date	Time	Age	Reason	DX
5/04/16	0800	90 YOM	Got dizzy when up	Syncope
5/14/16	1100	74 YOM	Slipped out of chair	Blind
6/07/16	0115	83 YOM	Alarm not set	Confused
9/11/16	2210	75 YOM	Up unattended	Dementia
9/24/16	1450	91 YOF	Slipped out of chair	Alzheimer
9/26/16	1315	90 YOF	Slipped out of chair	Blind
9/27/16	0840	70 YOM	Got up unattended	Confused
9/30/16	0610	91 YOF	Slipped out of chair	Alzheimer
10/03/16	0730	64 YOM	Slipped out of chair	ETOH Abuse
10/03/16	0425	82 YOF	Legs gave out	Arthritis
11/20/16	1345	82 YOM	Slipped out of chair	Dementia

Appendix K: Survey Results

1. Do you find the current protocol easy to use?

   Yes: 20

   No: 0

2. Would you change any part of the fall protocol?

   Yes: 3

   No: 17

3. Have you ever used a different fall assessment tool?

   Yes: 4

   No: 16

4. If yes, did you find any part of that fall risk tool useful for preventing falls?

   Yes: 4 (3 = easier to use) and (1 = involved physician)

   No: 16

Appendix L: Teaching Assessment Results

1. Which tool would be more effective for preventing falls?

_Before 18/After 0_____John Hopkins Fall Risk Assessment Tool

_Before 2/After 20_____Morse Fall Risk Assessment Tool

2. What is the reason for your choice? ___2 nurses had used Morse Fall Risk before_____

_____
_____

3. Which tool would you find easier to use in your daily practice?

_Before 18/After 0_____John Hopkins Fall Risk Assessment Tool

_Before 2/After 20_____Morse Fall Risk Assessment Tool

4. What is the reason for your choice?

After the information session, all 20 nurses preferred to use Morse Fall Score as part of their fall prevention protocol. _____
_____

_____ _____

_____