Spring 2023

An Inpatient Fall Prevention Program Evaluation Using the Context, Input, Process and Product Model

Brittany Harker
Boise State University

An Inpatient Fall Prevention Program Evaluation Using the Context, Input, Process and Product Model

A Scholarly Project Presented to the Faculty of the School of Nursing

Boise State University

In partial fulfillment of the requirements

For the Degree of Doctor of Nursing Practice

By

Brittany Harker, MSN, RN

Committee Chair (Faculty Mentor): Sara Ahten, DNP, RN, NC-BC

Committee Member (Second Reader): Deena Rauch, DNP, RN, NEA-BC, CENP, EBP-C, FACHE

Table of Contents

Executive Summary

Problem Description: It is reported that up to 1,000,000 million patients fall each year while hospitalized and that one-third of those falls will result in patient injury (AHRQ, 2021). Inpatient falls remain a substantial portion of reported safety events and are a primary cause of preventable patient injury. The Patient Safety and Risk Management Department is concerned with the increasing number of total falls, mainly falls with injury, occurring within their facility. In 2020 alone, the facility had six fall events with harm in the forms of intracranial hemorrhages and fractures. The event reviews found a repeating theme of nursing staff not consistently identifying and communicating patient fall risk status, which has led to a lack of implementation of fall prevention interventions; and a lack of awareness of fall prevention interventions available to them. This trend puts patients at significant risk for experiencing fall-related injuries that can extend medical center stays, require surgery, necessitate transfer to a higher level of care, and even lead to death. A potential decrease in reimbursement is also a threat to the organization if this trend continues.

Setting: The program evaluation took place in a regional Level II Trauma Center that is Joint Commission accredited nine months after implementing the corporate fall prevention toolkit. The organization employs 429 physicians and 1,400 staff members for its 318 licensed beds and is part of a corporate health system. The medical floor and its nursing staff are the focus of this program evaluation, as their fall rates outside of the comprehensive organizational totals are higher than the national average. To impact and reduce organizational fall rates and fall-related injuries, a focus on the medical floor warranted a review of this floor's adoption and adherence to the corporate fall prevention toolkit.

Rationale: The Context, Input, Process, and Product model was chosen as the theoretical model to conduct the program evaluation. This program evaluation focused on the process and product portions of this model to review the implementation of the corporate fall prevention toolkit. A logic model was developed as a framework for the program evaluation. This process and the product evaluation will include identifying best practices and how the initial fall prevention toolkit aligns with those evidence-based best practices. This evaluation will compare pre-implementation to post-implementation metrics and identify program problems after implementation. It also includes assessing how staff adopt and implements the program into their daily practice to influence outcomes. The program evaluation will also determine if the initial fall prevention toolkit decreased facility fall rates and patient harm events related to falls.

Specific Aims: The project participants were the nursing staff and management on the medical floor of the medical center. The project aim was to evaluate the facility's implementation of the corporate fall prevention toolkit to determine whether the outlined standards of care were followed and if the fall prevention toolkit outcomes were met. This project was part of the larger fall initiatives already taking place within the organization.

Project Outcomes and Implementation: Ten short-term outcomes were identified to evaluate the fall prevention toolkit implementation. The project manager first gained access to the organization's fall data and then used that data to determine if the following measures of success were met. The program evaluator used retrospective data to establish the percentage of patients who experienced a fall during their stay that were assessed for fall risk within 24 hours of admission and were reassessed within 12 hours before the fall event. Nursing documentation was reviewed to determine if the staff reached the policy compliance goal of 90% for post-fall huddles and post-fall assessments. The organization's fall rates were reviewed to determine if they had gone below three per 1,000 patient days and if the fall with injury rate was below the national benchmark of 0.460 falls per 1,000 patient days. Including staff feedback on the fall prevention toolkit was needed, so a staff survey containing the Fall Prevention Efficiency Scale with three open-ended questions was deployed. A 30% response rate was anticipated.

Finally, the program evaluator met with the director of patient safety and risk management to review findings and develop recommendations that were later shared with program stakeholders.
Evaluation Plan: The program evaluator used nominal counts and percentages to determine compliance percentages and categorized qualitative data from staff responses to the survey. Run charts were used for trending compliance over time. Six outcomes were either yes or no for completion.
Results: The program evaluator gained access to the fall data and determined the percentage of patients assessed within 24 hours of admission as 100% (*n*=33). Retrospective data were collected and evaluated, and 88% of fall events showed reassessment 12 hours before a fall event. The staff survey only had a 26% response rate, so this outcome was partially met. Post-fall documentation requirements did not meet the policy expectation of 90%, the post-fall assessment compliance was 64%, and the post-fall huddle compliance was 88%. The organization's fall rate outcome was not met with a rate of 3.69 falls per 1,000 patient days. The organization's fall with injury rate outcome was met with a rate of 0.320 falls per 1,000 patient days. Outcomes related to the meetings with the director of patient safety and risk management, development of program evaluation recommendations, and sharing of findings and recommendations with organizational stakeholders were met.
Interpretation: This program evaluation did not meet all its anticipated outcomes. The high nursing turnover rates impacted the outcomes on the medical floor since the implementation of the fall prevention toolkit, and most of the nurses on the floor were not part of the initial education. There is an opportunity for the organization to investigate how their fall prevention program is presented in new hire onboarding to increase compliance with assessments of fall risk and documentation requirements. The program evaluation established the organization's fall prevention program performance after implementing the fall prevention toolkit based on the outcomes determined by the organization's measures of success. The findings of this program evaluation support previous findings from the literature that using a fall prevention toolkit can reduce falls and fall-related injuries. The staff survey provided insight into the barriers of the program and what staff viewed as positive changes with the implementation of the fall prevention toolkit and will be used to better inform stakeholder decisions on the fall prevention program in the future. The program evaluation validated the literature-supported practice of ongoing program evaluation as part of the organization's regular practice.
Conclusions: The outcomes and evaluation plan for this program evaluation can be used in the organization's ongoing fall prevention program monitoring using this program evaluation as a foundational base. This program evaluation process can be expanded to all units of the organization for a hospital-wide fall prevention program evaluation not limited to one floor, and throughout the corporate health system. This program evaluation can be a model for the organization to evaluate other programs.

Keywords: program evaluation, fall prevention, fall prevention toolkit, fall-related injuries

An Inpatient Fall Prevention Program Evaluation Using the Context, Input, Process, and Product Model

Fall rates are an essential quality gauge for medical center systems since the Institute of Medicine (2000) published *To Err is Human: Building a Safer Health System*. This provoking article incited the public, which commenced the movement for medical centers to be more accountable, expand their awareness of safety events, and review and learn from those events to mitigate future occurrences. Unfortunately, since then, there has been little measurable success in reducing the number of preventable safety events and reducing patient harm from these events (Bates & Hardeep, 2018). Safety events, such as falls, remain a substantial danger to hospitalized patients (Dykes et al., 2019). A serious fall can result in severe harm and injury, decrease a patient's ability to function as they were previously, experience a reduced quality of life, increase fear of falling and can require more use of healthcare resources (Agency for Healthcare Research and Quality, 2021). Additionally, it may decrease the health system's ability to receive reimbursement from the Centers for Medicare and Medicaid (CMS) and reduces the community's perceptions of care at the facility.

Problem Description

Problem Background

The Agency for Healthcare Research and Quality (AHRQ) has reported that up to 1,000,000 people fall in the inpatient medical center setting each year (AHRQ, 2021). Patient falls account for many of the reported safety events in the medical center setting and are a primary cause of preventable injury in hospitalized patients. These falls can result in fractures, internal bleeding, lacerations, extensive bruising, muscle injury, and death.

Fall research has estimated that one-third of medical center patients' falls can be prevented (AHRQ, 2021). Managing a patient's individual risk factors for falls and optimizing their care plan and environment is key to a successful fall prevention program. Identifiable risk factors for experiencing a fall include a patient's age, medications, prior levels of physical functioning, recent anesthesia,

anticoagulants, history of neurological and cardiovascular diagnoses, tether devices, changes in mental status, and even being hospitalized increases risk for falls (Burns et al., 2020). Patient-specific risk factors need to be identified using validated risk assessment tools, and then interventions are implemented to mitigate them (AHRQ, 2021). In addition, it is also essential to consider other risk factors that patients may have that are not included in the standardized tools and mitigate those risk factors as well.

Research shows that 3% of patients fall while hospitalized, 30% of those falls will sustain an injury, and each fall increases a patient's length of stay on average 6.9 days (Dykes et al., 2020). These harmful events are not only costly to the patient, but the medical center in which the serious fall event occurs has financial costs and loss of reputation as well. Falls remain a significant enough issue that the Joint Commission (JC) has started requiring participating medical centers to report all patient fall events that result in any of the following injuries as sentinel events:

> Any fracture, surgery, casting, or traction; require consult/management or comfort care for a neurological (for example, skull fracture, subdural or intracranial hemorrhage) or internal (for example, rib fracture, small liver laceration) injury; or a patient with coagulopathy who receives blood products as a result of the fall; death or permanent harm as a result of injuries sustained from the fall (not physiological events causing the fall) (The Joint Commission, 2020).

To tackle the inpatient falls issue, the project site's corporate headquarters have developed a fall prevention toolkit for all their facilities to implement. This plan outlined the clinical standards of care for healthcare providers in the medical center setting to apply to all patients, whether at high risk for falls or not. The toolkit was executed at a medical center in the Intermountain West in August-October of 2021. After discussion with organizational leadership and stakeholders, a program evaluation of this fall prevention integration plan was chosen as this DNP scholarly project.

Problem Statement

The Patient Safety and Risk Management Department is concerned with the increasing number of total falls, mainly falls with injury, occurring within their facility. Event reviews found a repeating theme of nursing staff not consistently identifying and communicating patient fall risk status, which has led to a lack of implementation of fall prevention interventions; and lack of awareness of fall prevention interventions available to them. This trend puts patients at significant risk for experiencing fall-related injuries that can extend medical center stays, require surgery, necessitate transfer to a higher level of care, and even lead to death. A potential decrease in reimbursement is also a threat to the organization if this trend continues.

Local Problem

In 2020 alone, the facility reported six major fall safety events resulting in fractures or intracranial hemorrhages. While this medical center's fall rate and falls with injury rate are lower than the national average, there is an increasing trend in the frequency of serious fall-related harm events. The medical floor's fall rate, analyzed independently, are above the national average and trending higher. Additionally, this year this medical center has been experiencing a record high census combined with under-staffing contributing to these events. However, the event reviews show a consistently identified knowledge gap from nursing on indicators that place the patients at risk for falling and the risk factors for sustaining an injury in the event of a fall. This gap has led to staff not implementing appropriate fall interventions tailored to the patient's individual needs and not mitigating risk for harm.

The Patient Safety and Risk Management Department's review of fall data exposed missing interventions 37% of the time before a fall event occurs. Types of missing interventions that have been trended include inactive bed or chair alarms, no fall risk light outside of the room, no yellow fall risk band, call light out of reach, and being left unattended during toileting and showering activities. This demonstrates the lack of awareness of the various fall interventions that are available within the facility. For a fall prevention program to be successful, there must be an assessment of fall risk, a personalized

plan and interventions, and reliable execution of the plan and interventions (Dykes et al., 2020). Unfortunately, basic fall intervention tools are not being identified, implemented, and communicated effectively to reduce patient risk for falls and injury at the facility.

The Patient Safety and Risk Management Department has identified the need to re-educate nursing staff to fall risk indicators and interventions available within the facility, and the corporate office released a fall prevention toolkit in July of 2021 to standardize fall prevention practices within the organization. The fall prevention toolkit had the educational materials that the Patient Safety and Risk Management Department could use to support their nursing staffs' fall prevention knowledge base, and it outlined standards of care for fall prevention practices. This scholarly project is an evaluation of this re-education program, to determine if program standards of care were followed and if desired outcomes were met.

Available Knowledge

Literature Review

The need to search for best evidence-based practices related to fall injury prevention led to the development of the searchable question focused on decreasing falls and preventing avoidable harm. The following searchable question was developed to facilitate a literature search for evidence-based interventions that have been peer-reviewed and shown to reduce falls and fall-related safety events: In hospitalized patients 60 years and older, can an educational intervention for nursing decrease falls and fall-related injuries?

The PICO (Population, Intervention, Comparison, Outcome) format was used to contextualize the question searchable within electronic databases. Inpatients 60 years and older were identified as the population for this question, as this was the age demographic of all recent serious fall safety events within the facility. The intervention was evidenced-based nursing educational training, with the

comparison being no nursing-specific educational intervention. The outcome is reduced patient falls and fall-related avoidable harm.

The search in February 2021 spanned three electronic databases: PubMed, CINAHL, and JSTOR. Various databases were used to identify as many studies as possible to guide evidence-based intervention selection for this project. Key search terms included high fall risk, inpatient falls, fall prevention, fall risk assessment, fall-related injury education, the risk for injury, nursing, decrease falls, and reduce fall-related injuries. Inclusion criteria for articles were inpatient medical center setting studies, based in the United States, written in English, falls specific, within the last five years, nursing-specific interventions, peer-reviewed, and a focus on the elderly population.

Automatic exclusion criteria were any setting outside of a medical center, outside the United States, injuries unrelated to falls, and anything over ten years. Limiters also narrowed the search to full text and peer-reviewed only. After reviewing abstracts of the 307 articles for inclusion criteria, a total of 12 articles were selected for critical appraisal (see Appendix A).

Another literature search for program evaluation was needed when the new corporate fall prevention toolkit was released. PubMed was searched for context, input, process, and product evaluation model (CIPP). Forty-four results were returned from 1981 to 2021, and three articles were retained to guide the program evaluation process.

Synthesis of the Evidence

Falls have been studied extensively over the last few decades. This has led to many articles across various evidence levels and quality grades being published. The majority of the selected articles are Level III evidence and B grade quality. In addition, there is one Level II article with a quality grade of B included in the articles selected.

Inadequate assessments and handoffs, knowledge deficits, poor teamwork, and poor communication are nursing-related factors that influence falls (Bowden et al., 2019; Constantinou et al.,

2020; Dykes et al., 2019; Johnston & Magnan, 2019; Tzeng et al., 2015; Venema et al., 2019). A significant number of falls happen around toileting activities, and unwitnessed falls have a greater risk for injury, lending to the need for patient engagement in complying with fall prevention efforts (Constantinou et al., 2020; Domingue et al., 2018; Francis-Coad et al., 2020; Staggs et al., 2014; Venema et al., 2015). The evidence supported ongoing education and nursing staff training interventions to decrease falls and injuries (Bowden et al., 2018; Dykes et al., 2019; Dykes et al., 2020; Johnston & Magnan, 2019; Tzeng et al., 2015).

An educational intervention would need to extend into individual patient teaching to engage patients in fall prevention strategies. This also would guide educational activities to include how patient-specific risk factors and changes in condition can increase the risk for falls and sustaining injury (Bowden et al., 2019; Constantinou et al., 2020; Domingue et al., 2018; Francis-Coad et al., 2020; Staggs et al., 2014; Venema et al., 2015). An educational intervention would need to assess the nurses' knowledge of fall prevention and be conducted using a fall prevention knowledge test (Dykes et al., 2019). It is essential for any fall prevention program to clearly understand its staff's current level of knowledge. The educational material would need to address fall risk factors, interventions, tools available to staff, risk factors for injury, and improved communication skills to decrease falls and fall-related injuries (Bowden et al., 2019; Constantinou et al., 2020; Dykes et al., 2019; Johnston & Magnan, 2019; Tzeng et al., 2015; Venema et al., 2019).

The literature presented consistent and strong evidence to support a practice change pilot project for an educational intervention to reduce falls and injury within the elderly population on the medical floor. Medical centers should develop and utilize a fall prevention toolkit that lists specific fall interventions and strategies tailored to specific patient needs to reduce falls and injuries. The foci of an educational intervention should encompass increasing nurses' fall prevention competency and awareness of patients' toileting needs, reducing unwitnessed falls and providing nurses better teaching

skills for educating patients and families and engaging them in fall prevention efforts (Bowden et al., 2018; Dykes et al., 2019; Dykes et al., 2020; Johnston & Magnan, 2019; Tzeng et al., 2015).

Improving nurses' knowledge of fall prevention strategies and interventions should lead to more consistent use of appropriate interventions and reduce omission by standardizing fall prevention processes (Johnston & Magnan, 2019). In addition, the impact of educational interventions needs to be assessed by identifying specific fall indicators that will show education has been translated into practice. Finally, the literature has indicated data review of post fall huddle reports and fall prevention intervention auditing can communicate actionable fall data and monitor improvements in practice (Johnston & Magnan, 2019; Turner et al., 2019; Tzeng & Yin, 2015).

One support strategy found is to allow open communication and interaction between the nursing departments and quality departments continually through in-person rounding or meetings, email, or telephone (Turner et al., 2019). Requesting feedback from leadership can help adjust education content and structure to increase value to the organization. Evaluation of staff's perceptions of training at the end of the educational intervention and again later can indicate how the knowledge was received and put into practice (Dykes et al., 2018; Dykes et al., 2020; Johnston & Magnan, 2019; Turner et al., 2019; Tzeng & Yin, 2015).

The literature supports ongoing fall prevention program evaluations; evaluations should become part of the organization's regular operations and not be viewed as a one-time activity (Stufflebeam, 2000). Literature on the CIPP program evaluation model was reviewed because this DNP Project program evaluation focused on reviewing the fall prevention re-education and standards of care for fall prevention practices delivered to staff from August 2021-November 2021. Evaluation of safety programs is complex as the problems they seek to address. Programs need to be evaluated regularly to capture this intricacy and provide meaningful program improvement information as it grows and evolves (Barber et al., 2020; Farley & Battles, 2008; Lee et al., 2019).

Rationale

Theoretical Model

In the context of fall prevention, many research studies have been done with scattered successes and failures throughout various medical center systems (Turner, 2020). As a result, moving fall prevention research into active clinical practice has been slow and incomplete in many institutions. A theoretical or conceptual model can guide the process of moving nursing research into nursing practice. The Context, Input, Process, and Product (CIPP) program model has been validated as a program evaluation model and investigates the worth of a program to the organization (Stufflebeam, 2000). This cyclical model can be used at any point in the translational change process. It informs project managers and stakeholders of detected program deficiencies and what is going well to guide future clinical decision-making as the program changes and develops. This makes the CIPP program model suitable for quality improvement evaluation to measure the effectiveness of training provided and whether desired outcomes are being achieved; if the outcomes are not achieved the CIPP cycle begins again (Barber et al., 2020; Farley & Battles, 2008; Lee et al., 2019;).

The CIPP model evaluates four program areas: context, inputs, process, and products (see Appendix B). Context evaluation includes assessing needs to fulfill program objectives, issues that impede goals, resources, and plans to meet objectives, and the opportunities that may be found to improve or assist in the program within the defined project environment (Stufflebeam, 2000). All aspects of the needs, problems, resources, and opportunities need to be considered to design rigorous programs that meet their objectives. The context evaluation describes the program's setting, establishes its purpose, and anticipated outcomes. Identification of individuals who will be influenced and benefit from the program occurs alongside identification of any costs or barriers. The context evaluation provides clarity of program plan and establishes appropriateness. As the author noted, this stage can be

completed before, during, or after program implementation, but organizations must conduct this phase for improvement efforts to be effective.

Input evaluation helps determine how a program will improve services provided to their patients and improve and develop staff members. This is a crucial step for a successful program to achieve its goals and translate the change into practice (Stufflebeam, 2000). In addition, it assesses the environment for implementation barriers and helps an organization minimize waste resource waste.

Process evaluation is an ongoing critique of the program and the identified indicators of success. This evaluation also allows for staff and manager feedback when carried out at specific intervals during implementation (Stufflebeam, 2000). This evaluation will compare pre-implementation to post-implementation metrics and identify program problems after implementation. It also includes an assessment of how staff adopt and implement the program into their daily practice to influence outcomes. This part of the program evaluation allows for any participant feedback on the future use of the program. These feedback sessions are also a way for program managers to keep it at the forefront of end users' minds. The project manager carries a significant role in monitoring and documenting the impacts of the intervention.

The initial steps are to review the established outcomes for success and the window for data collection. Next, the evaluator should gain an overview of how the program is evolving, build rapport with participants, review the appropriate documentation, observe staff, and floor environments, and interview key program influencers among the staff (Stufflebeam, 2000). The process evaluation also includes writing an executive summary to inform stakeholders on the program's progress and if outcomes are being achieved and sustained. Then, the evaluator must present the information to the stakeholders. The evaluator needs to show continual process outcome updates that helps the staff engage and execute the program objectives. The records of process evaluation allow the project

manager to have accountability to any funding agencies and administrations (Stufflebeam, 2000). Process evaluation informs the next evaluation stage, which is the product evaluation.

Product evaluation summarizes the organization's achievements with the new program. It calculates, interprets, and arbitrates the successes based on the established outcomes. The product evaluation also includes the stakeholders' feedback and thoughts on the program, whether it met their goals and expectations, and if it was an appropriate return on investment (Stufflebeam, 2000). Product evaluations can be done at varying stages of the program and focus on the targeted needs and where the program is at in relation to them. This part of the program evaluation process can also assess the program's impact on the intended population, how effective the program was, if the program is sustainable, and can be applied in other organizational settings or programs.

Program evaluation will strengthen the program's quality, increase accountability, and support change efforts. Program evaluations allow the project manager and organization to learn from mistakes, monitor progress, and facilitate the best programs possible. The CIPP model was chosen to frame the scholarly project because of the need to evaluate the effectiveness of the initial fall prevention toolkit the facility had rolled out. This process and the product evaluation will include identifying best practices and how the initial fall prevention toolkit aligns with those evidence-based best practices. The program evaluation will also determine if the initial fall prevention toolkit decreased facility fall rates and patient harm events related to falls.

Per Stufflebeam (2000), the information obtained from process and product evaluations using the CIPP model can solve institutional difficulties and help them to meet their regulatory requirements. This, in turn, will inform the stakeholders' decision to abort, change, or continue monitoring the evaluated programs. The CIPP model assists the project manager in developing a thorough evaluation plan, and the process and product evaluation guidelines help generate local data. The project manager

ensures findings are of merit and worth to the organization through the summarized successes and opportunities the evaluation identifies.

Project Framework- Role of the Logic Model in Project Development

Logic models are project planning tools that guide project managers to plan and communicate project outcomes in a way that reflects clear thinking and responsible project management (W.K. Kellogg Foundation, 2004). A logic model is designed to facilitate a project manager's ability to communicate and manage the activities of project planning, design, implementation, analysis, and knowledge generation from projects. Logic models are also used to inform the organization and stakeholders about the various aspects of the project. Logic models provide a visual representation of the project's needed resources and activities related to the project's outcomes.

Logic models consist of inputs, activities, outputs, and outcomes. Inputs are resources that can be directly invested into the project; activities are the steps taken to bring about the changes; outputs are the direct results from the activities that reach specific audiences to achieve the project's identified outcomes (McCawley, n.d.). Logic model outcomes are broken down into short-term, intermediate, and long-term outcomes. Short-term outcomes are obtained within the project timeframe scope, intermediate outcomes obtained within six months to two years after project implementation, and long-term outcomes anticipated three-five years afterward. Outcomes focus on what the project anticipates accomplishing due to the resources and activities invested in the project. For the scholarly project, the logic model concentrates in detail on short-term outcomes that fit within the project implementation timeframe (see Appendix C).

Specific Aims

The project participants were the nursing staff and management on the medical floor of the medical center. The project aim was to evaluate the facility's implementation of the corporate fall prevention toolkit to determine whether the outlined standards of care were followed and if the fall

prevention toolkit outcomes were met. This project was part of the larger fall initiatives already taking place within the organization.

Context

Population

The project facility is in a large rural county and is the largest medical center that provides healthcare services for its residents. The state health department's publication on vital statistics reported the county has a population of 116,854, of which 21,523 are 60 years of age and older. This age group is 18% of the immediate county population which warrants consideration and planning by the organization to meet their specific needs and mitigate potential risk while seeking care.

The Patient Safety and Risk Management Department at the facility monitors all safety events that occur, including falls and severe falls with injury. The trending of fall events shows an increase in severe falls with injury in the patient population 60 years and older, according to the facility's Patient Safety and Risk Management Department. These findings established the target population of inpatients over 60 as the focus of the scholarly project.

Settings and Resources

This project is intended to evaluate the fall prevention toolkit and determine if the desired program outcomes have been achieved approximately six to nine months after the initial education intervention. The Patient Safety and Risk Management Department stated this facility has struggled with evaluating initiatives in the past, which has led to project failures and inability to sustain change. There have been different quality and patient safety initiatives to improve fall rates over the years. Still, none have been implemented well and sustained over time.

As stated on the facility's webpage, the proposed Doctor of Nursing Practice Scholarly Project setting is part of a large corporation. The facility is a regional Level II Trauma Center with a Level III Neonatal Intensive Care Unit, Pediatric Intensive Care Unit, Behavioral Health Center, and Cancer

Center. The facility employs 429 physician providers and residents. In addition, the facility employs 1,400 employees to staff its 318 licensed beds.

According to the facility's web page, the facility is certified as the region's Stroke Center through The Joint Commission. It is a Joint Commission-accredited Level II STEMI Center that has achieved the Coronary Intervention Excellence award and obtained three heart care accreditations for Chest Pain, Atrial-Fibrillation, and Heart Failure. In addition, the medical center has received an “A" grade for safety through the Leapfrog Group in 2020. This organization prides itself on meeting and sustaining quality and safety metrics.

Congruence of Project with Organizational Mission, Values, Strategies, and Needs Assessment

Patient injury from falls can be considered a nurse-driven indicator that decreases as improvements are made in the quality and delivery of nursing services (Bouldin et al., 2013). As such, it warrants an in-depth analysis and program evaluation, which is the focus of this scholarly project, that evaluates whether the desired improvements in patient outcomes and fall metrics occurred after evidence-based changes in nursing practice related to fall prevention were implemented. The focus on reducing falls aligns with the facility's mission statement: "Above all else, we are committed to the care and improvement of human life.”

The participants of this DNP project will be the medical floor nurses. They are responsible for identifying fall risk status and implementing fall interventions for each patient. The director of patient safety and risk management reported that many of the nurses on the medical floor have less than two years of experience and are expected to take a patient load of five to six patients. High nurse turnover can directly impact fall risk identification and intervention implementation because the new nurses do not have the skills and knowledge base to meet the expected standards of care (Bowden et al., 2018). The medical floor has experienced high nursing turnover rates in the last two years.

With high staff turnover, the culture has shifted and become one that unfortunately perceives falls are part of a typical workday. In an interview with the director of patient safety and risk management, fall prevention practices and strategies no longer bare the same weight and importance to staff as it once did. Falls are an issue for a medical center, and it manifests in increased fall rates and severe fall with injury rates that are publicly reported quality measures. Event reviews showed critical fall interventions were missing, interventions were not utilized as intended, or fall-risk status was not recognized.

The effects of these fall events have led to increased lengths of stay, increased costs, and decreased reimbursement. Organizational write-offs associated with serious fall events have totaled thousands of dollars just in the last two years alone. The organization's costs are seen in the expenses considered non-reimbursable due to hospital-acquired conditions, legal fees, and indemnity payments for falls with injury cases. For the inpatient population of 60 years and older, fall events have led to surgery, transfer to the ICU for a higher level of care, increased post-acute care costs, and even mortality. Every fall that occurs because of a lack of identification of fall risk and failure to start fall interventions places this vulnerable population at risk for sustaining an injury, increasing moral distress of staff, hurting the organization’s reputation, and revenue loss for the organization. It is not enough to rely on luck to not sustain a fracture or bleed with a fall event; we need to try proactively to prevent them from occurring.

Addressing this issue safeguards patients, but it is a matter of reputation as well. This medical center prides itself on being an organization that is founded on quality and safety, and if this problem goes unaddressed, that reputation is at risk. Reputation is vital for the medical center in a small community setting and the regional markets. Safety metrics are publicly reported, potentially decreasing the organization's reputation, and leading to poor rapport with community members. People want to come to a quality medical center, receive the best care, and remain safe. If community members see

poor safety metrics, it could lead them to seek care elsewhere; this loss of business will impact its income, and ultimately its finances. Evaluating a previously implemented fall prevention toolkit reinforces that standardization of care for fall practices within the medical center setting has occurred or not. That may improve its reputation and trust with community members seeking services, thus directly impacting medical center profits.

The program evaluation could also demonstrate whether the nursing staff is adhering to the standards of care introduced in the fall prevention toolkit or not. Adherence may indicate the organization is beginning to overcome some resistive cultural barriers stemming from a history of poorly implemented evidence-based practice initiatives that have failed to be sustained. If staff are not adhering to the corporate standards of care is important to know as well, non-adherence itself can inform the project manager and stakeholders. If the problem is driven by individuals with compliance issues that would require coaching and accountability measures or identify an organizational issue that would require different tactics to overcome the barriers with the organization's culture.

Evaluating Change and Readiness for Change

The medical center's executive leadership is engaged in improving quality and safety metrics. They have already taken steps to improve their safety metrics and are resetting expectations for floor leadership, which funnels down to the staff. As a result, executive leadership holds them to a higher standard than they have been held to in the past. Executive leadership now expects directors and managers to report fall events in their daily leadership safety huddles. In addition, the parent corporation has supplied guidance documents to help facilities implement a fall prevention program and policy.

The company's patient safety organization has set the goal for medical centers to work towards Zero-Harm supported by the Joint Commission and the Institute for Healthcare Improvement, according to the director of patient safety and risk management. Their awareness of the fall events in their facility

is a major driving force behind the need for a change project focused on reducing medical center falls and decreasing patient harm. This awareness supports the facility's ability to engage in the change process in a meaningful and sustainable way that has not been present in the past. The larger fall prevention initiatives already implemented before the DNP project strengthened this position.

The medical center has a dedicated full-time director-level position specifically for patient safety and risk management. This director handles all safety metrics and reporting of medical error events. This department was expanded in December 2019 from a one-person department to a two-person department; reflecting the organization’s commitment to improve quality and patient safety. The director of patient safety and risk management and the patient safety specialist have analyzed the organization's fall data from occurrence reports, nursing documentation, and post-fall huddle forms for actionable related items between events and identified gaps in the utilization of the fall prevention program.

The medical center reported that their fall rate hovers around the national average of 3-4 falls per 1,000 patient days (Bouldin et al., 2013). However, when the medical floor is looked at separately from the entire medical center's comprehensive reporting, they are well above the national average. This indicates that high fall volume floors are balanced out by other inpatient floors that do not have near the number of falls. There is room for improvement on those other floors, and opportunities for improvement are not just specific to the medical floor. To meaningfully address and decrease this organization's fall rate and reduce fall-related injuries, the scholarly project needed to focus on the staff and patients of the medical floor.

Executive leadership from local through corporate levels focuses on reducing harmful events, including falls and falls with injury rates, as falls are considered one of the most significant contributors to patient injury events (Makary & Daniel, 2016). Medical center leadership has approved and purchased the Accreditation Manager Plus Tracer program through the Joint Commission that allows for

customized auditing and compliance monitoring (The Joint Commission, 2022). This program provides for the performance of hospital acquired condition (HAC) Attack Leadership rounding that includes fall prevention auditing.

Resources available within this organization include access to multidisciplinary teams (e.g., physical therapy, occupational therapy, pulmonary rehab), standardized data collection from electronic healthcare records and occurrence reporting, corporate fall prevention toolkit suggestions, and access to corporate and division fall resources as part of corporate learning organization structure. Recently, the medical center upgraded beds and call system to the Hill-Rom bed management system (Hill-Rom, 2021). With that upgrade, there have been more tools available for fall risk identification and communication through its dashboard that gives real-time information of bed alarms and visual confirmation that a patient is in bed or not. This system allows users to access the resources of Hill-Rom in managing and using their products in their fall prevention efforts.

Strengths and Weaknesses

A Strength, Weaknesses, Opportunities, and Threats (SWOT) analysis and an organizational assessment tool were used to identify the organization's strengths and weaknesses related to the scholarly project. Strengths included the engaged executive leadership within the facility who are making changes to bring safety culture forward and have implemented daily reporting of fall events in leadership huddles every day. There are dedicated leadership positions for patient safety and robust multidisciplinary teams through trauma programs, physical and occupational therapy programs, and pharmacy that plays a part in their fall prevention program and education. These multidisciplinary team members sit on the Fall Prevention Committee and participate as needed in serious safety event reviews to determine process failures and future mitigation strategies. The organization is part of a larger learning organization with a dedicated Patient Safety Organization (PSO). PSO's collect and analyze voluntarily reported medical errors to help improve patient safety and being part of a PSO brings federal

protections for organization that their reviews of event are considered safe from legal disclosure. Being part of a larger corporation, the local organization has improved data collection and reporting systems and more tools and resources dedicated to patient safety. This organization has invested in patient safety resources, and this project has access to them.

Weaknesses from this organization include a historical record of poor culture from leadership on the effectiveness of fall prevention programs, and the cultural belief that falls are just part of everyday practice. Leaders are resistive to the efforts of patient safety and risk management when implementing new practices because previous projects did not consider all aspects of the roll out and programs negatively impacted them and their staff. To these leaders, the project come and go, and the new ones will just fade away with no accountability and follow through. The organization lacks a standardized fall risk stratification tool and risk factor identification within its charting system. In August of 2021, the Fall Prevention Policy was updated to include risk factors and universal fall precautions. The current fall risk assessment makes nursing only answers “yes” or “no” if the patient is at high risk for falls. When everyone is at high risk for falls, no one is. There is inconsistent use of the Hill-Rom bed management and call system, and the facility lacks a standardized approach to using this tool. There is high nursing turnover on the medical-surgical floor. Staff are newer, have less experience, and lack awareness of the severity and potential ramifications of fall events.

Several opportunities are tied to this project as well. The first is that the facility’s post fall huddle form will be completed the way it was intended. There is the potential to standardize and improve the use of the Hill-Rom bed system at the facility. Finally, there is the potential to impact division medical centers’ fall prevention programs through shared learning.

There are threats identified to this project. The organization’s director of quality has left since project planning began, and a new, inexperienced director has taken her place. Executive leadership has changed frequently, and if engaged leadership goes, there is the potential that this project will not be

supported or sustained. Finally, if the leadership team's steps to change culture do not work, and the nursing staff reverts to resistive behaviors, the project's success is threatened.

Memorandum of Understanding

The memorandum of understanding (MOU) constitutes an agreement between the organization and the project manager, outlining the scholarly project components for organizational approval to conduct the project. The MOU is not included in this document at the request of the partnering organization, as it contains identifiable information. The MOU was finalized in January 2022, and a signed copy was retained by the organization and the project manager (see Appendix D).

Interventions

Logic Model

To guide the fall prevention toolkit program evaluation, the following short-term outcomes were identified using the Kellogg logic model table (see Appendix C). The logic model was used to develop the scholarly project's necessary resources and interventional activities to accomplish the identified outcomes. The logic model also allowed the project manager to identify and list the anticipated outputs that would come as a result of the dedicated resources and activities. The logic model will be used as a communication tool for organizational stakeholders.

Short-term outcomes are expected to be completed during the project timeframe and consist of six process outcomes (PO) and four change outcomes (CO). Based on the discussed need for program evaluation of the previously implemented fall prevention toolkit, these were selected. In addition, intermediate and long-term outcomes included in the logic model are expected to be completed by the organization after the project timeline concludes.

Short Term Outcomes:

1. By May 1, 2022, the project manager obtained organizational monthly fall data from January 2021- September 2021 before the fall prevention toolkit implementation and monthly data from

October 2021-April 2022 after implementation for retrospective review in program evaluation by May 1, 2022. (PO)

2. By July 31, 2022, retrospective data analysis determined the percentage of fall events in which patients who had fall risk assessed within 24 hours of admission. (PO)

3. By July 31, 2022, retrospective data analysis determined the percentage of patients who were assessed for fall risk within 12 hours prior to fall event. (PO)

4. By July 31, 2022, 30% of the nursing staff on the medical floor provided feedback on the fall prevention toolkit, implementation barriers, potential gaps, and perceptions on what has gone well and what can be improved. (CO)

5. By July 31, 2022, retrospective fall data was collected monthly for October 2021-July 2022, which demonstrated >90% compliance with post fall huddle documentation and post fall assessment documentation since the fall prevention fall prevention toolkit implementation. (CO)

6. By July 31, 2022, the organizational fall rate was below the organizational benchmark of 3 falls per 1,000 patient days by July 31. (CO)

7. By July 31, 2022, the organization's fall with injury rate was below the national benchmark of 0.460 per 1,000 patient days. (CO)

8. By September 30, 2022, the project manager will meet with the director of patient safety and risk management to review program evaluation findings. (PO)

9. By September 30, 2022, program improvement recommendations were developed in collaboration with organizational stakeholders and ongoing corporate planning. (PO)

10. By October 31, 2022, program evaluation recommendations were presented to organizational leadership. (PO)

Intermediate Outcomes:

11. By August 2023, the organization had identified an internal evaluator of ongoing fall prevention program evaluations. (PO)

12. By June 2023, the key performance indicator of completing fall risk assessments within 24 hours of admission was in the 90th percentile by organizational trending. (PO)

13. By June 2023, there was a 5% decrease in patients who fell and were not screened for high risk within 12 hours of fall event by organizational trending compared to percentage established in initial program evaluation by the project manager. (CO)

14. By August 2023, the organization had conducted a second feedback session with 80% nursing response following changes in their fall prevention program from the program evaluation. (PO)

15. By June 2023, the organization maintained >90% compliance in completing the required post fall documentation. (CO)

16. By July 2023, the organization's fall rate was maintained below the organizational goal for 12 consecutive months. (CO)

17. By July 2023, the organization's fall with injury rates was maintained below the national benchmark for 12 consecutive months. (CO)

18. By December 2022, program evaluation recommendations were accepted by the director of patient safety and risk management. (PO)

19. By August 2023, the organization had adopted program evaluation recommendations. (PO)

20. By January 2023, the organization had implemented and completed the program evaluation recommendations. (PO)

Long Term Outcomes:

21. The successful integration of the corporate fall prevention plan has decreased patient falls events and fall-related injuries.

22. The organization has sustained fall prevention efforts and met the corporate goal of zero patient harm.

23. The successful reduction of falls has reduced the organization's legal fees and indemnity payouts.

Outcomes 1, 2, and 3 are process outcomes. For Outcome 1, interventional activities included the project manager working with the director of patient safety and risk management and the information technology (IT) coordinator to set up user access to the organization's network and Meditech charting system. This permitted procurement of the retrospective review of historical data before the fall prevention toolkit implementation and data following implementation and allowed for monitoring of May through July 2022 fall data in real-time during the project window. The project manager was also able to obtain copies of the organization's fall prevention policy, post fall huddle form, electronic staff feedback form, and the initial fall prevention toolkit. This outcome facilitated the program evaluation by allowing thorough investigation and data review. Data was used to determine if desired outcomes were met, helped establish the merit and worth of fall prevention practices in the facility, and set indicators that can show program performance metrics and reflect any changes in safety culture that may have occurred since the initial implementation.

Outcome 2 used the access and data obtained in Outcome 1 to analyze the data based on key performance indicators within the fall prevention policy and the fall prevention toolkit. The expectation outlined in the policy and the toolkit is that all patients will be screened for fall risk status within 24 hours of admission. This metric can confirm whether staff are screening all patients at the beginning of stay as outlined in the standards of care and can inform the evaluator and stakeholders if there are practices gaps in nursing's assessment of fall risk status. The organization tracks and trends its fall metrics through the JC's Accreditation Manager Plus (AMP) program and uses Excel spreadsheets and PowerPoints to disseminate trends and fall metrics to organizational leadership. Fall metrics were pulled

from the AMP program, and each inpatient fall event's data was reviewed to determine if there was a fall risk assessment completed within 24 hours of admission. Compliant fall records were divided by total fall records assessed in the time frames to establish the compliance percentage.

Outcome 3 involved using the access and data obtained in Outcome 1 to analyze the data based on key performance indicators within the fall prevention policy and the fall prevention toolkit. Policy and fall prevention toolkit standards of care require every shift reassessment of fall risk status throughout the stay. By reviewing whether fall risk status has been completed 12 hours prior to fall events, the project manager can determine gaps in nursing reassessments and set up a process indicator for program evaluation. Fall metrics were pulled from the AMP program, and each inpatient fall event's data was reviewed to determine if there was a fall risk assessment completed within 12 hours. Compliant fall records were divided by total fall records assessed in the time frames to establish the compliance percentage.

Outcomes 4, 5, 6, and 7 are change outcomes. Outcome 4 was met by distributing an electronic QR code that directed staff to a feedback form to fill out. This form asked participating nurses to provide insights into how the fall prevention toolkit was going and any perceived barriers or gaps in the use of the fall prevention standards of care. The project manager reviewed the completed forms to supplement the program evaluation findings and see if fall data supported any perceived issues identified by staff. This outcome supports comprehensive program evaluation by incorporating nursing staff feedback. It can potentially identify barriers that the fall data has not identified previously. This metric can support that safety culture is changing to improve patient safety. This established another indicator for process and product evaluation in the program evaluation.

Outcome 5 was measured by pulling retrospective and real-time fall data from January 2021-July 2022 to determine whether staff completed the required post fall huddle documentation when fall events occurred. This huddle is a debriefing opportunity for staff to reflect at the time of the event on

any fall-risk indicators that may have previously been missed or not appropriately mitigated through fall prevention efforts. The facility's policy requires 90% compliance in completing the post fall huddle and documentation to inform organizational leadership of any trending causes of falls. This indicator also served as another support that safety culture is improving from prior to implementation. This is another process indicator for successful program evaluation of the fall prevention toolkit. Fall metrics were pulled from the AMP program, and compliant fall records were divided by total fall records assessed in the data time frames to establish the compliance percentage.

Outcome 6 was measured by taking the total number of report patient fall events each month from October 2021 through July 2022 and dividing each month by the number of patient days, then multiplied by 1,000. This value is the medical center's inpatient fall rate. Outcome 7 was calculated in the same way, but the value was only falls where injury occurred that required treatment instead of total falls. Partnering with the Accounting Department is necessary to obtain the medical center's actual patient days by each floor to calculate and measure Outcome 6 and Outcome 7. These outcomes established product indicators that can evaluate the program and establish its worth and merit to stakeholders as these are publicly reported metrics. This is also a valuable indicator of a shift in safety culture in the facility.

Outcomes 8, 9, and 10 are process outcomes. Outcome 8 was met on completion when the project manager met with the director of patient safety and risk management to review program findings. This meeting looked at results indicating practice gaps in fall risk assessment, fall prevention interventions, missed documentation, and medical center fall rates. Outcome 8 requires the project manager to know the facility's fall prevention policy and performance metrics to determine if metrics are meeting expectations or not. Outcome 8 is a product indicator for the fall evaluation program and helps determine if evidence-based practices for fall prevention have been adopted into practice.

Outcome 8 led to the completion of Outcome 9. The program's opportunities for improvement were discussed in Outcome 8, allowing for the collaborative effort to develop program evaluation recommendations for organizational stakeholders that aligned with ongoing corporate planning. Problem identification and potential solutions will serve to inform stakeholders, allowing them to decide whether they will implement the presented remediation plan and adopt further recommendations or not based on program evaluation findings.

Outcome 10 was met by presenting the process and product evaluation findings to the organization's leadership and Fall Prevention Committee. A PowerPoint presentation was developed with the key findings from the program evaluation and identifying opportunities for improvement. The presentation was the culmination of the program evaluation, combining all the components of this scholarly project together to apprise executive leadership of the extent that safety culture has changed in response to the fall prevention toolkit, quantifying what results use the fall prevention toolkit has produced in the organization, and soliciting participant feedback on the fall prevention program.

Correlation of Interventions to Theoretical Model Elements and Phases

The scholarly project interventions reflected the process and product evaluation phases of the CIPP program evaluation model. This project and its related interventions facilitated the organization's ongoing review of a fall safety initiative that began approximately six to nine months prior to the scholarly project implementation. The interventions measured provided the organization with actionable data that will inform and drive future program improvements regarding fall prevention and potentially influence other safety initiative programs in the organization. The scholarly project interventions reflected the evaluation criteria that organizational leadership set as desired outcomes for the successful implementation of the fall prevention toolkit.

The framework helped establish the timeline for these interventions to meet program deadlines, ensuring the evaluation was completed promptly with all relevant aspects reviewed. These

interventions also included a vital element of the process evaluation: soliciting end-user feedback to drive further program improvements. All interventions in this scholarly project are supported by the CIPP program evaluation model and have influenced the organization's fall prevention efforts by generating valuable data that will continue to drive and measure program performance in the future.

Timeline

Planning, implementation, data collection, data analysis, and dissemination are the phases in which this DNP scholarly project was developed (see Appendix E). The project planning phase began in October 2020 and went through April 2022. Activities that took place during this phase included: literature review, development of problem statement, organizational assessment, SWOT analysis, proposal drafts, timeline development, logic model development, completion of the Collaborative Institutional Training Initiative (CITI), completion of the MOU with the organization, meetings with organizational leadership, receiving organization approval for the project, obtaining Institutional Review Board approval, and formal presentation and acceptance of the DNP Scholarly Project proposal. In addition, the facility's fall prevention toolkit was implemented during this phase.

The implementation and data collection phase ran from May 2022 through August 2022. The process and product evaluations were completed during this project phase to evaluate the fall prevention toolkit. Throughout this phase, frequent updates were provided to organizational leadership and monitoring of fall events. Data collection included gathering fall data pre-fall prevention toolkit implementation from January 2021- September 2021 and fall data post-fall prevention toolkit implementation October 2021-July 2022. The organization's post fall huddle data and post fall assessment documentation were collected for the same period.

Data analysis began in May 2022 through December 2022 as data became available. Data analysis was performed to evaluate whether the fall prevention toolkit met the anticipated outcomes. Pre-implementation data were retrospectively reviewed from January 2021-October 2021. Post-

Implementation data were retrospectively reviewed from November 2021-April 2022. Real-time data collection and analysis occurred during the project window for May, June, and July of 2022. The data and analysis were used to determine practice gaps and if desired outcomes were achieved with the fall prevention toolkit. Gaps in practices were identified, and future program recommendations were developed. The program evaluation information was organized into a visual presentation in the dissemination phase.

The dissemination phase was the final stage of the project that took place from September 2022 through May 2023. During this phase of the project, the organization's leadership were presented the findings from the project to determine the merit and worth of the program based on program evaluation findings. This summary included if desired outcomes were met and impacted their safety culture based on fall data. In addition, organizational leadership could determine if they would use the project manager's recommendations to inform future program decisions. Findings were also reviewed at the organization's Fall Prevention Committee. The project was reviewed by the committee chair and second reader. The Scholarly Project Final Report was then presented at the Boise State University (BSU) Graduate Showcase and then presented at the executive session for the DNP program. The final report was submitted for publication in ScholarWorks at BSU.

Measures

The focus of interest for this scholarly project will be to perform a program evaluation of the fall prevention toolkit that was implemented previously within the facility. The scholarly project's outcomes (see Appendix C) are based on the organization's identified measure of success from the fall prevention toolkit. These outcomes were all entered in an outcome evaluation table describing the instrument, data, analysis goals, and analysis techniques to be completed for each outcome (see Appendix F).

Quantitative and qualitative data measures were chosen for this scholarly project and were collected in the project's implementation and data collection phases. The understanding of the desired

outcomes is improved by integrating and collecting both quantitative and qualitative data. Combining qualitative and quantitative data balances the limitations of one type of data with the other. In addition, combining data types will give an evaluator a better understanding of the "why" and "what" is being evaluated at through triangulation of both data types, thus improving the entire data analysis.

Data Collection Tools

The organization utilizes the Joint Commission's AMP tracer tool to log and track fall metric compliance and an Excel spreadsheet with fall data entered by the Patient Safety & Risk Management Department. The organization also has a developed Fall Prevention Dashboard with its measures of success that started with the rollout of the fall prevention toolkit. The measures of success focus on assessing fall risk within 24 hours of admission and assessing the patients as at risk for falls within 12 hours before the fall event. This information was pulled directly from nursing documentation on fall prevention interventions, risk assessment, and post-fall assessment within their electronic healthcare record (EHR) every 24 hours, making a secondary data set available. Gaining access to all these data sets is how Outcome 1 was measured.

The program evaluation relied on the primary data already being tracked and trended for fall metrics (Johnson & Sylvia, 2018). The facility's fall data is on a manual Excel spreadsheet. The spreadsheet captures the date and time of fall events, fall event types, fall location, and level of harm from occurrence reporting. The spreadsheet also tracks the completion of the post fall assessment and post fall huddle documentation. The patient's previous fall history, fall risk assessment within 24 hours of admission, and assessment within 12 hours of the fall event are also tracked. Outcomes 2, 3, 5, 6, and 7 were measured according to the fall data captured on these primary data sources. The organization's Fall Dashboard and secondary data was not utilized as it did not capture all fall events if any documentation components were missed.

Outcome 4 was measured using a Fall Prevention Efficiency Scale (FPES) developed by Dykes et. al (2021) that consists of 13 questions with 4-point Likert anchors (Strongly Disagree, Disagree, Agree, Strongly Agree). The chosen scale has Cronbach's α 0.88 for total test sample across four samples, 0.88 for sample validation, 0.82 for initial paired-sample t-test, and 0.92 for paired-sample retest. This tool was found to be valid and reliable. QR code was emailed or texted to staff for evaluation completion. The FPES can be found in Appendix G. Permission to utilize the FPES was obtained through the Copyright Clearance Center's RightsLink for Wolters Kluwer Health Inc. (see Appendix H).

There were also three questions in addition to the FPES for medical floor registered nurses (RN) staff to respond to. These questions were specific to what was going well with the organization's fall prevention program, what was not going well, and any suggestions for improvement of the fall prevention program. These three questions were open-ended to allow staff to write feedback as they saw fit.

In addition, two demographic questions were added to the tool for the organization's use after this project has been completed. These multiple-choice questions ask a participant to identify their work unit and their job title. These questions weren't pertinent or used for this project, because the only participants for this project were registered nurses working on the medical floor. The organization will use the tool developed for the project, plus the two demographic questions hospital-wide after the scholarly project implementation and data collection is completed.

This FPES was chosen to collect nurses' perceptions of the fall prevention program. Quantified data came from the 4-point Likert-type scale for assessment of knowledge of fall prevention program and efficiency of its application in practice. Qualitative data came from question comment boxes and open-ended questions for what is going well, what is not, and improvement suggestions. No personal information was collected. The complete survey tool used can be found in Appendix I.

Outcomes 8, 9, and 10 utilized the data in Outcomes 1-7. These outcomes were measured based on whether they were completed or not and required data collection and analysis of all seven preceding outcomes. Outcomes 1-7 were used to inform the program evaluation's recommendations to guide future decisions with the program developed and shared in Outcomes 8, 9, and 10.

Analysis

The complete Outcomes Evaluation Table can be found in Appendix F. Outcome 1 measured whether access was gained to the organization's charting systems, network, and fall data. Outcome 1 allowed for thorough program evaluation with the organizational data. No data analysis was done for Outcome 1, as it is a process outcome with a nominal yes or no result.

Outcome 2 had an analysis goal to determine if the assessment of fall risk status and implementation of interventions occurred early in the admission. Outcome 2 supported the fall prevention toolkit's standard of care for identifying fall risk status and intervention early. Outcome 2 utilized nominal data to count those fall events that had assessments completed within 24 hours of admission. Frequency distributions were used to arrange and present the quantitative data. Percentages were calculated based on the numerator of fall events that had an assessment completed divided by the denominator of total fall events. Run charts were utilized to trend compliance with this KPI over time, including pre-implementation of the fall prevention toolkit.

Outcome 3 had an analysis goal to determine nursing staff gaps in fall risk assessments. Outcome 3 supported the fall prevention toolkit's standard of care for the reassessment of fall risk at every shift change, change in patient condition, and at any transitions of care. Outcome 3 also utilized nominal data to count those fall events that had assessments completed within the 12 hours preceding the fall event. Frequency distributions were used to arrange and present the quantitative data. Percentages were calculated based on the numerator of fall events that had an assessment completed

divided by the denominator of total fall events. Run charts were utilized to trend compliance with this KPI over time, including pre-implementation of the fall prevention toolkit.

Outcome 4's feedback survey generated both quantitative and qualitative data. Quantitative data was based on the 4-point Likert scale used for the FPES. The qualitative data will come from the open-ended questions to collect feedback data on perceptions, current practice environment, and suggestions for improvements. The responses were categorized based on perceived strengths, barriers, and improvement suggestions voiced by the staff members completing the survey. Outcome 4 is how staff feedback will be incorporated into the program evaluation to inform the project manager and organization stakeholders better. This tool quantifies and qualifies staff's perceptions of the fall prevention program; this tool allowed for comparing staff's feedback with organizational data collected. The analysis goal was to help inform leadership if safety culture is improving. Descriptive statistics were used to get nominal counts, mean, and percentages of the FPES quantitative data responses. Narrative and content analysis was used on the qualitative data collected.

Outcome 5 focused on compliance with required post fall huddle and post fall assessment documentation completion during the evaluation window previously described. These are nominal counts used to determine two compliance percentages, one for post fall huddle compliance and one for post fall assessment compliance. The numerator was the fall events that had the documentation pieces completed, and the denominator was the total number of fall events. Run charts were utilized to evaluate compliance over time. This outcome was analyzed to determine if staff have incorporated the mandatory documentation into their personal practices and improved compliance from pre-implementation of the fall prevention toolkit.

Outcomes 6 and 7 were measured by completion or not using the formula to calculate falls per 1,000 patient days. Outcome 6 took the total number of fall events each month and divided it by the total patient days from the report sent by the Accounting Department. The result was then multiplied by

1,000 to get the organizational fall rate. Outcome 7 took the number of fall events with harm each month and divided it by the total patient days from the report sent by the Accounting Department. The result was multiplied by 1,000 to get the fall with injury rate. Both rates, once calculated, were compared to the goal and benchmark set by the organization to determine if they had dropped below them. Outcome 6 would show an improvement in patient safety efforts, while a reduction in Outcome 7 would indicate a decrease in patient harm events for the facility that are publicly reported.

Outcome 8's goal was to collaborate with the director of patient safety and risk management to ensure the program evaluation met facility needs and expectations. This outcome relied on the data collected in all the previous outcomes to facilitate this collaboration. The meeting in Outcome 8 facilitated the measurement and completion of Outcome 9. Program evaluation recommendations were developed with organizational stakeholder input to align with ongoing corporate planning around fall prevention practices. This step was necessary for meeting and presenting program evaluation findings to organizational leadership in Outcome 10. Outcome 10 is to inform stakeholders and organizational leadership on the state of their fall prevention program and if established outcomes were met. This will allow them to decide if program recommendations should be adopted after completion of the scholarly project in support of their ongoing efforts around fall prevention. No data analysis was done for Outcomes 8, 9, and 10, as they were process outcomes with a nominal yes or no measurement.

Ethical Considerations

Ethical Considerations and Protection of Participants

The project manager completed multiple online ethics and compliance training modules through the Collaborative Institutional Training Initiative (see Appendix J). This project is not intended or designed to be a research study and was submitted to Boise State University's Institutional Review Board (IRB) as a program evaluation project. No personal identifiers will be collected from the staff nurse participants or of patients in the fall data, maintaining their anonymity and confidentiality. Only

organizational data that was necessary and relevant to evaluate the fall prevention toolkit were reviewed and used.

Data were housed and protected on the host facility's secured network in an access restricted file that only the director of patient safety and risk management, director of quality, and patient safety and risk specialist have access to. The organization is providing the project manager with de-identified and scrubbed organizational fall data and staff responses. This de-identified and scrubbed organizational fall data and staff responses will be stored on the secured drive of the principal investigator as required by the IRB.

The FPES survey will be emailed out through the organization's email network and participation will be voluntary. To ensure anonymity and confidentiality there will be no way to track who participates and who does not in the emailed survey. With a nursing staff of 51 employees on the medical unit, there will be no way to connect any specific response back to an individual.

The fall prevention toolkit was developed at the organization's corporate level, which also vetted the initial fall prevention toolkit for all their facilities through their corporate teams and boards. The scholarly project was designed to assess the impact this toolkit program had on staff nurses' fall prevention practices within the local facility after implementation and reviewed the fall prevention toolkit outcomes to determine whether it successfully standardized fall prevention practices in the organization. This organization's reputation may be at risk by the way project information is reported and published. To mitigate any potential threat to the participants of the local facility, organizational input and approval were sought for all stages in the project timeline. Due to the sensitive nature of the data collected within the scholarly project, the organization has chosen to remain anonymous. All identifying information has been redacted from project publications and presentations.

Participation in program evaluation of the previously implemented fall prevention toolkit is voluntary for staff. The structure and design of program reinforcement were composed only of

necessary components highlighted in the gap analysis as not to be redundant and waste staff and leadership's time. Staff nurses agreed to participate, as this was a voluntary program evaluation of the previously mandatory fall prevention toolkit implementation. The evaluation was conducted to improve the future delivery of their standardized approach to fall prevention practices in their facility.

Conflicts of Interest & Biases

As the project manager, being employed in the Patient Safety and Risk Management Department at the medical center creates a potential conflict of interest that could affect the outcomes of this project. As an employee in the Patient Safety and Risk Management Department, the project manager is responsible for chairing the Fall Prevention Committee and sitting on the Patient Safety Committee. Therefore, there is a potential bias to justify the project's success to show organizational leadership the desired improvement in the organization's fall rates and a decrease in fall-related injuries. Fall metrics were collected as objective, quantifiable data to mitigate this bias, which reduces the opportunity for bias. This action maintains the integrity of the data and ensures honest program evaluation results. In addition, there is the assumption that nursing will desire to improve patient safety by implementing the corporate standards of care, which will enhance safety culture.

This program evaluation has a selection bias because the department chosen for review was based on the medical floor's previous fall performance metrics prior to implementation. This can positively or negatively impact the program evaluation depending on staff members' adoption and application of the initial fall prevention toolkit. There is also a component of selection bias in the aspect of staff's voluntary participation in program evaluation interventions. Only engaged high-performing staff will likely participate, which could influence results. Although randomization of involvement was not an option to mitigate this risk, we hope to obtain an adequate number of program participants to participate in the study across all performance levels to mitigate this bias. When developing this

program evaluation project, these biases were considered because staff members are employed by the organization and expected to adhere to corporate practice guidelines.

Threats to Quality

There are many competing organizational goals and metrics leading up to project implementation, including JC reaccreditation visits and corporate regulatory visits. There is a threat in nursing staff and floor leadership turnover after the initial implementation. There is a potential threat to the project if the corporation rolls out different fall initiatives before the previous program can be evaluated for success. Due to electronic delivery errors and unread emails, there is a potential threat of inadequate staff feedback on the fall prevention toolkit implementation.

The fall prevention toolkit is a corporate-driven initiative that the facility was required to implement. There was mandatory education for the initial fall prevention toolkit for all medical center nursing staff to standardized fall prevention care. Staff involved could feel pressured to participate in program evaluation feedback because the initial fall prevention toolkit was not voluntary and forced responses could decrease the quality and value of feedback responses. Staff could participate and check the required boxes without changing personal practice because they view this as another corporate initiative that will fail and not be sustainable. The initial implementation at the corporate level that excluded local leadership involvement can also introduce bias because local leaders have been working on these metrics with varying success without corporate help historically.

IRB Application and Project Determination

The Boise State University Institutional Review Board (IRB) reviewed this program evaluation project. The exempt application was submitted in March of 2022. The letter of determination was received from the IRB on April 27, 2022. The IRB determined this project did not meet their definition for human subjects' research and was granted exempt status. The letter of determination from the IRB can be found in Appendix K.

Project Budget

A DNP scholarly project requires expense management, and the project manager is responsible for estimating expenses, budgeting expenses, and controlling expenses related to the project (Reavy, 2016). The project's budget is a strategic piece of information that the host organization can use to make decisions regarding project implementation, establish baseline expenses, and determine the allocation of project funds (Reavy, 2016). This section presents this scholarly project's expense report, 2–3-year budget, and statement of operations created by the project manager.

Project Expense Report

The expense report for this scholarly project (see Appendix L) looks at four categories of estimated expenses: equipment and technology, materials and supplies, personnel, and space. The equipment and technology expense category is the most significant, with the EHR and regulatory program licensing fees accounting for 92% of the category's expenses.

Personnel expenses are the second-largest expense category. The personnel category includes the time and wages for the director of patient safety and risk management, project manager, IT coordinator, manager of the medical floor, fall prevention committee members, medical floor nursing staff, administration, and accounting personnel. The project's space expense was the third-largest category, followed by the materials and supplies category. The project's total estimated expenses are $64,133.

3 Year Budget

The estimated expenses for Years 2 and 3 (see Appendix M) are $33,594 and $35,273, respectively. The primary drivers for lower costs in Years 2 and 3 are eliminating the one-time EHR implementation and the reduced personnel costs. A 5% inflation rate was applied to Years 2 and 3 (United States Bureau of Labor Statistics, 2021).

Statement of Operations

The project's statement of operations (see Appendix N) shows the project's expenses, in-kind donations from the sponsoring organization, in-kind donations with the project manager's time, and operating income. This scholarly project was not designed to generate revenue for the sponsoring facility. However, does have the potential to impact cost savings from reduced write-offs, litigations, and uncompensated care. Therefore, this scholarly project has an operating income of zero, with in-kind contributions from the sponsoring organization and project manager covering all expenses.

Sustainability

The scholarly project was a program evaluation of the organization's implementation of a corporate fall prevention toolkit that focused on the fall prevention program's processes and products. Fall data tracking and trending, along with corporate KPIs, will be ongoing after the completion of the scholarly project. There are several substantial supporting factors for the sustainability of continuing evaluation of the organization's fall prevention program.

Program evaluation recommendations shared with the leadership and stakeholders with oversight of the fall prevention program can be adopted if they choose to do so after the completion of the program evaluation. However, if the administration and stakeholders decide to adopt the recommendations, there remains an ongoing need to evaluate any impacts on the program. Therefore, the decision resting on the organization's leadership and stakeholders to implement recommendations helps ensure sustainability and process improvement for the fall prevention program and establish ongoing evaluation efforts.

The value of the Patient Safety and Risk Management Department within the organization is seen in their aims to prevent and reduce risks, errors, and harm. The Patient Safety and Risk Management Department has oversight of all safety programs and their subsequent evaluations. Partnering with the Patient Safety and Risk Management Department for the scholarly project helps ensure its sustainability after completion.

The facility has an established Fall Prevention and Patient Safety Committee that has direct oversight and reporting obligations for how the fall prevention program is functioning and the organization's fall rates. There are also established pre-scholarly project expectations within the corporation that each facility will monitor fall data and report up data through the corporate Patient Safety Organization. There are also regulatory requirements that support ongoing program evaluation of the fall prevention program.

The organization is accredited by the JC, that also requires the monitoring and collection of data for performance improvement initiatives that support safety and quality of care for their patients as part of their provisions of care standards (JC, 2022). This organization also participates in voluntary reporting of adverse safety events, such as falls with injury, with the Joint Commission. This and the other identified factors contribute to the sustainability of the scholarly project and ongoing program evaluations. Continuous tracking, trending, and reporting will occur within the Patient Safety and Risk Management Department at the organization as it did prior to the scholarly project.

Results

Steps of the Interventions

Preliminary steps to develop the program evaluation of the corporate fall prevention toolkit were completed by April 30, 2022. Nursing leadership support for the project and approval by the facility's Fall Prevention Committee was finalized in May 2022. After IRB approval, the project manager worked with the director of patient safety and risk management to gain access to applicable fall data gathered before the implementation of the fall prevention toolkit in October 2021 and the post-toolkit implementation fall data. In addition, the project manager was given access to monitor concurrent fall data during the program evaluation. Frequent meetings between the project manager and the director of patient safety and risk management occurred throughout the program evaluation implementation phase.

Retrospective data were collected from January 2021 through April 2022, and concurrent fall data from May 2022 through July 2022. The FPES electronic survey tool was distributed to staff over two weeks to rate and provide feedback on the changes in the organization's fall prevention practices since October 2021. A total of six nurses responded to the survey. Fall data and survey responses were categorized and evaluated to determine if the fall prevention toolkit met the established measures of success, identified the program's strengths, and recognized the program's opportunities for improvement. Recognized opportunities for improvement were used to develop program recommendations in collaboration with the director of patient safety and risk management. The program evaluation findings and recommendations were shared with organizational stakeholders after the project.

Details of the Process Measures, Outcomes, and Analysis

The program evaluation consisted of 10 short-term outcomes outlined in the outcome evaluation table (see Appendix F). Outcome 1 was met. The project manager met with the director of patient safety and risk management and obtained access to the organizational fall data. The retrospective and concurrent fall data were used in the program evaluation of the corporate fall prevention tool kit.

Outcome 2 was met. A chart review was done to determine if nursing had assessed the patients who fell within 24 hours of admission for fall risk (see Appendix O). 100% (*N*=33, *n*= 33) of patients who experienced a fall were assessed within 24 hours of admission.

Outcome 3 was met. However, the data showed only 88% (*N*=33, *n*=29) adherence to the policy of reassessment 12 hours before a fall event. A chart review was done to determine if nursing had assessed the patients for fall risk within 12 hours of the fall event (see Appendix P).

Outcome 4 was partially met. The survey was open and distributed for two weeks, from July 25-August 5, 2022. Six nurses of the 23 eligible nurses completed the survey. The response rate was 26%

participation from nursing staff to provide feedback on the fall prevention toolkit (see Appendix Q), rather than the benchmark of 30%. Narrative staff response categories are in Appendix R.

Outcome 5 was not met. A chart review was done to determine if nursing complied with expectations for the completion of a post-fall huddle and post-fall assessment documentation as required by policy. A post-fall huddle was completed on 88% (N=33, *n*=29) of fall events (see Appendix S). A post-fall assessment was completed on 64% (N=33, *n*=21) of fall events rather than the desired 90% for both (see Appendix T).

Outcome 6 was not met. Post-implementation, the organization had 219 fall events, and the medical floor had 51. The organization's fall rate was 3.69. This was not below the organizational benchmark of 3 falls per 1,000 patient days. The medial floor fall rate was 5.44 per 1,000 patient days (see Appendix U).

Outcome 7 was met. The organization had six falls with injury events, and the medical floor had three. The organization's fall with injury rate was 0.112 per 1,000 patient days post-implementation of the fall prevention toolkit. This is below the national benchmark of 0.460 falls per 1,000 patient days. The medical floor fall with injury rate was 0.320 per 1,000 patient days (see Appendix V).

Outcomes 8, 9, and 10 were met. The project manager met with the director of patient safety and risk management on September 9, 2022. Program evaluation findings were shared during this meeting, and program recommendations were developed. On October 27, 2022, the program evaluation findings and recommendations were presented to organizational leadership during the Fall Prevention Committee meeting.

Contextual Elements & Associations Between Outcomes & Interventions

Multiple contextual elements interacted with the project's outcomes and interventions. A significant positive contextual element was the corporate focus on fall prevention with the development of the fall prevention toolkit and support materials for the organization. This corporate focus keeps fall

prevention a high priority in the organization. Conversely, the program evaluation's three negative contextual elements were the loss of the executive leadership team members, changes to the charting system for fall documentation, and high nursing turnover and vacancy rates. The impact of the contextual elements on outcomes and interventions will be discussed in more detail in the Interpretation section.

Unintended Consequences

The program evaluator met with the organization's division leadership in August 2022 and was briefed on their intent to define a fall prevention bundle for their division hospitals. An unintended benefit of this program evaluation was that it informed organizational stakeholders of the current practice status of the fall prevention program, specifically nursing practice compliance will fall-related patient assessments within 24 hours of admission and throughout their hospital stay. In addition, many of the proposed bundle elements are already in place with the organization's fall prevention program, leaving fewer new processes to rollout with the upcoming fall prevention bundle.

Missing Data

Two completed survey responses with multiple questions left blank resulted in missing data. This was attributed to the fact that the survey did not require an answer to all the questions. Documentation data was missing from the program evaluation. Missing documentation data included patients not assessed for fall risk within 12 hours of the fall event, missing post-fall assessment documentation by the nursing staff, and not completing a post-fall huddle after the fall event.

Actual Project Revenues and Expenses

This program evaluation's actual expenses were less than anticipated. The patient safety and risk management department at the beginning of 2021 moved away from auditing documentation compliance in the JC AMP program. This change resulted in a $7,450 decrease in expenses for the program evaluation. The program evaluation's expenses and revenue were met by in-kind donations

for the organization and program evaluator (see Appendix W).

Interpretation

Association Between Interventions and Outcomes

Most fall prevention programs focus on tracking and trending fall rates to determine the effectiveness of their fall prevention program. However, this alone is insufficient to perform a thorough fall program evaluation. Therefore, the program evaluator also reviewed the organization's fall risk assessment method, current practices of fall prevention assessment, interventions utilized for fall prevention, documentation compliance, and staff perceptions of the fall prevention program. In reviewing all these components collectively, the project manager completed a thorough program evaluation to inform the organization's stakeholders of the state of their fall prevention program following the implementation of a fall prevention toolkit.

Comparison of Results with Previous Findings

This program evaluation supports what was found previously in the literature for using a standardized fall prevention toolkit to reduce falls and fall-related injuries. The CIPP model was used to evaluate fall data and program compliance to established expectations, allowing for the tracking of practice improvements over time (Johnston & Magnan, 2019; Stufflebeam, 2000; Turner et al., 2019; Tzeng & Yin, 2015). The FPES tool for staff to provide valuable feedback on the fall prevention program was aligned with the literature recommendations to include them in the program evaluation (Dykes et al., 2019; Dykes et al., 2020; Johnston & Magnan, 2019; Turner et al., 2019; Tzeng & Yin, 2015). Finally, this program evaluation highlighted the literature-supported directives for organizations to engage in ongoing program evaluations as part of regular and routine processes (Barber et al., 2020; Farley & Battles, 2008; Lee et al., 2019; Stufflebeam, 2000).

Impact of Project on People and Systems

This program evaluation did not achieve all the projected outcomes as planned. However, this

program evaluation has impacted the organization's fall prevention program in establishing how it is currently performing after a fall prevention toolkit was implemented. The director of patient safety and risk management was impacted primarily by meeting and advising the project manager throughout the program evaluation planning, implementation, and dissemination phases. The organizational stakeholders liked the FPES tool for soliciting staff feedback and chose to deploy this tool to other units outside this project's scope. The only deliverable for bedside nursing staff outside the established organizational expectations was completing the voluntary staff survey. The project manager did the chart and data reviews. Still, they did require troubleshooting with the director of nursing informatics to fix fall data reporting functionality after documentation screens were updated to include the MORSE fall scale.

Reasons for Differences Between Observed and Anticipated Outcomes

The first negative contextual element that influenced the program evaluation was the loss of the CNO and ACNO at the facility. The organization has also replaced the medical floor director and the unit manager since project planning was started and program evaluation components were approved. These contextual elements jeopardized all the outcomes and interventions for the program evaluation if the new leadership was not on board with the project. The project manager attended the hospital's Fall Prevention Committee in May 2022 to introduce the program evaluation plan to the new leadership team and stakeholders and had to obtain their approval before beginning implementation.

The electronic survey tool (see Appendix I) used for staff feedback was introduced along with the plan for dissemination. The new nursing leadership gave their support and approval for the program evaluation. Nursing leadership's only suggestion was to move the survey window to the last week of July 2022 through the first week of August 2022. They felt that shifting the survey window would facilitate better response rates and avoid survey fatigue from the recent Vital Voices survey that staff was asked to complete in May 2022.

The second negative contextual element that influenced the program interventions was the organization's decision to implement a standardized fall risk assessment tool in June 2022. Unfortunately, the introduction of the tool into the charting system caused the high fall-risk reports to malfunction. This change required the project manager to work with the director of informatics to fix the existing report to pull fall data reports as before to complete Outcomes 1, 2, 3, 5, 6, and 7.

The final negative contextual element influencing outcomes was the high nursing turnover in the medical unit since implementing the fall prevention toolkit. This contextual element impacts Outcomes 2, 3, 4, and 5 because they each require nursing compliance with documentation to measure. The training on the fall prevention toolkit was not carried out at orientation for new staff hired after the initial medical unit staff training in September 2021. Onboarding new hires for the standardized fall prevention practices has been left to a required reading of the fall prevention policy and socializing practices with the experienced staff when they are on the unit. The organization reported a 40% vacancy rate when the survey tool was being opened for staff, and many staff on the unit were not present for the initial rollout of the fall prevention toolkit.

Costs and Strategic Trade-Offs

The program evaluation itself had no increase in cost to the organization. However, the program evaluation has shown the organization's move to a standardized corporate orientation process for all new staff members has impacted the onboarding expectations and training of the organization's fall prevention program. In addition, the new orientation model excludes local leaders, such as the director of patient safety and risk management. This strategic trade-off can limit fall prevention efforts moving forward.

Policy Implications

The organization that hosted the program evaluation project will remain JC accredited. Following the JC's (2022) provision of care requirement PC.01.02.08, the hospital will continue to need

to assess and manage patients' risk for falls and apply appropriate interventions based on the patient's assessed risk. This requirement facilitates the organization's ongoing fall prevention program policies, including appropriate interventions and staff education planning. The major implications of not improving documentation compliance are the loss of shared learning and process improvement within the organization to prevent future falls and patient injuries. In addition, the fall prevention policy and program expectations will need to address the staff onboarding concerns identified by the program evaluation.

Limitations

This program evaluation was limited by the organizational contextual elements discussed previously in achieving its outcomes. In addition, the program evaluation is specific to this organization and its fall prevention program, further limiting its applicability in other medical-surgical units within the corporation because it is a quality improvement project, not research. This program evaluation will be further limited based on the pending division-level standardized fall prevention policy set to come out in late 2022 to all their division hospitals. However, the program evaluator has met with division leadership and the director of patient safety and risk management to align program evaluation recommendations to anticipated division policy changes that build on the base corporate policy. Lastly, this project was limited to only looking at fall prevention from the nursing perspective and excluded those ancillary departments that regularly interact with high fall-risk patients.

Conclusions

Usefulness of the Work and Potential for Spread to Other Contexts

This program evaluation outlines the planning steps, outcome development, and necessary interventions to begin assessing a fall prevention program's performance, strengths, and opportunities for improvement. The program evaluation supports the ongoing program evaluation that will be needed to continue to review and update the hospital's fall prevention program based on evidence-based

practices and regulatory changes over time, by implementing a thorough foundational review. Observation and assessment of the medical floor fall data performed in this program evaluation will inform observation and review of the other units within the organization and how that funnel into the organizational fall data. The program evaluation process established by this project can and should lend to reviewing the effects that future changes to hospital fall prevention program may bring, particularly with the forthcoming division-level policy changes. Also, this program evaluation can be a model for the hospital to evaluate other internal programs.

Sustainability

This program evaluation was intended to determine the effect of implementing a corporate fall prevention toolkit on reducing the hospital's falls and fall-related injuries. Regulatory and corporate fall prevention requirements will ensure the sustainability of the organization's fall prevention program and will require ongoing assessment of the program's effectiveness in the future. Therefore, the host hospital's patient safety and risk management department will continue to manage and assess the fall prevention program after completing this project.

Implications for Practice and Further Study

The organization and the medical floor have seen a trending reduction in fall rate and fall with injury rate since the implementation of the fall prevention toolkit (see Appendix U and V). The organization has created fall prevention badge buddies, held policy-focused information events in the cafeteria, and developed fall prevention huddle topics for dissemination to educate nursing staff on fall risk assessment and post-fall documentation requirements. Despite these efforts, they are not reaching their documentation compliance goals of 90%.

Post-fall assessment documentation is trending upwards, while post-fall huddle documentation has been trending downwards since the implementation of the fall prevention toolkit (see Appendix S and T). One recommendation would be to add a checklist of required documentation to the back of the

post-fall huddle form, acknowledging that the checklist alone would not guarantee this part of the documentation was completed. The checklist would serve as a reminder to complete all the policy required documentation to improve the adherence statistics. The organization sent out the FPES tool to all inpatient units, so reviewing the staff feedback from this survey could inform more barriers to documentation compliance than seen on the medical floor alone.

All key players in fall prevention at the organization need to adhere to the standardized interventions for high fall risk patients as outlined in policy (Bowden et al., 2018; Dykes et al., 2019; Dykes et al., 2020; Johnston & Magnan, 2019; Tzeng et al., 2015). Implications for further study and investigation by the organization include a deep dive into what fall prevention education is currently presented in new employee orientation. This review also needs to examine how ancillary and interdisciplinary staff are educated and onboarded to help with the continuity of interventions and compliance with fall prevention efforts. Finally, stakeholders must develop a process improvement plan to reach all new nursing staff, interdisciplinary staff, and ancillary departments with fall prevention expectations.

The staff surveys identified issues in communicating patient ambulation status and toileting needs. Responding nurses felt that knowing the patient's ambulation capacity or witnessing ambulation would help them assess fall risk. The organization has an opportunity to renew efforts to promote and foster increased interdisciplinary communication of fall risk with various therapy disciplines by using the room whiteboard to communicate therapy assessment findings and directly sharing positive fall risks witnessed during therapy evaluations.

All six responses in the staff survey identified whiteboards not being updated with patient-specific fall information. Inadequate assessments and handoffs, poor collaboration, and substandard communication influence falls (Bowden et al., 2019; Constantinou et al., 2020; Dykes et al., 2019; Johnston & Magnan, 2019; Tzeng et al., 2015; Venema et al., 2019). In discussion with the director of

patient safety and risk management, this is an ongoing issue, even outside fall prevention within the organization. The use of the whiteboard as a communication tool between interdisciplinary team members, patients, and families have been established in the literature (Goyal et al., 2020; Law et al., 2022). Given the reported historical issues within the organization and staff feedback on the program evaluation, an organizational focus to increase compliance in updating this communication tool is warranted.

Alarm fatigue from all high fall risk patients requiring a bed alarm was noted consistently in the survey responses. The corporation implemented a new validated fall risk assessment tool in June of 2022. There is an opportunity for the hospital to track and compare the number of identified high fall risk patients before the implementation of this new tool to the number after to determine if there has been a reduction in the number of patients assessed as being high risk for falls. If a decline is seen, there is potential to lower the number of bed alarms to help combat alarm fatigue.

In reviewing fall data and survey responses, there is no good documentation or practice for engaging patients and family members in fall prevention planning and execution of interventions. The literature encourages engaging patients and family members in fall prevention efforts (Bowden et al., 2019; Constantinou et al., 2020; Domingue et al., 2018; Francis-Coad et al., 2020; Staggs et al., 2014; Venema et al., 2015). The organization could explore using fall contracts with patients and families and purposeful hourly rounding with patients and families for better communication and involvement.

Next Steps and Dissemination

Program evaluation findings and recommendations were shared with organizational stakeholders at their Fall Prevention Committee meeting in October 2022. The next step for stakeholders will be to determine if the facility will adopt any of the recommendations made by the project manager. They also will need to determine if there are further adjustments to be made following the rollout of standardized division-wide fall prevention policy and care bundles. There is an onus on the

Fall Prevention Committee and hospital executive leadership to promote a culture of accountability by holding unit leadership and staff responsible for fall prevention safety measures and documentation compliance. Fall bundles being rolled out assign specific interventions to the risk level that are not currently part of the corporate fall prevention toolkit. This project's outcomes and recommendations will be presented to cohort members, DNP program faculty, other nursing program students, and colleagues at Boise State University in March 2023.

References

Barber, C., Van Der Vleuten, C., Leppink, J., & Chahine, S. (2020). Social accountability frameworks and their implications for medical education and program evaluation: a narrative review. *Academic Medicine*, *95*(12), 1945-1954.

Bates, D. W., & Singh, H. (2018). Two decades since to err is human: an assessment of progress and emerging priorities in patient safety. *Health Affairs*, *37*(11), 1736-1743.

Bouldin, E. D., Andresen, E. M., Dunton, N. E., Simon, M., Waters, T. M., Liu, M., Daniels, M.J., Mion, L.C., & Shorr, R. I. (2013). Falls among adult patients hospitalized in the floored states: prevalence and trends. *Journal of patient safety*, *9*(1), 13.

Bowden, V., Bradas, C., & McNett, M. (2019). Impact of level of nurse experience on falls in medical surgical floors. *Journal of nursing management*, *27*(4), 833-839.

Burns, Z., Khasnabish, S., Hurley, A. C., Lindros, M. E., Carroll, D. L., Kurian, S., Alfieri, L., Ryan, V., Adelman, J., Bogaisky, M., Adkison, L., Yu, S.P., Scanlan, M., Herlihy, L., Jackson, E., Lipsitz, S.R., Christiansen, T., Bates, D., & Dykes, P. C. (2020). Classification of injurious fall severity in hospitalized adults. *The Journals of Gerontology: Series A*, *75*(10), e138-e144.

Constantinou, E., & Spencer, J. A. (2020). Analysis of inpatient medical center falls with serious injury. *Clinical nursing research*, 1054773820973406.

Domingue, S., Morelock, S., Walsh, J., Newcomb, P., Russe, C., Nava, A., Jones, A., & John, J. R. (2018). Beyond fall risk assessment: A case-control study in an Urban Medical Center. *Journal of clinical nursing*, *27*(21-22), 3894-3899.

Dykes, P. C., Bogaisky, M., Carter, E. J., Duckworth, M., Hurley, A. C., Jackson, E. M., Khasnabish, S., Lindros, M.E., Lipsitz, S.R., Scanlan, M., Yu, S.P., Bates, D. W., & Adelman, J. S. (2019). Development and validation of a fall prevention knowledge test. *Journal of the American Geriatrics Society*, *67*(1), 133-138.

Dykes, P. C., Burns, Z., Adelman, J., Benneyan, J., Bogaisky, M., Carter, E., Awatef, E., Lindros, M.E., Lipstiz, S.R., Scanlan, M., Shaykevich, S., & Bates, D. W. (2020). Evaluation of a patient-centered fall-prevention tool kit to reduce falls and injuries: a nonrandomized controlled trial. *JAMA network open*, *3*(11), e2025889-e2025889.

Dykes, P. C., Khasnabish, S., Burns, Z., Adkison, L. E., Alfieri, L., Bogaisky, M., Carroll, D. L., Carter, E. J., Hurley, A. C., Jackson, E., Kurian, S., Lindros, M. E., Ryan, V., Scanlan, M., Sessler, K., Shelley, A., Spivack, L. B., Walsh, M., Bates, D. W., & Adelman, J. S. (2021). Development and validation of a fall prevention efficiency scale. *Journal of patient safety*.

Farley, D. O., & Battles, J. B. (2009). Evaluation of the AHRQ patient safety initiative: framework and approach. *Health Services Research*, *44*(2p2), 628-645.

Francis-Coad, J., Hill, A.M., Jacques, A., Chandler, A.M., Richey, P.A., Mion, L.C., and Shorr, R.I. (2020). Association between characteristics of injurious falls and fall prevention interventions in acute medical and surgical floors. *Journals of Gerontology: Medical Sciences*, 75(10), 152-158.

Goyal, A., Glanzman, H., Quinn, M., Tur, K., Singh, S., Winter, S., Snyder, A., & Chopra, V. (2020). Do bedside whiteboards enhance communication in hospitals? An exploratory multimethod study of patient and nurse perspectives. *BMJ Quality & Safety*, *29*(10), 1-2.

Hill, A. M., Jacques, A., Chandler, A. M., Richey, P. A., Mion, L. C., & Shorr, R. I. (2019). In-medical center sequelae of injurious falls in 24 medical/surgical floors in four medical centers in the Floored States. *The Joint Commission Journal on Quality and Patient Safety*, *45*(2), 91-97.

Hill-Rom. (2021). *Products*. Advancing Connected Care | Hill-Rom. Retrieved March 22, 2022, from https://www.hillrom.com/en/products/

Institute of Medicine. 2000. *To Err Is Human: Building a Safer Health System*. Washington, DC: The National Academies Press. https://doi.org/10.17226/9728.

Johnston, M., & Magnan, M. A. (2019). Using a fall prevention checklist to reduce medical center falls:

results of a quality improvement project. *AJN The American Journal of Nursing*, *119*(3), 43-49.

Law, S., Antonacci, R., Ormel, I., Hidalgo, M., Ma, J., Dyachenko, A., Laframboise, D., & Doucette, E. (2022). Engaging patients, families and professionals at the bedside using whiteboards. *Journal of Interprofessional Care*, 1-10

Lee, S.Y., Shin, J. S., & Lee, S. H. (2019). How to execute Context, Input, Process, and Product evaluation model in medical health education. *Journal of educational evaluation for health professions*, *16*.

Makary, M. A., & Daniel, M. (2016). Medical error—the third leading cause of death in the US. *Bmj*, *353*.

McCawley. PF. (n.d.) The Logic Model for program planning and evaluation. The University of Idaho Extension: Moscow, ID. http://www.cals.uidaho.edu/edcomm/pdf/CIS/CIS1097.pdf

Reavy, K. (2016). *Inquiry and leadership: A resource for the DNP project*. F. A. Davis Company.

Sylvia, M. L. (2018). Primary data collection. In M. L. Sylvia & M. F. Terhaar (Eds.), Clinical analytics and data management for the DNP (2nd ed. pp. 87-95). Springer Publishing Company.

Staggs, V. S., Mion, L. C., & Shorr, R. I. (2014). Assisted and unassisted falls: different events, different outcomes, different implications for quality of medical center care. *The Joint Commission Journal on Quality and Patient Safety*, *40*(8), 358-364.

Stufflebeam, D. L. (2000). The CIPP model for evaluation. In *Evaluation models* (pp. 279-317). Springer, Dordrecht.

The Joint Commission. (2020, June 24). *Effective Jan. 1, 2021: Sentinel Event Policy to define fall events*. https://www.jointcommission.org/resources/news-and-multimedia/newsletters/newsletters/joint-commission-online/june-24-2020/effective-jan-1-2021-se-policy-to-define-fall-events/

The Joint Commission. (2022). *Do more with tracers with AMP*. Your Total Quality and Safety Resource | Joint Commission Resources. Retrieved March 22, 2022, from https://www.jcrinc.com/products-and-services/software/do-more-with-tracers-with-amp/

The Joint Commission. (2022, January 2). Joint Commission resources Portal. The Joint Commission E-Edition. https://edition.jcrinc.com/MainContent.aspx

The Joint Commission. (2022, July 1). Joint Commission resources portal. The Joint Commission E-Edition. https://edition.jcrinc.com/MainContent.aspx

Turner, K., Staggs, V., Potter, C., Cramer, E., Shorr, R., & Mion, L. C. (2020). Fall prevention implementation strategies in use at 60 Floored States medical centers: a descriptive study. *BMJ quality & safety*, *29*(12), 1000-1007.

Tzeng, H. M., & Yin, C. Y. (2015). Exploring post-fall audit report data in an acute care setting. *Clinical nursing research*, *24*(3), 284- 298.

Venema, D. M., Skinner, A. M., Nailon, R., Conley, D., High, R., & Jones, K. J. (2019). Patient and system factors associated with unassisted and injurious falls in medical centers: an observational study. *BMC geriatrics*, *19*(1), 1-10.

United States Bureau of Labor Statistics. (2021, September 17). Consumer price index rose 5.3 percent over the year ending August 2021: The economics daily: U.S. Bureau of Labor Statistics. https://www.bls.gov/opub/ted/2021/consumer-price-index-rose-5-3-percent-over-the-year-ending-august-2021.htm

W.K. Kellogg Foundation (2004). Logic model development guide. Retrieved from https://www.aacu.org/sites/default/files/LogicModel.pdf

Appendix A

Literature Review Summary Table

TITLE OF ARTICLE	AUTHORS	RESEARCH QUESTION OR AIM OF THE ARTICLE	TYPE OF STUDY (DESIGN)	LEVEL OF EVIDENCE	DESCRIPTION OF SAMPLE	OUTCOME MEASURES	RESULTS/KEY FINDINGS
Problem Background							
Two Decades Since *to Err is Human*: An Assessment of Progress and Emerging Priorities in Patient Safety	Bates & Singh, 2018	Evaluate the progress in addressing and reducing medical center-acquired adverse events since *To Err is Human* came out in 1999.	Literature Review	Level V- B	70 references cited	1. Evaluate the progress health care systems have made at reducing medical error events.	- Frequency of adverse safety events remain high, notable variability in compliance with implementation of proven interventions and compliance variations. - Errors that still need further addressing are handoffs, failure to rescue, misidentification of patients, pressure ulcers, and falls. - A consistent safety culture is a critical determinant of the success of safety interventions.
Classification of Injurious Fall Severity in Hospitalized Adults	Burns et al., 2020	Refine the major injury classification of falls for more reliability and categorization	Literature Review	Level V-B	12 referenced cited	Develop subcategories for major injury severity rating.	Subcategories that enhance the National Database of Nursing Quality Indicators that improve reliability and categories.
To Err is Human: Building a Safer Health System	Institute of Medicine, 2000	Bring awareness to the issue of preventable safety events caused by medical errors and break the cycle of inaction.	Literature Review Public Testimony Telephone Survey Two Group Meetings	Level IV- A	A phone survey was from the Joint Commission's list of states, and a non-representative sample was chosen from larger states. The first group of 19 people with	1. Comprehensive strategy for reducing medical errors in the healthcare setting.	- Established 8 recommendations to guide health systems and government policy to improve patient safety while seeking care and reducing harmful events. - Established a national focus to create leadership, research,

			Commissioned paper for legal issues raised with reporting		responsibilities for error reporting and programs. The second group, 14 people from medicine, nursing, and pharmacy.		tools, and protocols to enhance safety knowledge. - Identified that learning from errors increases patient safety. - Raised the standards and expectations for improving safety through organizational action. - Improve safety by implementing safety practices at the delivery level.
Medical error—the third leading cause of death in the US	Makary & Daniel, 2016	Medical errors are not captured in death certificates because no ICD code is attributed to them. As a result, medical error prevalence and incidence are under-reported.	Literature Review	Level V- B	22 references cited	1. Address the under-reporting of serious adverse harm events because it relies on death certificates based only on ICD codes.	- ICD codes don't capture humor or system errors associated with the cause of death in individuals. - Offered strategies to improve capture of medical errors on death records to improve reporting.
Fifteen Years after *To Err is Human*	Pronovost et al., 2016	The aim was to study the infections rates prior to the Institute of Medicine's *to Err is Human* with rates 15 years later to highlight the development of a successful approach to reducing CLABSIs.	Novel approach and chronicled success of CLABSI reduction since IOM's *To Err is Human*	Level V-B	National Infection Rates from 1900s-2013	1. Evaluate the progress health care systems have made at reducing medical error events.	- Only successful decreases in harm events have been in HAIs, which should inform other areas of harm on successful harm reduction strategies. - Michigan's CUSP program intervention was designed to train frontline staff to recognize hazards to make decisions that support safer care and safety culture. This was expanded to include a checklist for line insertion to prompt safe insertions. As a result, the CLABSI rate

							decreased by 66% in 18 months. - John Hopkin's randomized trial reaffirmed that prevention is possible on a large scale by changing norms about preventability and building support for infrastructure to promote prevention supported by a 70% reduction in CLABSIs in the control group and 21% in the control group.
Injurious Fall Characteristics that Require Mitigation Intervention							
Association Between Characteristics of Injurious Falls and Fall Preventive Interventions in Acute Medical and Surgical Floors	Francis-Coad et al., 2020	To identify the association between fall interventions at the time of fall injury and faller characteristics and determine the association between preventive interventions and fall circumstances.	Case-Control Study	Level III-A	24 Med/Surg floors in the Floored States and the 1,033 injurious patient falls.	Using secondary data analysis using logistic regression and hazard ratios: 1. Perform an analysis of fall circumstances, patient characteristics, and fall interventions. 2. Identification of trends in fall prevention and areas for improvement.	- Injurious falls were seen early in admission, suggesting that early interventions take place as soon as possible from admission 54.8% of injurious falls occurred within 4 days of admission. - Mental status change within 24 hours prior to a fall showed increased bed alarm use evidenced by a p-value of <.001, 27% of cases this was present. - 75.1% of falls were unwitnessed. - 49.9% of the falls were related to toileting needs. - Most events occur in the patient's room, 79.4%.

In-Medical center Sequelae of Injurious Falls in 24 Medical Floors in Four Medical centers in the Floored States	Hill et al., 2019	To determine if injurious medical center falls are associated with longer lengths of stay, increased mortality, and discharge to a place other than home.	Prospective Case-Control Study	Level III-A	24 Med/Surg floors in 4 medical centers in the US and 1,033 patients who sustained a fall with injury. 1,206 control group consisted of patients on the same floor at the same time and a similar number of days at the time of falls. 2005-2010	Using secondary data analysis with logistic regression and Cox regression determine the impact of injurious fall-related to: 1. Increased length of stay 2. Increased mortality 3. Increased risk of inability to return home on discharge.	- Compared to control groups, fallers who sustained injury had increased lengths of stay OR 1.59 with CI 95% and altered discharge disposition from going back home OR 1.52 CI 95%. - Falls may not be a "geriatric problem" as many in this study were under 70 years old. - Falls with injury are more common in older patients and on rehab or med/surg floors which admit older and confused patients than other floors. - Mental status changes within 24 hours p-value <0.001. - Multiple medications taken by fallers included antiarrhythmics, anticoagulants, antidepressants, antihypertensive, antipsychotics, etc., and had a p-value <0.001.

Assisted and Unassisted Falls: Different Events, Different Outcomes, Different Implications for Quality of Medical center Care	Staggs et al., 2014	To quantify the increased risk of injury associated with falling unassisted and estimate the effects of falling unassisted on injury levels.	Quantitative Descriptive Cross-Sectional Analysis through data extraction of all available data in 2011 on falls from the NDNQI.	Level III-A	166,883 falls in participating medical centers in NDNQI from medical and surgical floors across the Floored States.	Using GLIMMIX Procedure to fit hierarchical logistic regression models: 1. Examine the impact of falling assisted or unassisted on injuries sustained 2. Determine if this is a valid quality outcome measure.	- Unassisted falls are more likely than assisted falls to result in injury and support fall prevention efforts in reducing unassisted falls with aOR 1.59 with CI 95%. - Suitable quality outcome measure. - An educational approach to prevent falls is promising to reduce unassisted falls. - Floors more susceptible to unassisted falls include medical floors 88.6%, medical floors 87.4%, and surgical floors 84.1%.
Patient and System Factors Associated with Unassisted and Injurious Falls in Medical centers: An Observational Study	Venema et al., 2019	To identify risk factors for injurious falls in the rural medical center system.	Non-Experimental Descriptive Observational Study	Level III-B	17 medical centers, 353 reported fall events in rural medical centers in Nebraska	1. Use a multivariate logistic regression to examine the factors that predicted fall type and outcome.	- Cognitive impairments were associated with higher fall rates (p-value <0.001) and were more likely to be unassisted and centered around toileting needs. - Injury rate increased with age, toileting routines, and bathroom locations of falls. - Gait belts were associated (p-value <0.001) with reduced unassisted falls and reduced injury.
Potential Interventions to Improve Communication of Fall Risk Status							
Analysis of Inpatient Medical center Falls with Serious Injury	Constantinou et al., 2020	To understand the characteristics of those who sustained a fall with serious injury.	Retrospective Case Study	Level III-B	Convenience sampling for all patients that fell and sustained injury from a 1,200-bed Magnet medical center from 2015-2017. 53	1. Perform data analysis using an adapted Injurious Fall Data Collection Tool for all falls with a serious	- Highlights the need for improved communications between nursing and other team members involved in care. - Study showed support for the need to identify risk for injury

					records met inclusion criteria.	injury from 2015-2017.	at admission and at regular intervals. The need for patient and family engagement to overcome non-compliance behaviors were present in half the studied falls. - A recommendation to focus on interventions based around toileting may be beneficial in reducing fall-related injuries as half of the serious injury events occurred around toileting. Clearly communicate and identify patient-specific interventions based on a fall risk score so that patients, families, and other caregivers know what should be utilized. Interventions were only in place 88.7% of the time, but only 56.6% had interventions to reduce injury.
Beyond Fall Risk Assessment	Domingue et al., 2017	To examine the characteristics of patients who fell and compare them to patients who did not predict falls better.	Retrospective Case-Control Study	Level III-B	The records of 160 patients who experienced a fall and 160 patients who did not experience a fall in the Texas medical center system. Then random sampling of both groups' records to sample size of 302.	1. Establish if there is statistical significance between specific fall risk factors and falls in hospitalized patients on medical or surgical floors. 2. Identify fall risk score	- Nursing assessment is key to identifying fall-prone patients who may score low to moderate risk. - Patients also taking Ativan are at greater risk for falls, and interventions should be placed regardless of fall risk score with a p-value of 0.002. - A statistical relationship was found between toileting at the time of fall and being over 60 years old p-value 0.01.

						category based on John Hopkins Fall Risk Assessment Tool (JHFRAT) in relation to patients who fell. 3. Identify the differences in injuries sustained following a fall based on the fall risk score before JHFRAT.	
Evaluation of a Patient-Centered Fall Prevention Toolkit to Reduce Falls and Injuries	Dykes et al., 2020	To assess the fall prevention toolkit that engages patients and families in fall prevention processes is associated with fall and injury reduction.	Non-Randomized Controlled Trial Step Wedge Design	Level II-B	37,231 hospitalized inpatients from 14 medical floors within 3 separate academic medical centers.	1. Primary outcome of a reduction in fall rate per 1,000 patient days in targeted floors. 2. Secondary outcome was a reduction of fall rate with injury per 1,000 patient days.	- Implementation of a fall prevention tool kit was associated with a significant 15% reduction in falls and 34% reduction in fall-related injuries. - A patient care team partnership appears to be beneficial for preventing falls and injury.
Using a Fall Prevention Checklist to Reduce Medical center Falls: Results of a Quality Improvement Project	Johnston & Magnan, 2019	To promote patient safety by improving adherence to an existing medical center-approved fall prevention protocol.	Quality Improvement Project	Level V-B	Cancer Center Institution with 84 beds on six oncology specialty floors. The QI team had six members from various nursing backgrounds and roles. Staff participating in the pilot was 37 nurses with	1. Examine the impact of using a fall prevention checklist on the implementation of the 14 intervention-based fall prevention	- They developed a fall prevention audit to be done at the beginning of each shift and whenever there was a change in the level of care or patient condition. - The audit identified two consistently missed interventions of missing fall

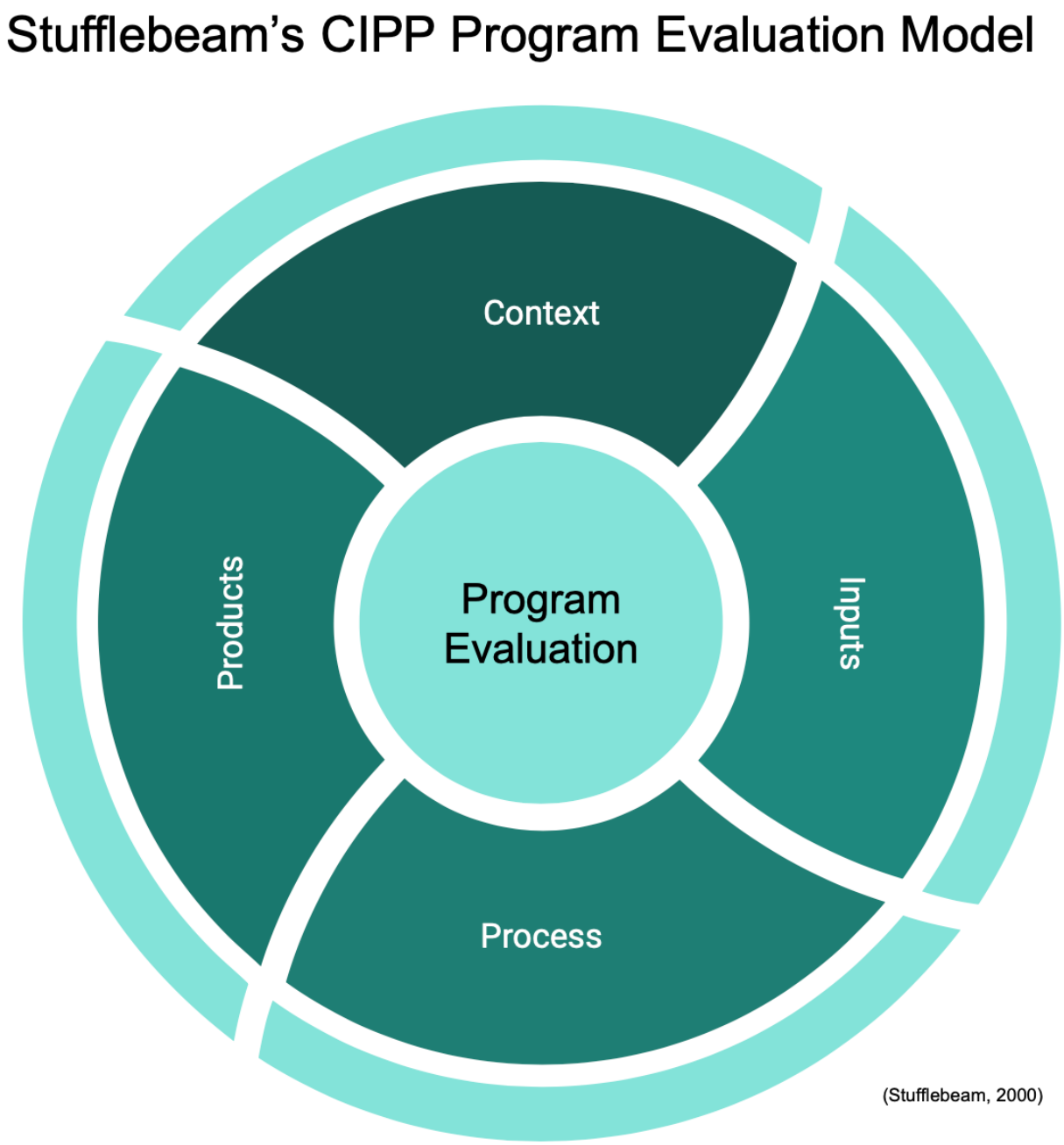
					90 completed fall prevention checklists.	protocol bundles. 2. Determine the incidence of falls on participating floors.	risk signage and correct bed alarm use, which was incorrectly set 19% of the time. - The checklist was an effective aid in shift handoff communication, with 78% of staff reporting that it should be used during handoffs.
Exploring Post-Fall Audit Report Data in an Acute Care Setting	Tzeng & Yin, 2015	Demonstrate one strategy for actionable and aggregated fall data to bedside nurses.	Retrospective Descriptive Study	Level III-B	119 patients fell during the study window and had completed post fall huddle form from Northwestern Floored States Medical center.	Data collection by using interview questions, chart review, documentation reminders, and additional information open-ended questions to: 1. Establish demographic characteristics of falls. 2. Identify interventions in place at the time of fall.	- The post fall huddle form was an approach to communicate back to bedside clinicians the fall data in an aggregated and actionable format. - Was promising as a fall reduction strategy as a preliminary finding. - Half of the falls occurred on the adult medical floor.
Potential Interventions to Assess Nursing Fall Prevention Knowledge and Increase Nursing Fall Competency							
Impact of Level of Nurse Experience on Falls in the Medical Floors	Bowden et al., 2018	Describe nurse-specific and patient risk factors present at the time of fall.	Descriptive Retrospective Cohort Study	Level III-B	2012-2013 344 hospitalized patients across 5 Medical and 6 Surgical floors in an academic health system who had a fall.	1. Determine staffing levels effect on fall rates. 2. Determine if increased falls are associated	- Nurse-specific factors that may influence falls and the background of nurses show the effect on overall outcomes such as failure to rescue and patient mortality.

						with less experienced nurses or more experienced nurses.	- Ongoing fall education preventions efforts for tenured staff as well as at new hire orientation are supported from this study. - Increased nursing staff on the floor decreased fall rates by three to four nurses 65.7%, decreased to 22.7% with five, and 4.4% with six nurses.
Development and Validation of a Fall Prevention Knowledge Test	Dykes et al., 2018	Perform a literature review to establish if a nurse-specific knowledge test around fall prevention existed or not and, if not, to develop and validate one.	Non-experimental Explanatory	Level III- B	209 nurses across 5 acute care medical centers	1. Presence of established knowledge test or not and if not. 2. Develop and validate a fall prevention knowledge test.	- Using fall research, they identified 28 items that caregivers should know and integrate into patient care plans to prevent falls. - They developed and validated a fall prevention knowledge test. - Knowing how to prevent falls is insufficient to prevent falls, but not having the basic knowledge of falls may be a contributing factor. -A fall validated knowledge test tool can inform fall prevention programs.
Fall Prevention Program Strategies							
Fall Prevention Implementation Strategies In-Use at 60 Floored States Medical centers: A Descriptive Study	Turner et al., 2020	To identify and describe the prevalence of specific fall prevention implementation strategies in the medical center.	Qualitative Descriptive Cross-Sectional	Level III- B	A subset of US medical centers participating in NDNQI for first and second quarter fall data in 2017. Convenience sampling of 800 study invitations 189 medical centers responded as volunteers to randomly select 80 medical	1. Assess how medical center fall prevention implementation strategies are operationalized in the US in fall prevention interventions.	- Found variations in interpretations of guidelines and implementation practices across all facilities. - Further research is needed to evaluate the quality of implementation strategies of fall prevention interventions and which are most effective.

					centers to participate in stratified random sampling. Focus on Med/Surg floor data.	2. Leadership influence on adoption and implementation of recommended practices.	- Leadership support is needed for successful fall prevention programs.
Program Evaluation							
Social Accountability Frameworks and Their Implications for Medical Education and Program Evaluation: A Narrative Review	Barber et al., 2020	Identify and document common themes for social accountability frameworks.	Integrative Review	Level V-B	33 documents, 4 key social accountability frameworks.	1. Identify common themes across frameworks and use 5 indicators from CIPP for context, input, process, products, and impact.	- This is a way to establish links between program inputs, products, and impacts using the CIPP model.
Evaluation of the AHRQ Patient Safety Initiative: Framework and Approach	Farley & Battles, 2009	Describe the evaluation performed on AHRQ's patient safety initiative using the CIPP program evaluation model.	Program Evaluation	Level V-A	AHRQ patient safety outcomes	1. Describe the process the patient safety initiative was evaluated over 4 years.	- Conceptual framework allowed for reviewers to examine key indicators and synthesize results across them; it was also responsive to the program changes over time using the CIPP model for program evaluation.
How to execute Context, Input, Process, and Product evaluation model in medical health education	Lee et al., 2019	Execute the CIPP model to perform an educational program review.	Integrative Review	Level V-B	N/A	1. Describe the use of the CIPP program evaluation model.	- CIPP model eases the evaluation process and provides the basis for program improvement.

Appendix B

Theoretical Model



Appendix C

Logic Model

Resources/Inputs	Activities	Outputs		Outcomes: Short term	Outcomes: Intermediate	Outcomes: Long term
Personnel: Director of Patient Safety and Risk Management, Project Manager, IT Coordinator **Time & Wages:** Director of Patient Safety and Risk Management, Project Manager, IT Coordinator **Supplies:** Fall Data, Paper/Ink **Equipment/Tech:** Computer, Internet, Meditech Charting System, Printer **Fiscal Resources:** Meditech, Computers, Internet, Paper/Ink, Printer **Space:** Patient Safety and Risk Management Department	- Obtain access to the organization's network and charting systems. - Work with Director to pull historical fall data. - Run EHR data report from January 2021-September 2021 and October 2021-April 2022. - Monitor EHR data in real-time May-June 2022 during a project window. - Obtain a copy of the organization's Fall Prevention Policy, Post Fall Huddle Form, and Fall Prevention Toolkit. -Obtain access to the electronic staff feedback form.	- Allows for thorough program evaluation to determine if desired outcomes were met. - Establishes merit and worth of fall prevention practices in the facility. - Establishes data indicators that show if culture change is occurring to improve patient safety.	- Director of Patient Safety and Risk Management - Project Manager - IT Coordinator	1. By May 1, 2022, the project manager obtained organizational monthly fall data from January 2021-September 2021 before the fall prevention toolkit implementation and monthly data from October 2021-April 2022 after implementation for retrospective review in program evaluation. (PO)	11. By August 2023, the organization had identified an internal evaluator for ongoing fall prevention program evaluations. (PO)	21. The successful integration of the corporate fall prevention plan has decreased patient fall events and fall-related injuries.

Resources/Inputs	Activities	Outputs		Outcomes: Short term	Outcomes: Intermediate	Outcomes: Long term
Personnel: Director of Patient Safety and Risk Management, Project Manager, Nursing Staff, Unit Leadership. **Time & Wages:** Director of Patient Safety and Risk Management, Project Manager, Nursing Staff, Unit Leadership **Supplies:** Fall Data, Fall Prevention Toolkit, Fall Prevention Policy **Equipment/Tech:** Computer, internet, Accreditation Manager Plus program (AMP), Microsoft Office, Meditech **Fiscal Resources:** AMP Program, Computers, Microsoft Office, Internet, Meditech **Space:** Patient Safety and Risk Management Department & Medical Unit	- Work with Director to pull historical fall data from EHR for October 2021-June 2022. - Review Fall Prevention Policy and Fall Prevention Toolkit. - Review post-implementation fall data to determine if fall risk was assessed within 24 hours of admission between May 1-July 15, 2022. - Calculate percentage compliance for October 2021-June 2022.	- Confirms if staff appropriately assess fall risk status to implement fall interventions at the beginning of the stay. -Supports standard of care for early identification of fall risk status and early intervention to prevent falls. - Establishes merit and worth of fall prevention practices in the facility. - Evaluate if there is a practice gap in timely fall risk assessment by nursing staff. - Establishes a process indicator for program evaluation and how it is doing.	- Director of Patient Safety and Risk Management - Hospital Administration - Fall Prevention Committee - Project Manager - Nursing Staff - Unit Leadership - Patients	2. By July 31, 2022, retrospective data analysis determined the percentage of fall events in which patients who had fall risk assessed within 24 hours of admission. (PO)	12. By June 2023, the key performance indicator of completing fall risk assessments within 24 hours of admission was in the 90th percentile by organizational trending. (PO)	22. The organization has sustained fall prevention efforts and met the corporate goal of zero patient harm.

Resources/Inputs	Activities	Outputs		Outcomes: Short term	Outcomes: Intermediate	Outcomes: Long term
Personnel: Director of Patient Safety and Risk Management, Project Manager, Nursing Staff, Unit Leadership **Time & Wages:** Director of Patient Safety and Risk Management, Project Manager, Nursing Staff, Unit Leadership **Supplies:** Fall Data, Fall Prevention Toolkit, Fall Prevention Policy **Equipment/Tech:** Computer, Internet, AMP Program, Microsoft Office, Meditech **Fiscal Resources:** AMP Program, Microsoft Office, Computers, Internet **Space:** Patient Safety and Risk Management Department & Medical Unit	- Work with Director to pull historical fall data from EHR for October 2021-June 2022. - Review Fall Prevention Policy and Fall Prevention Toolkit. - Review fall data to determine if patients who fell were identified at risk before falling between May 1-July 15, 2022. - Calculate percentage compliance for October 2021-June 2022.	- Determines if a gap in fall risk assessment by nursing staff exists. - Supports the standard of care to assess all patients for fall risk. - Indicator that can show if culture change is occurring to improve patient safety. - Establishes a process indicator for program evaluation and how it is doing.	- Director of Patient Safety and Risk Management - Hospital Administration - Fall Prevention Committee - Project Manager - Nursing Staff - Unit Leadership - Patients	3. By July 31, 2022, retrospective data analysis determined the percentage of patients who were assessed for fall risk within 12 hours prior to fall event. (PO)	13. By June 2023, there was a 5% decrease in patients who fell and were not screened for high risk within 12 hours of fall event by organizational trending compared to the percentage established in initial program evaluation by project manager. (CO)	23. The successful reduction of falls has reduced the organization's legal fees and indemnity payouts.

Resources/Inputs	Activities	Outputs		Outcomes: Short term	Outcomes: Intermediate	Outcomes: Long term
Personnel: Director of Patient Safety and Risk Management, Administration, Project Manager, Nursing Staff, Unit Leadership **Time & Wages:** Director of Patient Safety and Risk Management, Administration, Project Manager **Supplies:** Fall Data, Electronic Fall Feedback Form, Fall Prevention Toolkit, Fall Prevention Policy **Equipment/Tech:** Computer, Internet, AMP Program, Microsoft Office, Meditech **Fiscal Resources:** AMP Program, Microsoft Office, Computers, Internet **Space:** Patient Safety and Risk Management Department & Medical Unit	- Review Fall Prevention Policy and Fall Prevention Toolkit. - Review copy of developed electronic feedback form. - Use electronic feedback forms to obtain nursing staff insights for what is going well, what can be improved, and any barriers. - Review and analyze staff feedback obtained between May 1-July 15, 2022.	- Supports solid program evaluation by incorporating frontline nursing feedback into evaluation. - Potentially identifies weaker program areas not easily identified or captured by data. - Indicator that can show if culture change is occurring to improve patient safety. - Establishes a process indicator for program evaluation and how it is doing.	- Director of Patient Safety and Risk Management - Hospital Administration - Fall Prevention Committee - Nursing Staff - Project Manager - Unit Leadership	4. By July 31, 2022, 30% of the nursing staff on the medical floor provided feedback on the fall prevention toolkit, implementation barriers, potential gaps, and perceptions on what has gone well and what can be improved. (CO)	14. By August 2023, the organization had conducted a second feedback session with 80% nursing response following changes in their fall prevention program from the program evaluation. (PO)	

Resources/Inputs	Activities	Outputs		Outcomes: Short term	Outcomes: Intermediate	Outcomes: Long term
Personnel: Director of Patient Safety and Risk Management, Project Manager, Nursing Staff, Unit Leadership **Time & Wages:** Director of Patient Safety and Risk Management, Project Manager, Nursing Staff, Unit Leadership **Supplies:** Fall Data, Fall Prevention Toolkit, Fall Prevention Policy **Equipment/Tech:** Computer, Internet, AMP Program, Microsoft Office, Meditech **Fiscal Resources:** AMP Program, Microsoft Office, Computers, Internet **Space:** Patient Safety and Risk Management Department & Medical Unit	- Work with Director to pull historical fall data from EHR for October 2021-June 2022. - Review Fall Prevention Policy and Fall Prevention Toolkit. - Review post fall huddle forms or review period October 2021- June 2022. - Review Meditech documentation of post fall assessments or review period October 2021-June 2022. - Calculate compliance percentage for both post fall huddle documentation and post fall assessment documentation for review periods January 2021-September 2021 and October 2021-June 2022.	- Ensures nursing staff meet policy requirements and organizational expectations for documentation compliance. - Indicator that can show if culture change is occurring to improve patient safety. - Establishes a process indicator for program evaluation and how it is doing.	- Director of Patient Safety and Risk Management - Hospital Administration - Fall Prevention Committee - Nursing Staff - Project Manager - Unit Leadership - Patients	5. By July 31, 2022, retrospective fall data was accessed monthly for October 2021-July 2022 using the AMP program, which demonstrated >90% compliance with post fall huddle documentation and post fall assessment documentation since the fall prevention toolkit implementation. (CO)	15. By June 2023, the organization maintained >90% compliance in completing the required post fall documentation. (CO)	

Resources/Inputs	Activities	Outputs		Outcomes: Short term	Outcomes: Intermediate	Outcomes: Long term
Personnel: Director of Patient Safety and Risk Management, Accounting, Project Manager **Time & Wages:** Director of Patient Safety and Risk Management, Accounting, Project Manager **Supplies:** Fall Data, Patient Days **Equipment/Tech:** Computer, Internet, AMP Program, Microsoft Office, Meditech **Fiscal Resources:** AMP Program, Microsoft Office, Computers, Internet, Meditech **Space:** Patient Safety and Risk Management Department	- Work with Director to pull historical fall data from EHR for October 2021-June 2022. - Retrospectively review fall data between May 1-July 15, 2022. - Work with Accounting Department for monthly patient days report for January 2021- June 2022. - Calculate fall rate per 1,000 patient days for each month between January 2021- June 2022. - Calculate the overall fall rate per 1,000 patient days from January 2021-September 2021 and for October 2021-June 2022.	- Indicator that can show if culture change is occurring to improve patient safety. - Establishes a product indicator for program evaluation that shows what the program has accomplished.	- Director of Patient Safety and Risk Management - Hospital Administration - Fall Prevention Committee - Nursing Staff - Project Manager - Unit Leadership - Patients	6. By July 31, 2022, the organizational fall rate was below the organizational benchmark of 3 falls per 1,000 patient days. (CO)	16. By July 2023, the organization's fall rate was maintained below the organizational goal for 12 consecutive months. (CO)	

Resources/Inputs	Activities	Outputs		Outcomes: Short term	Outcomes: Intermediate	Outcomes: Long term
Personnel: Director of Patient Safety and Risk Management, Accounting, Project Manager **Time & Wages:** Director of Patient Safety and Risk Management, Accounting, Project Manager **Supplies:** Fall Data, Patient Days **Equipment/Tech:** Computer, Internet, Microsoft Office, Meditech, AMP Program **Fiscal Resources:** Microsoft Office, Computers, Internet, Meditech, AMP Program **Space:** Patient Safety and Risk Management Department	- Work with Director to pull historical fall data from EHR for October 2021-April 2022. - Retrospectively review fall data with noted injury between October 2021-June 2022. - Work with Accounting Department for monthly patient days report for January 2021- April 2022. - Calculate fall with injury rate per 1,000 patient days for each month between January 2021- June 2022. - Calculate overall fall with injury rate per 1,000 patient days for January 2021-September 2021 and October 2021-June 2022.	- Indicator that can show if culture change is occurring to improve patient safety. - Establishes a product indicator for program evaluation that shows what the program has accomplished.	- Director of Patient Safety and Risk Management - Hospital Administration - Fall Prevention Committee - Project Manager - Nursing Staff - Unit Leadership - Patients	7. By July 31, 2022, the organization's fall with injury rate was below the national benchmark of 0.460 per 1,000 patient days. (CO)	17. By July 2023, the organization's fall with injury rates was maintained below the national benchmark for 12 consecutive months. (CO)	

Resources/Inputs	Activities	Outputs		Outcomes: Short term	Outcomes: Intermediate	Outcomes: Long term
Personnel: Director of Patient Safety and Risk Management, Administration, Project Manager **Time & Wages:** Director of Patient Safety and Risk Management, Administration, Project Manager **Supplies:** Fall Data, Fall Prevention Integration Toolkit, Literature Review **Equipment/Tech:** Computer, Internet, AMP Program, Microsoft Office, Meditech **Fiscal Resources:** AMP Program, Microsoft Office, Computers, Internet, Meditech **Space:** Patient Safety and Risk Management Department	- Review Fall Data. - Review Fall Prevention Policy and Fall Prevention Toolkit. - Review fall literature for evidence-based practices. - Perform a gap analysis to determine areas that need remediation based on fall data, policy, toolkit, and literature between May 1-July 15, 2022.	- Establishes a process indicator for program evaluation and how it is doing. - Facilitates translation of evidence-based best practices into daily practice. - Informs administration of program opportunities for improvement. - Allow leadership to determine if they want to implement the remediation plan.	- Director of Patient Safety and Risk Management - Hospital Administration - Fall Prevention Committee - Project Manager - Nursing Staff - Unit Leadership - Patients	8. By September 30, 2022, the project manager will meet with the Director of Patient Safety and Risk Management to review program evaluation findings. (PO)	18. By December 2022, program evaluation recommendations were accepted by the director of patient safety and risk management. (PO)	

Resources/Inputs	Activities	Outputs		Outcomes: Short term	Outcomes: Intermediate	Outcomes: Long term
Personnel: Director of Patient Safety and Risk Management, Project Manager **Time & Wages:** Director of Patient Safety and Risk Management, Project Manager **Supplies:** Fall Data, Fall Prevention Toolkit, Literature Review **Equipment/Tech:** Computer, Internet, AMP Program, Microsoft Office, Meditech **Fiscal Resources:** AMP Program, Microsoft Office, Computers, Internet, Meditech, AMP Program **Space:** Patient Safety and Risk Management Department	- Review Fall Data. - Review Fall Prevention Policy and Fall Prevention Toolkit. - Perform a gap analysis to determine if there are areas that need remediation based on fall data. - Determine program evaluations and recommendations based on fall data, gap analysis, and fall literature for best practices between May 1-July 15, 2022.	- Informs administration of program opportunities for improvement. - Establishes a product indicator for program evaluation of what the program has accomplished. - Facilitates translation of evidence-based best practices into daily practice. - Allow leadership to determine if they want to implement the remediation plan.	- Director of Patient Safety and Risk Management - Hospital Administration - Fall Prevention Committee - Project Manager - Nursing Staff - Unit Leadership - Patients	9. By September 30, 2022, program improvement recommendations were developed in collaboration with organizational stakeholders and ongoing corporate planning. (PO)	19. By August 2023, the organization had adopted program evaluation recommendations. (PO)	

Resources/Inputs	Activities	Outputs		Outcomes: Short term	Outcomes: Intermediate	Outcomes: Long term
Personnel: Director of Patient Safety and Risk Management, Administration, Project Manager, Fall Prevention Committee **Time & Wages:** Director of Patient Safety and Risk Management, Administration, Project Manager, Fall Prevention Committee **Supplies:** Fall Data, Fall Prevention Toolkit, Literature Review **Equipment/Tech:** Computer, Internet, AMP Program, Microsoft Office, Meditech **Fiscal Resources:** AMP Program, Computers, Microsoft Office, Internet, Meditech **Space:** Patient Safety and Risk Management Department, Medical Unit, Conference Room	- Review Fall Data. - Review Fall Prevention Policy and Fall Prevention Toolkit. - Perform a gap analysis to determine if there are areas that need remediation based on fall data. - Determine program evaluations and recommendations based on fall data, gap analysis, and fall literature for best practices. - Remediation plan was submitted and approved by stakeholders. - Prepare information into a visual presentation. - Deliver a presentation to program stakeholders.	- Informs administration of the extent culture change has occurred to improve patient safety. - Organization leadership has current fall performance metrics and recommendations to continue program improvement following the scholarly project. - Allow leadership to determine if they want to implement the remediation plan.	- Director of Patient Safety and Risk Management - Hospital Administration - Fall Prevention Committee - Project Manager	10. By October 31, 2022, program evaluation recommendations were presented to organizational leadership. (PO)	20. By January 2023, the organization had implemented and completed the program evaluation recommendations. (PO)	

Appendix D

Memorandum of Understanding

This is withheld at the request of the partnering organization. The DNP project manager has retained a signed copy.

Appendix E

Timeline

An Inpatient Fall Prevention Program Evaluation using the CIPP Model																																	
Activity	**Oct 2020**	**Nov 2020**	**Dec 2020**	**Jan 2021**	**Feb 2021**	**Mar 2021**	**Apr 2021**	**May 2021**	**Jun 2021**	**Jul 2021**	**Aug 2021**	**Sep 2021**	**Oct 2021**	**Nov 2021**	**Dec 2021**	**Jan 2022**	**Feb 2022**	**Mar 2022**	**Apr 2022**	**May 2022**	**Jun 2022**	**Jul 2022**	**Aug 2022**	**Sep 2022**	**Oct 2022**	**Nov 2022**	**Dec 2022**	**Jan 2023**	**Feb 2023**	**Mar 2023**	**Apr 2023**	**May 2023**
Planning: Program Evaluation																																	
Literature Review / Problem Statement																																	
Executive session topic presentation																																	
Organizational Assessment/ SWOT Analysis																																	
Proposal Drafts																																	
Timeline																																	
Logic Model																																	
CITI Training																																	
Fall Prevention Committee Meetings																																	
Meetings with Organization Leadership																																	
Initial Integration Plan Intervention																																	
Organizational Approval for Project																																	
MOU																																	
Review Data For Practice Gaps																																	
IRB																																	
Proposal Presentation																																	
Review CIPP Program Evaluation Model																																	
Obtain Organizational Fall Data																																	
Implementation/Data Collection/Data Analysis:																																	
Solicit Feedback from Participants																																	
Updates to Director of Patient Safety																																	
Monitoring Required Fall Documentation																																	
Pull Data from Required Fall Documentation																																	
Review Fall Data For Practice Gaps																																	
Visually Format Findings																																	
Evaluate Outcomes																																	
Formulate Recommendations																																	
Dissemination:																																	
Review findings with Patient Safety Director																																	
Review findings with Committee Chair																																	
Review findings Fall Prevention Committee																																	
Present in Executive Sessions																																	
Present in BSU Showcase																																	
Final Report:																																	
Write Final Report																																	
Submit Final Report																																	

Appendix F

Outcome Evaluation Table

Scholarly Project Outcome Evaluation Table			
Outcome	**Data Collection Instrument / Data**	**Analysis Goal**	**Analytic Technique**
1. By May 1, 2022, the project manager obtained organizational monthly fall data from January 2021- September 2021 before the fall prevention toolkit implementation and monthly data from October 2021-April 2022 after implementation for retrospective review in program evaluation. (PO)	Instrument: Facility's fall data Excel Spreadsheets and AMP program data: date/time of fall event, fall event type, fall location, level of harm, identified cause of event, post fall assessment completion, post fall huddle completion, repeat fall event, alarm related event, fall history assessed on admission, fall risk status identified within 24 hours of admission, fall risk status was assessed with applied interventions within 12 hours prior to the fall event. Data: Quantitative primary data showing compliance with all identified KPIs from the fall integration plan chosen for program evaluation. Contains data 6 months before implementation fall data to facilitate the evaluation of the program's performance.	Gain access to facility's charting systems, network, and data. Allows for thorough program evaluation with organizational data.	Yes or No.
2. By July 31, 2022, retrospective data analysis determined the percentage of fall events in which patients who had fall risk assessed within 24 hours of admission. (PO)	Instrument: Facility's fall data Excel Spreadsheets and AMP program data: date/time of fall event, fall event type, fall location, level of harm, identified cause of event, post fall assessment completion, post fall huddle completion, repeat fall event, alarm related event, fall history assessed on admission, fall risk status identified within 24 hours of admission, fall risk status was assessed with applied interventions within 12 hours prior to the fall event. Data: Quantitative primary data October 2021-June 2022 showing the number of fall events and compliance for fall risk assessment within 24 hours of admission.	Determines if an assessment of fall risk status and implementation of fall interventions occurred at the beginning of stay. Supports standard of care for early identification of fall risk status and early intervention to prevent falls.	Descriptive statistics for quantitative data will be used to determine the nominal count and percentages of patients who fell assessed within 24 hours of admission. Run charts will be used to trend compliance over time.
3. By July 31, 2022, retrospective data analysis determined percentage of patients who were assessed for	Instrument: Facility's fall data Excel Spreadsheets and AMP program data: date/time of fall event, fall event type, fall location, level of harm, identified cause of event, post fall assessment completion, post fall huddle completion, repeat fall event, alarm related event,	Determines if a gap in fall risk assessment by nursing staff exists.	Descriptive statistics for quantitative data will be used to determine the

fall risk within 12 hours prior to fall event. (PO)	fall history assessed on admission, fall risk status identified within 24 hours of admission, fall risk status was assessed with applied interventions within 12 hours prior to the fall event. Data: Quantitative primary data October 2021-June 2022 showing the number of fall events and compliance for fall risk assessment within 12 hours before the fall event.	Determine if staff assess fall risk every shift and mitigate fall risk prior to a fall event.	nominal count and percentages of patients who fell assessed within 12 hours of the fall event. Run charts will be used to trend compliance over time.
4. By July 31, 2022, 30% of the nursing staff on the medical floor provided feedback on the fall prevention toolkit, implementation barriers, potential gaps, and perceptions on what has gone well and what can be improved. (CO)	Instrument: Fall Prevention Efficiency Scale: 13 questions, 4 Likert anchors (Strongly Disagree, Disagree, Agree, Strongly Agree). Cronbach's a 0.88 for total test sample across four samples, 0.88 for sample validation, 0.82 for initial paired-sample t-test, and 0.92 for paired-sample retest. QR code will be emailed or texted to staff for evaluation completion. 3 open-ended questions for staff to respond to what is going well, what can be improved, and any barriers faced. 2 demographic questions will be collected regarding unit worked in and job title in multiple-choice format. Data: Staff perceptions of the fall prevention program. Quantified data from a 4-point Likert-type scale for assessment of knowledge of fall prevention program and efficiency of its application in practice. Qualified data from question comment boxes and open-ended questions for what is going well, what is not, and improvement suggestions. No personal information will be collected.	Incorporate, quantify, and qualify staff's perceptions of the fall prevention integration plan 6-9 months after initial implementation to inform program evaluation for organizational stakeholders. Compare if fall data supports any perceived issues reported by staff. Inform the program evaluation if safety culture is improving.	Descriptive statistics for quantitative data will determine nominal count, mean, percentages. Categorize commonalities for qualitative data.
5. By July 31, 2022, retrospective fall data was accessed monthly for October 2021-July 2022 using the AMP program, which demonstrated >90% compliance with post fall huddle documentation and post fall assessment documentation	Instrument: Facility's fall data Excel Spreadsheets and AMP program data: date/time of fall event, fall event type, fall location, level of harm, identified cause of event, post fall assessment completion, post fall huddle completion, repeat fall event, alarm related event, fall history assessed on admission, fall risk status identified within 24 hours of admission, fall risk status was assessed with applied interventions within 12 hours prior to the fall event.	Determine if staff have incorporated mandatory documentation into their personal practices and improved compliance to fall prevention policy expectations.	Descriptive statistics for quantitative data will be used to determine nominal count and percentages of compliance with post fall

since the fall prevention toolkit implementation. (CO)	Data: Quantitative primary data from October 2021-June 2022 showing compliance with all identified KPIs from the fall integration plan chosen for program evaluation.		documentation. Run charts will be used to trend compliance over time.
6. By July 31, 2022, the organizational fall rate was below the organizational benchmark of 3 falls per 1,000 patient days. (CO)	Instrument: Falls per 1,000 patient days calculation (Number of patient falls/ Number of patient days) *1,000= Fall Rate Data: Quantitative fall data and actual patient days from Accounting Department.	Show improvement in patient safety efforts by getting below the low end of the national benchmark for falls.	Yes or No
7. By July 31, 2022, the organization's fall with injury rate was below the national benchmark of 0.460 per 1,000 patient days. (CO)	Instrument: Falls per 1,000 patient days calculation (Number of severe harm patient falls/ Number of patient days) *1,000= Severe Fall with Injury Rate Data: Quantitative fall data and actual patient days from Accounting Department.	Show decrease in falls with injury events that improve patient safety.	Yes or No
8. By September 30, 2022, the project manager will meet with the Director of Patient Safety and Risk Management to review program evaluation findings. (PO)	Instruments: This measurement will be based on completing the preceding outcomes and formulating program recommendations shown by quantitative and qualitative data to stakeholders. Data: Primary qualitative and quantitative program evaluation findings based on compliance with identified KPIs	Collaboration of project manager with Director of Patient Safety and Risk Management to ensure program evaluation met facility needs and expectations.	Yes or No
9. By September 30, 2022, program improvement recommendations were developed in collaboration with organizational stakeholders and ongoing corporate planning. (PO)	Instrument: This measurement will be based on completing the preceding outcomes and formulating program recommendations shown by quantitative and qualitative data to stakeholders. Data: PowerPoint presentation of program evaluation findings for quantitative and qualitative data, show areas that are not meeting KPI goals, and suggestions for remediation of opportunity areas.	Offer recommendations to address any opportunities for improvement identified from the program evaluation.	Yes or No
10. By October 31, 2022, program evaluation recommendations were presented to organizational leadership. (PO)	Instrument: This measurement will be based on completing the preceding outcomes and formulating program recommendations shown by quantitative and qualitative data to stakeholders. Data: PowerPoint presentation of program evaluation findings for quantitative and qualitative data, show areas that are not meeting KPI goals, and suggestions for remediation of opportunity areas.	Inform stakeholders on the fall prevention program's progress to guide future program decisions and goals.	Yes or No

Appendix G

Fall Prevention Efficiency Scale

TABLE 6. Fall Prevention Efficiency Scale

	Response			
	SD	**D**	**A**	**SA**
Our fall prevention program conserves our time because:				
1. No extra work is required since components of our fall prevention program are integrated within our work flow				
2. The resources we need to carry out the program are readily available				
3. We know if a patient needs to have a bed alarm activated or not				
4. We know a patient's ambulation status				
Our fall prevention program wastes our time because:†	SD	D	A	SA
5. Of not being sure the plan in the patient's room is current				
6. Of the steps needed to update the plan in the patient's room				
Fall TIPS‡ is worth the time it takes because we:	SD	D	A	SA
7. Do not have to check toileting procedures, since patients' fall prevention plans are visible in their rooms				
8. Found Fall TIPS easy to use once learned				
9. Involving the patient and asking questions while conducting the fall risk assessment is helpful				
My opinion about Fall TIPS‡ is that:	SD	D	A	SA
10. Observing patients' capacity to ambulate during the fall risk assessment is helpful				
11. Planning fall prevention interventions with the patient is helpful				
12. Involving thee family with the patient's fall prevention plan is helpful				
13. Having patient specific fall prevention interventions versus knowing "low, medium, high fall risk" is helpful				

Thank you in advance for responding to the items below to help us understand your beliefs about using your hospital's fall prevention program. Responding to items indicates that you know you are participating in a research project*. This is an anonymous survey. Please read each item below and check the degree with which you agree or disagree with each item: SD, strongly disagree; D, disagree; A, agree; SA, strongly agree.

*For quality improvement projects, remove the statement about "research project."

†Reverse code.

‡For sites not using Fall TIPS, substitute either the name of the fall prevention program used or "our fall prevention program."

Appendix H

Scale Permissions

WOLTERS KLUWER HEALTH, INC. LICENSE TERMS AND CONDITIONS

Jan 20, 2022

This Agreement between Ms. Brittany Harker ("You") and Wolters Kluwer Health, Inc. ("Wolters Kluwer Health, Inc.") consists of your license details and the terms and conditions provided by Wolters Kluwer Health, Inc. and Copyright Clearance Center.

The publisher has provided special terms related to this request that can be found at the end of the Publisher's Terms and Conditions.

License Number	5233250982314
License date	Jan 20, 2022
Licensed Content Publisher	Wolters Kluwer Health, Inc.
Licensed Content Publication	Journal of Patient Safety
Licensed Content Title	Development and Validation of a Fall Prevention Efficiency Scale.
Licensed Content Author	Dykes, Patricia; PhD, RN; Khasnabish, Srijesa; Burns, Zoe; Adkison, Lesley; PhD, RN; Alfieri, Lois; MSN, RN; Bogalsky, Michael; Carroll, Diane; PhD, RN; Carter, Eileen; PhD, RN; Hurley, Ann; DNSc, RN; Jackson, Emily; MBA, RN; Kurian, Susan; EdD, MSN; Lindros, Mary; Ellen EdD, RN; Ryan, Virginia; MSN, RN; Scanlan, Maureen; MSN-BC, RN; Sessler, Kelly; MPH, RN; Shelley, Alexandra; MS, FNP-BC; Spivack, Linda; Walsh, Mary-Ann; BSN, CPPS; Bates, David; MD, MSc; Adelman, Jason; MD, MS
Licensed Content Date	Jan 12, 2022
Licensed Content Volume	Publish Ahead of Print
Type of Use	Manner not listed
Requestor type	University/College
Sponsorship	No Sponsorship
Format	Print and electronic
Portion	Figures/tables/illustrations
Number of figures/tables/illustrations	1
Author of this Wolters Kluwer article	No
Will you be translating?	No
Intend to modify/change the content	No
Special Requirements	Use the Fall Prevention Efficiency Scale in my DNP project
Portions	Table 6. Fall Prevention Efficiency Scale Image on page 7
Attachment	
Requestor Location	[redacted]
Publisher Tax ID	
Billing Type	
Billing Address	
Total	
Terms and Conditions	

Appendix I

Survey Form

Fall Prevention Program Survey

Thank you in advance for responding to the items below to help us understand your beliefs about using your hospital's fall prevention program. Responding to items indicates that you know you are participating in a quality improvement project. This is an anonymous survey. Please read each item below and check the degree with which you agree or disagree with each item: SD, strongly disagree; D, disagree; A, agree; SA, strongly agree.

Job Title: RN PCT/CNA

Home Unit: Float Pool Med/Onc PCU Rehab Surg/Ortho

Our fall prevention program conserves our time because:				
1. No extra work is required since components of our fall prevention program are integrated within our work flow	SD	D	A	SA
2. The resources we need to carry out the program are readily available	SD	D	A	SA
3. We know if a patient needs to have a bed alarm activated or not	SD	D	A	SA
4. We know a patient's ambulation status	SD	D	A	SA
Our fall prevention program wastes our time because:†				
5. Of not being sure the plan in the patient's room is current	SD	D	A	SA
6. Of the steps needed to update the plan in the patient's room	SD	D	A	SA
Our fall program is worth the time it takes because we:				
7. Do not have to check toileting procedures, since patients' fall prevention plans are visible in the room	SD	D	A	SA
8. Found the fall program easy to use once learned	SD	D	A	SA
9. Involving the patient and asking questions while conducting the fall assessment is helpful	SD	D	A	SA
My opinion about the fall program is that:				
10. Observing patient's capacity to ambulate during the fall risk assessment is helpful	SD	D	A	SA
11. Planning fall prevention interventions with the patient is helpful	SD	D	A	SA
12. Involving the family with the patient's fall prevention plan is helpful	SD	D	A	SA
13. Having patient specific fall prevention interventions versus knowing "low, medium, high fall risk" is helpful	SD	D	A	SA

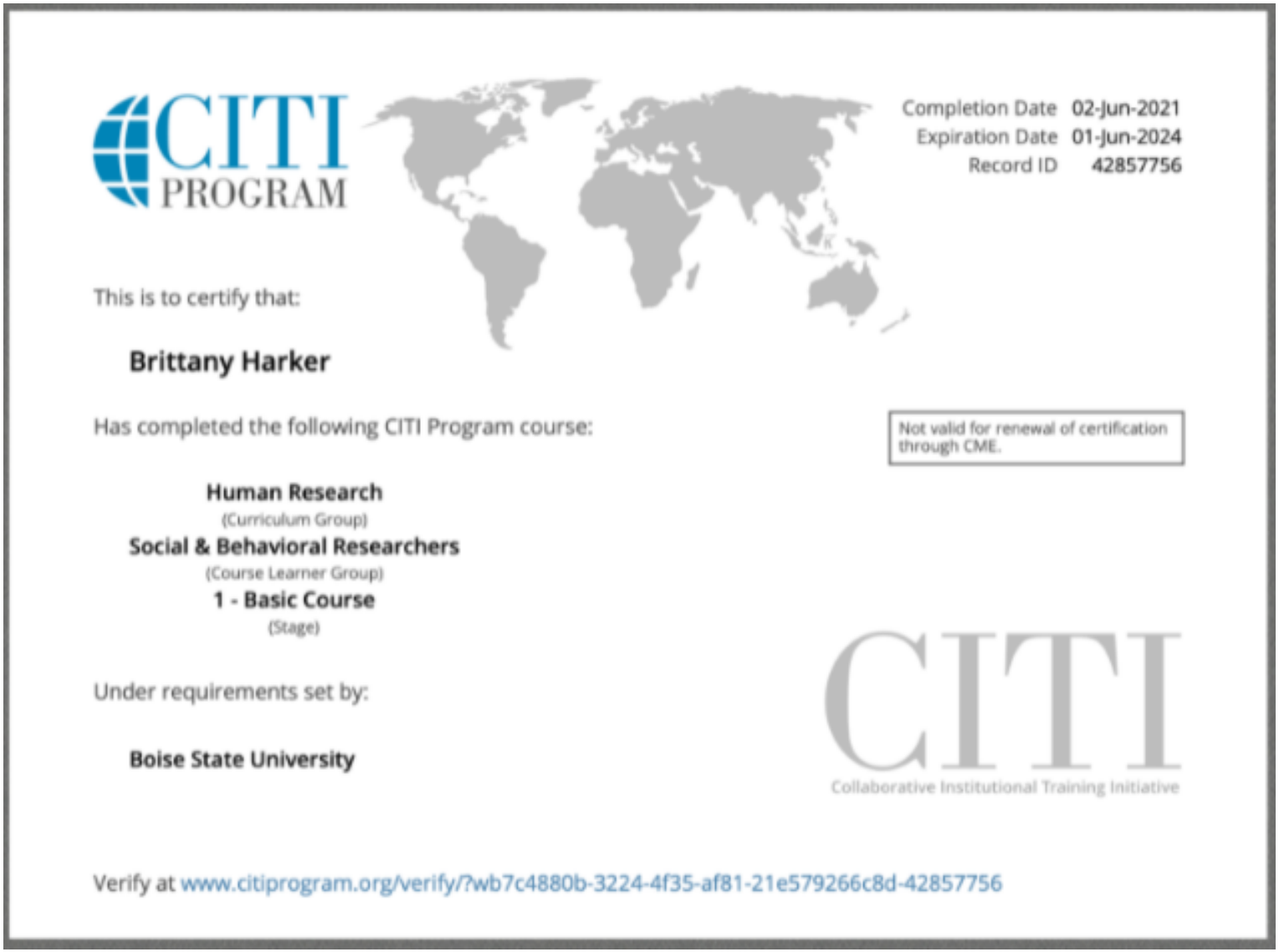
What parts of our fall prevention program do you feel are going well?

What parts of our fall prevention program do you feel are not going well?

Do you have any suggestions to improve our fall prevention program?

Appendix J

CITI Training



CITI PROGRAM

Completion Date 02-Jun-2021
Expiration Date 01-Jun-2024
Record ID 42857756

This is to certify that:

Brittany Harker

Has completed the following CITI Program course:

Not valid for renewal of certification through CME.

Human Research
(Curriculum Group)
Social & Behavioral Researchers
(Course Learner Group)
1 - Basic Course
(Stage)

Under requirements set by:

Boise State University

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?wb7c4880b-3224-4f35-af81-21e579266c8d-42857756

Appendix K

IRB Determination Letter

BOISE STATE UNIVERSITY
RESEARCH AND ECONOMIC DEVELOPMENT
Research Compliance

April 27, 2022

Sara Ahten
Associate Professor | Boise State University
School of Nursing
Mail Stop 1840

Dr. Ahten,

The Office of Research Compliance (ORC) has received your IRB exempt protocol application titled, "An Inpatient Fall Prevention Program Evaluation Using the CIPP Model." After reviewing, we have determined that your project does not meet our definition of "human subjects research." Your research does not involve human subjects, as defined under 45 CFR 46.102(f), as this submission qualifies as program evaluation. Therefore, your research does not involve "human subjects," and you are not required to submit a protocol application to the Boise State IRB.

Please do not hesitate to contact me if you have any questions:
(208) 426-5402
pipertraywick@boisestate.edu
Mail Stop 1138

Sincerely,
Piper Traywick
IRB Coordinator

Appendix L

Project Expense Report

					Grand Total	**$ 64,133.00**
Expense Category	**Expense Description**	**Explanation of Expense**	**Type of Cost**	**Volume**	**Cost per Unit**	**Total**
Equipment/Tech	Computer	Data collection, analysis, scholarly project presentation development, and virtual meetings.	Fixed	1 Computer	$290.00/ Computer	$ 290.00
Equipment/Tech	Monitors	Data collection, analysis, scholarly project presentation development, and virtual meetings.	Fixed	2 Monitors	$167.00/ Monitor	$ 334.00
Equipment/Tech	Mouse	Data collection, analysis, scholarly project presentation development, and virtual meetings.	Fixed	1 Mouse	$43.00/ Mouse	$ 43.00
Equipment/Tech	Keyboard	Data collection, analysis, scholarly project presentation development, and virtual meetings.	Fixed	1 Keyboard	$80.00/ Keyboard	$ 80.00
Equipment/Tech	Microsoft Office	License cost for data collection, data analysis, scholarly project presentation development, and virtual meetings.	Fixed	3 Months x 1 Project Manager = 3 Months	$32.00/ Month/ User	$ 96.00
Equipment/Tech	Meditech	Initial license & software cost for EHR system.	Fixed	1 Hospital x 1 Year	$25,000.00/ year	$ 25,000.00
Equipment/Tech	Internet	Internet access for the project manager to view the facility's	Fixed	1 User x 9 Months	$80.00/ Month	$ 720.00

		fall data and participate in virtual meetings.				
Equipment/Tech	Accreditation Manager Plus (AMP)	License cost for the regulatory program used for auditing and trending fall documentation compliance.	Fixed	Unlimited Users x 1 Year	$7,450.00/ Year	$ 7,450.00
Equipment/Tech	Printer	Printing policies, integration plan, and fall data.	Fixed	1 Printer	$973.00/ Printer	$973.00
Equipment/Tech	Projector	Presentations to Fall Committee & Stakeholders.	Fixed	1 Projector	$300/ Projector	$ 300.00
Equipment/Tech	Projector Screen	Presentations to Fall Committee & Stakeholders.	Fixed	1 Screen	$76.00/ Screen	$ 76.00
Materials & Supplies	Paper	Printing policies, integration plan, communications, and fall data.	Fixed	1 Paper Ream	$5.00/ Ream	$ 5.00
Materials & Supplies	Ink	Printing policies, integration plan, communications, and fall data.	Fixed	1 Ink Cartridge	$165.00/ Cartridge	$ 165.00
Personnel	Patient Safety & Risk Specialist Wages/Project Manager	RN is responsible for fall data collection, data analysis, program evaluation, and presentation to stakeholders.	Variable	600 Hours x 1 Specialist = 600 Hours	$38.00/ Hour	$ 22,800.00
Personnel	Director of Patient Safety and Risk Management Wages	Director with oversight of all patient safety initiatives and program, assist in data collection of historical fall data, facilitator of fall prevention toolkit, work with the project manager to establish evaluation purpose and goals and sign off on end results prior to	Variable	50 Hours x 1 Director= 50 Hours	$67.00/ Hour	$ 3,350.00

		presentation to facility stakeholders.				
Personnel	IT Personnel	IT to set project manager up with access to the organization's charting system and network.	Variable	1 Hour x 1 IT Person = 1 Hour	$24.00/ Hour	$ 24.00
Personnel	Medical Floor Nursing Staff Wages	Nurses who will be participating in the Fall Integration Plan Feedback Session.	Variable	1 Hour x 20 Nurses= 20 Hours	$28.00/ Hour	$ 560.00
Personnel	Medical Floor Manager Wages	Oversight of medical floor nursing staff and approves productivity time.	Variable	1 Hour x 1 Director = 1 Hour	$49.00/ Hour	$ 49.00
Personnel	Administration Wages	Stakeholders with oversight over fall prevention programs and initiatives approved program evaluation and helped establish program evaluation metrics.	Variable	3 Hours x 2 Administrators= 6 Hours	$105.00/ Hour	$ 630.00
Personnel	Accounting Wages	Provided the project manager with the unit's adjusted patient days used in data collection and analysis of program evaluation.	Variable	1 Hour x 1 Accounting Assistant = 1 Hour	$28.00/ Hour	$ 28.00
Personnel	Fall Prevention Committee	Facility leadership stakeholders with oversight of fall prevention program.	Variable	1 Hour x 15 Leaders= 15 Hours	$49.00/ Hour	$ 735.00
Personnel	Marketing Wages	Graphic design and communications support for the project	Variable	5 hours x 1 Marketing Person = 5 Hours	$25.00/ Hour	$ 125.00
Space	Conference Room	Space to meet with stakeholders.	Variable	1 Room x 1 Hour	$300.00/ Room/ Hour	$ 300.00

Appendix M

3 Year Budget

Yearly Totals:	**$ 64,133.00**	**$ 33,594.00**	**$ 35,273.00**	
Expense Category	**Year 1**	**Year 2**	**Year 3**	**Rationale**
Equipment/Tech	$ 35,362.00	$ 15,080.00	$ 15,834.00	Year 1: program evaluation, staff feedback session, includes all equipment for future trending of fall data, including Meditech implementation. Year 2 & 3: Internet, Microsoft Office, Meditech, and AMP program licenses for 1 year. A 5% inflation increase each year is included in estimated expenses.
Materials & Supplies	$ 170.00	$ -	$ -	Year 1: paper and ink for project printing. Year 2 & 3: Not applicable because the fall policies, data, and the program will be managed electronically by the organization.
Personnel	$ 28,301.00	$ 14,734.00	$ 15,470.00	Year 1: project manager wages, director and manager wages, IT wages, marketing wages, and nursing staff wages. Year 2 & 3: Fall Committee Member (15) wages for fall data tracking, trending, and reporting for 1-hour monthly meetings. Patient Safety Director wages for Fall Committee monthly meetings. Patient Safety Specialist wages for fall tracking, trending, and reporting in 1-hour monthly meetings and 2 hours a week. A 5% cost of living increase each year is included in estimated expenses.
Space	$ 300.00	$ 3,780.00	$ 3,969.00	Year 1: present program evaluation findings to stakeholders. Year 2 & 3: monthly space for fall prevention committee meeting cost with a 5% inflation increase included each year.

U.S. Bureau of Labor Statistics. (2021, September 17). Consumer price index rose 5.3 percent over the year ending August 2021: The economics daily: U.S. Bureau of Labor Statistics. https://www.bls.gov/opub/ted/2021/consumer-price-index-rose-5-3-percent-over-the-year-ending-august-2021.htm

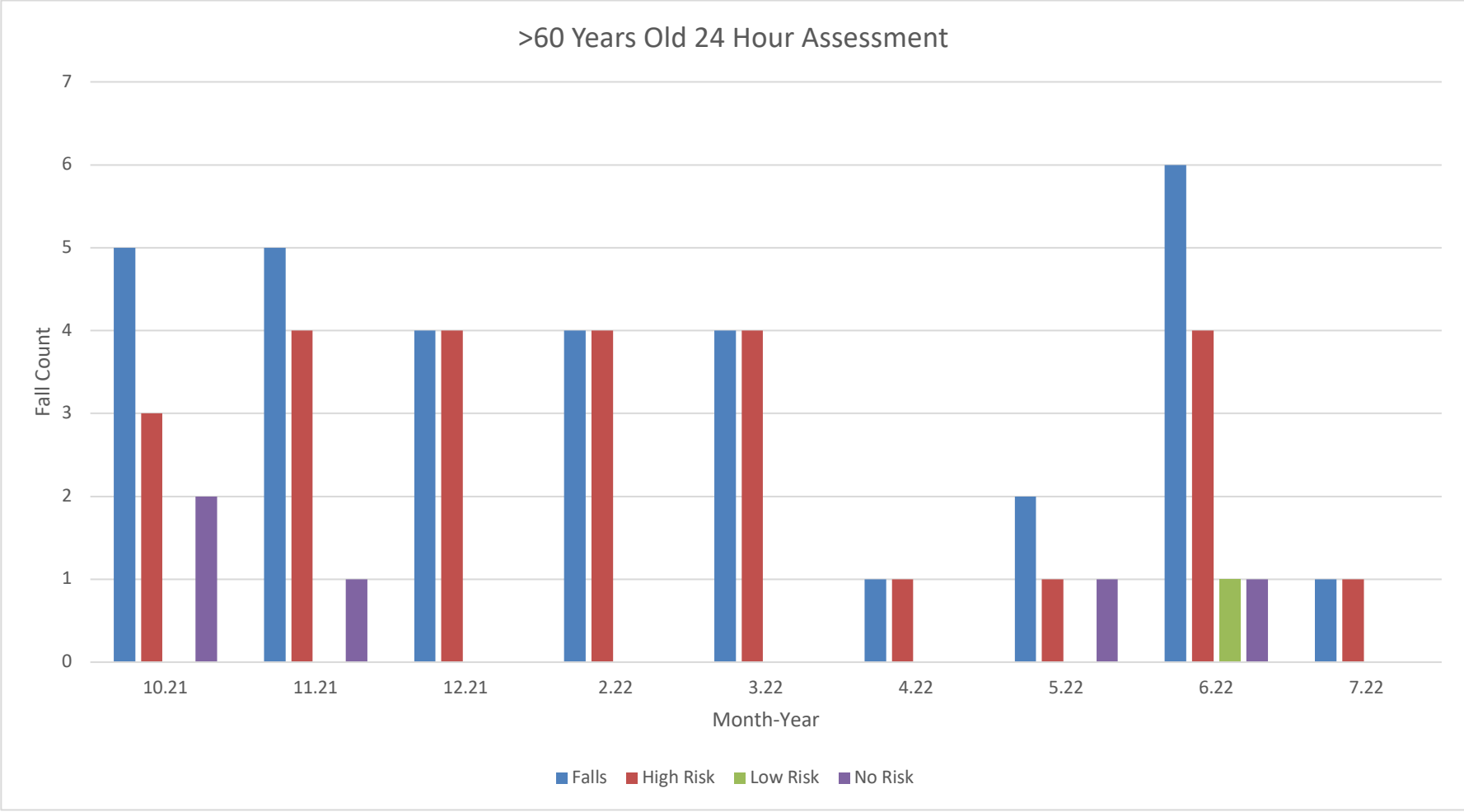
Appendix N

Statement of Operations

Statement of Operations		
Operating Income		**$0.00**
	Revenue Total	**$ 64,133.00**
Source	**Description**	**Amount**
In-kind contributions by the organization and the DNP student as project manager. This is a subsidized project with no additional associated revenue.	In-kind equipment/technology	$ 27,912.00
	In-kind materials and supplies	$ 170.00
	In-kind personnel wages: Director of Patient Safety and Risk Management, Project Manager, IT Coordinator, Manager of Medical Floor, Fall Prevention Committee members, Medical Floor nursing staff, Administration, and Accounting	$ 28,301.00
	In-kind for space	$ 300.00
	Expenses Total	**$ 56,683.00**
Expenses	**Description**	**Amount**
Equipment/Tech		$ 27,912.00
Materials & Supplies		$ 170.00
Personnel		$ 28,301.00
Space		$ 300.00
	Net Operating Income	**$0.00**

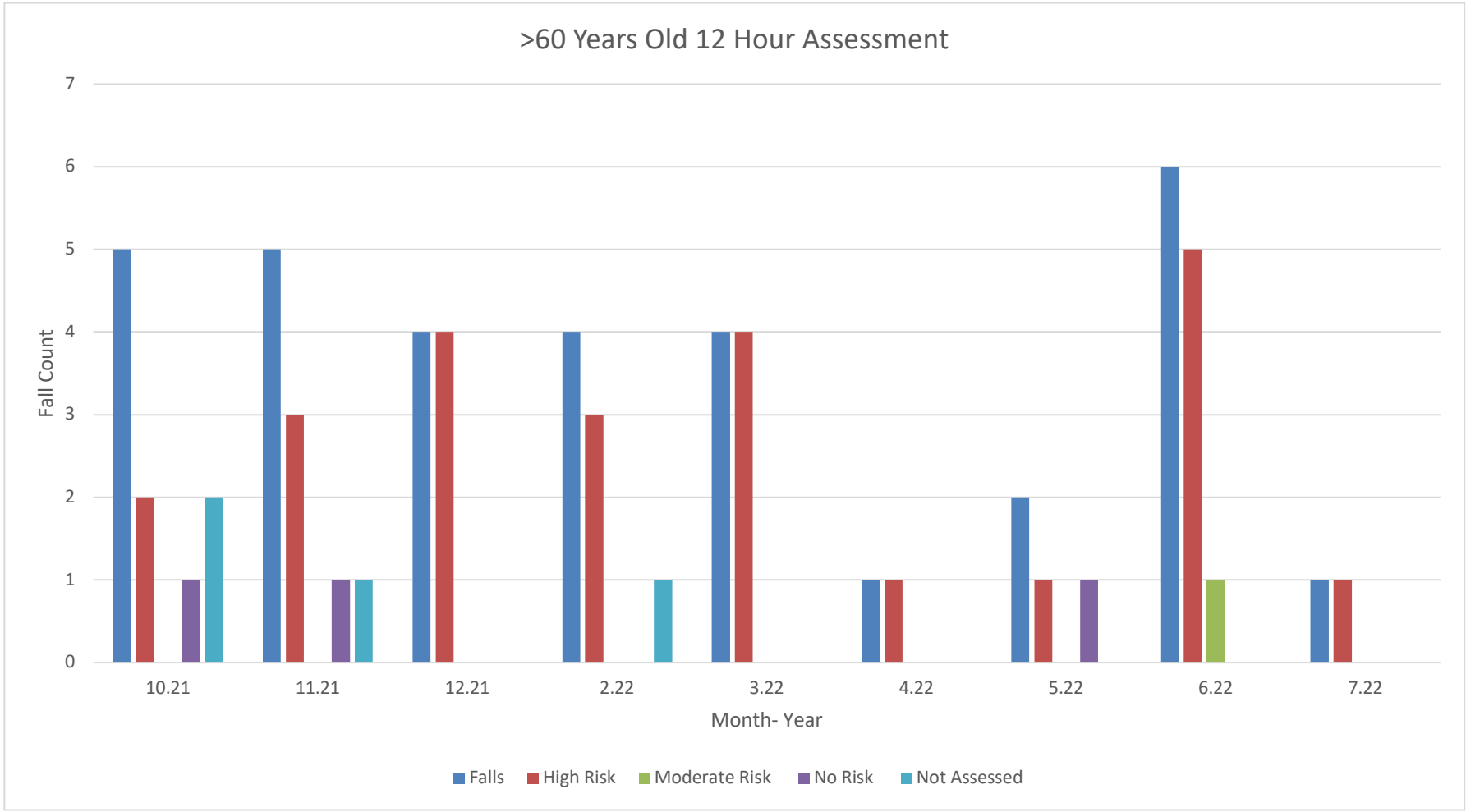
Appendix O

Fall Risk Assessed within 24 Hours of Admission



Appendix P

Fall Risk Assessed within 12 Hours of Fall Event



Appendix Q

FPES Results *(N=23, n=* 6)

FALL PREVENTION EFFICIENCY SCALE	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE	BLANK
OUR FALL PREVENTION PROGRAM CONSERVES OUR TIME BECAUSE:					
NO EXTRA WORK IS REQUIRED SINCE COMPONENTS OF OUR FALL PREVENTION PROGRAM ARE INTEGRATED WITHIN OUR WORKFLOW		50%	50%		
THE RESOURCES WE NEED TO CARRY OUT THE PROGRAM ARE READILY AVAILABLE		50%	33%		17%
WE KNOW IF A PATIENT NEEDS TO HAVE A BED ALARM ACTIVATED OR NOT	17%	33%	33%		17%
WE KNOW A PATIENT'S AMBULATION STATUS		50%	33%		17%
OUR FALL PREVENTION PROGRAM WASTES OUR TIME BECAUSE: †					
OF NOT BEING SURE THE PLAN IN THE PATIENT'S ROOM IS CURRENT		67%	17%	17%	
OF THE STEPS NEEDED TO UPDATE THE PLAN IN THE PATIENT'S ROOM	17%	17%	49%		17%
OUR FALL PREVENTION PROGRAM IS WORTH THE TIME IT TAKES BECAUSE WE:					
DO NOT HAVE TO CHECK TOILETING PROCEDURES, SINCE PATIENTS' FALL PREVENTION PLANS ARE VISIBLE IN THE ROOM		17%	66%	17%	
FOUND THE FALL PROGRAM EASY TO USE ONCE LEARNED		50%			50%
INVOLVING THE PATIENT AND ASKING QUESTIONS WHILE CONDUCTING THE FALL ASSESSMENT IS HELPFUL		67%			33%
MY OPINION ABOUT THE FALL PREVENTION PROGRAM IS THAT:					
OBSERVING PATIENT'S CAPACITY TO AMBULATE DURING THE FALL RISK ASSESSMENT IS HELPFUL	17%	83%			
PLANNING FALL PREVENTION INTERVENTIONS WITH THE PATIENT IS HELPFUL	17%	50%			33%
INVOLVING THE FAMILY WITH THE PATIENT'S FALL PREVENTION PLAN IS HELPFUL	17%	50%			33%
HAVING PATIENT SPECIFIC FALL PREVENTION INTERVENTIONS VERSUS KNOWING "LOW, MEDIUM, HIGH FALL RISK" IS HELPFUL	17%	50%			33%

† REVERSED SCORED

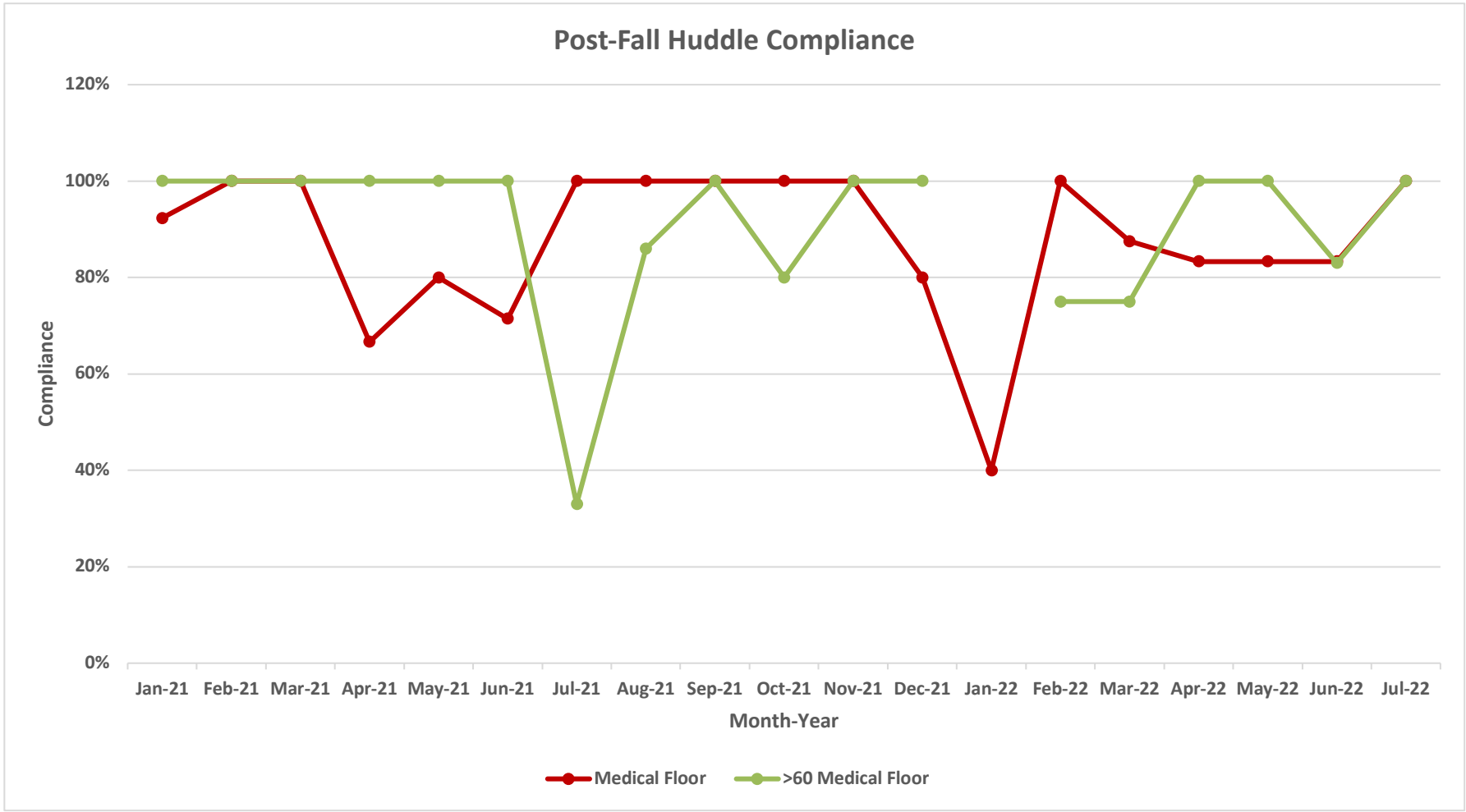
Appendix R

Narrative Survey Results *(N=23*, *n*= 6)

	RESPONSE CATEGORIES
WHAT IS GOING WELL	• More consistency in identification of fall risk • Improved communication of fall risk status • Increased awareness of who needs a bed alarm
WHAT IS NOT GOING WELL	• Ancillary and support staff forgetting to reactivate bed alarms • Unclear ambulation status • Slow response times to bed alarms • Alarm fatigue • Post-fall huddles are difficult to complete • Whiteboards not being updated • Missing bed cables
SUGGESTIONS FOR IMPROVEMENT	• Improve staffing ratios • More involvement of patient and family in planning fall prevention interventions • Updating whiteboards • Purposeful hourly rounding

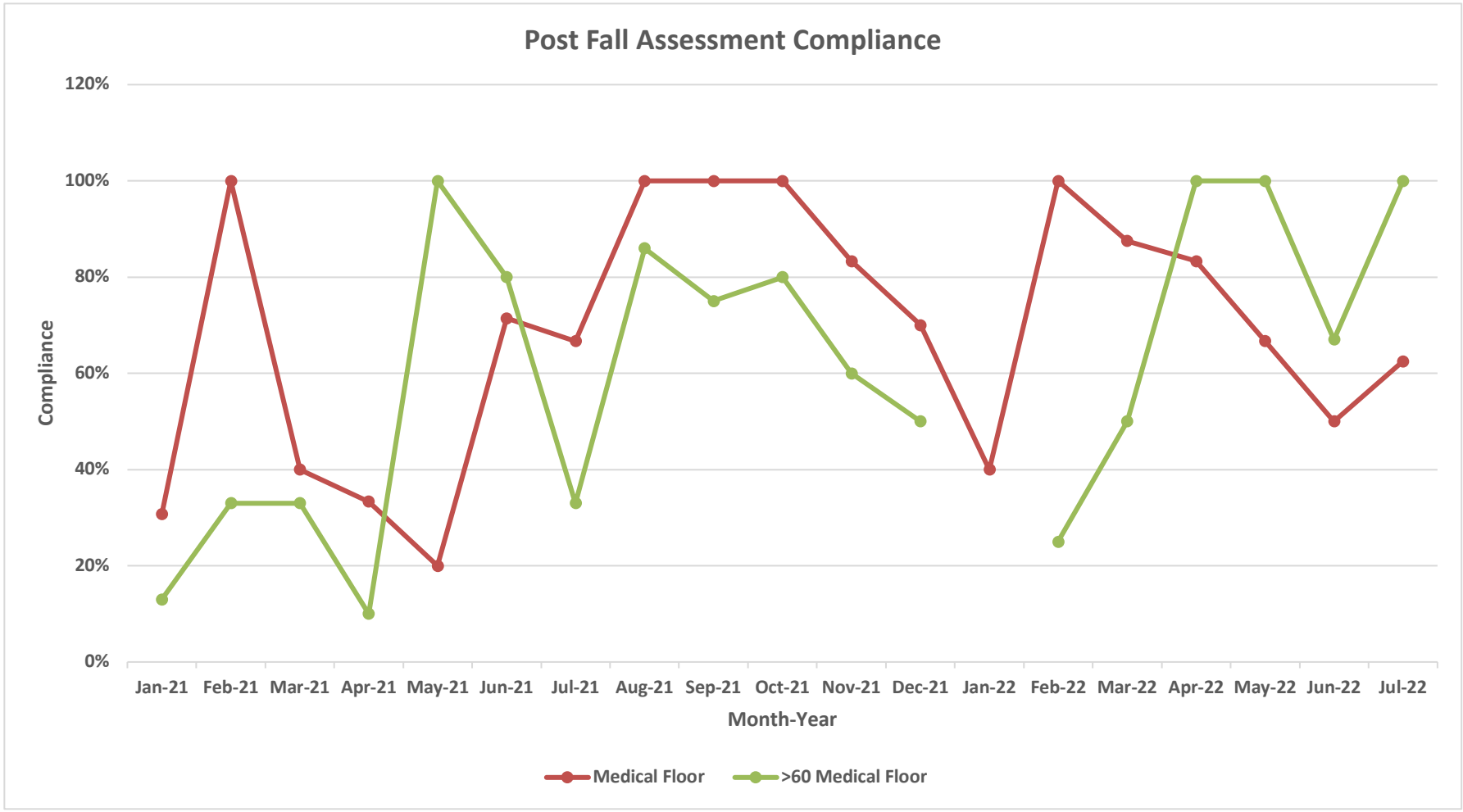
Appendix S

Post-Fall Huddle Compliance



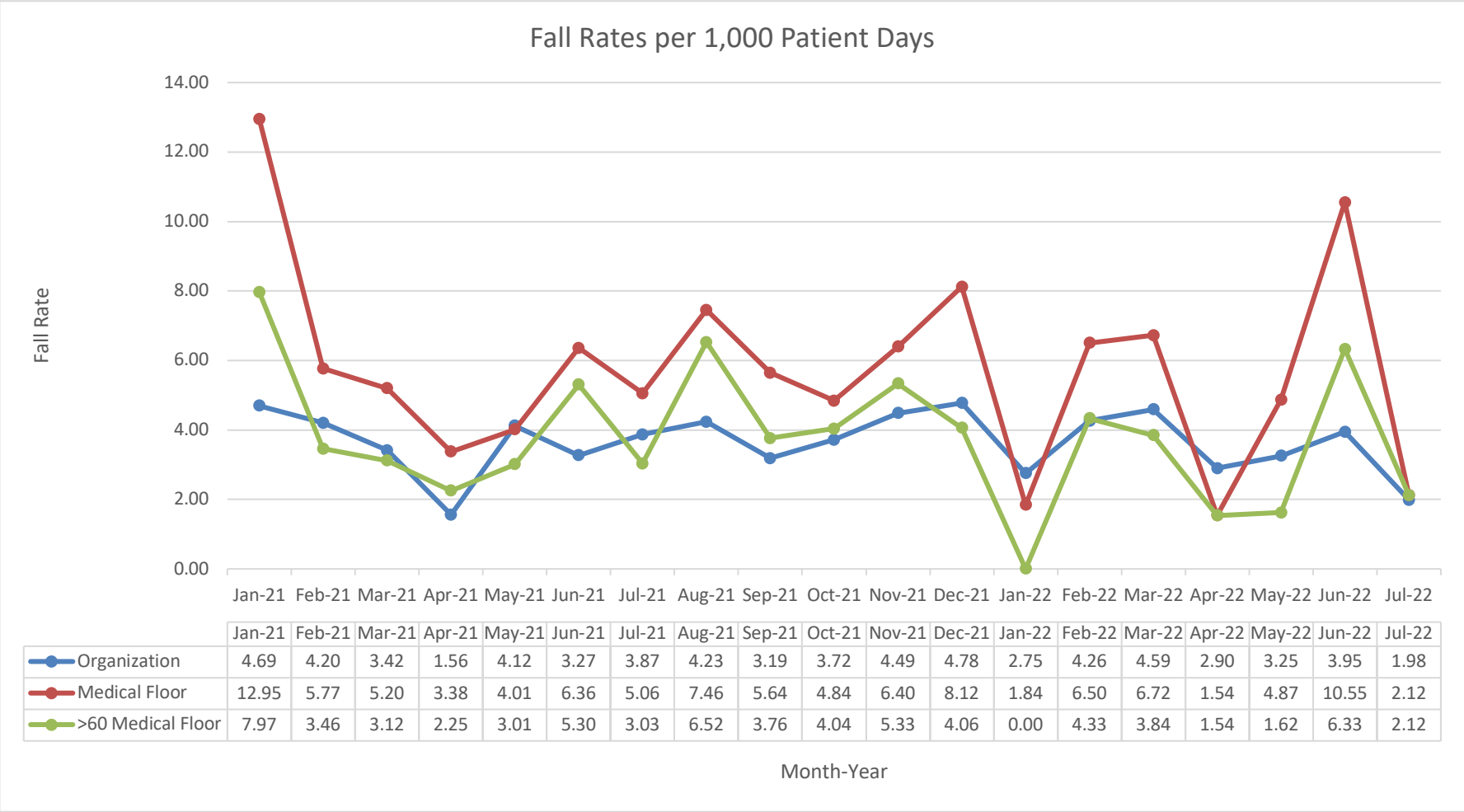
Appendix T

Post Fall Assessment Compliance



Appendix U

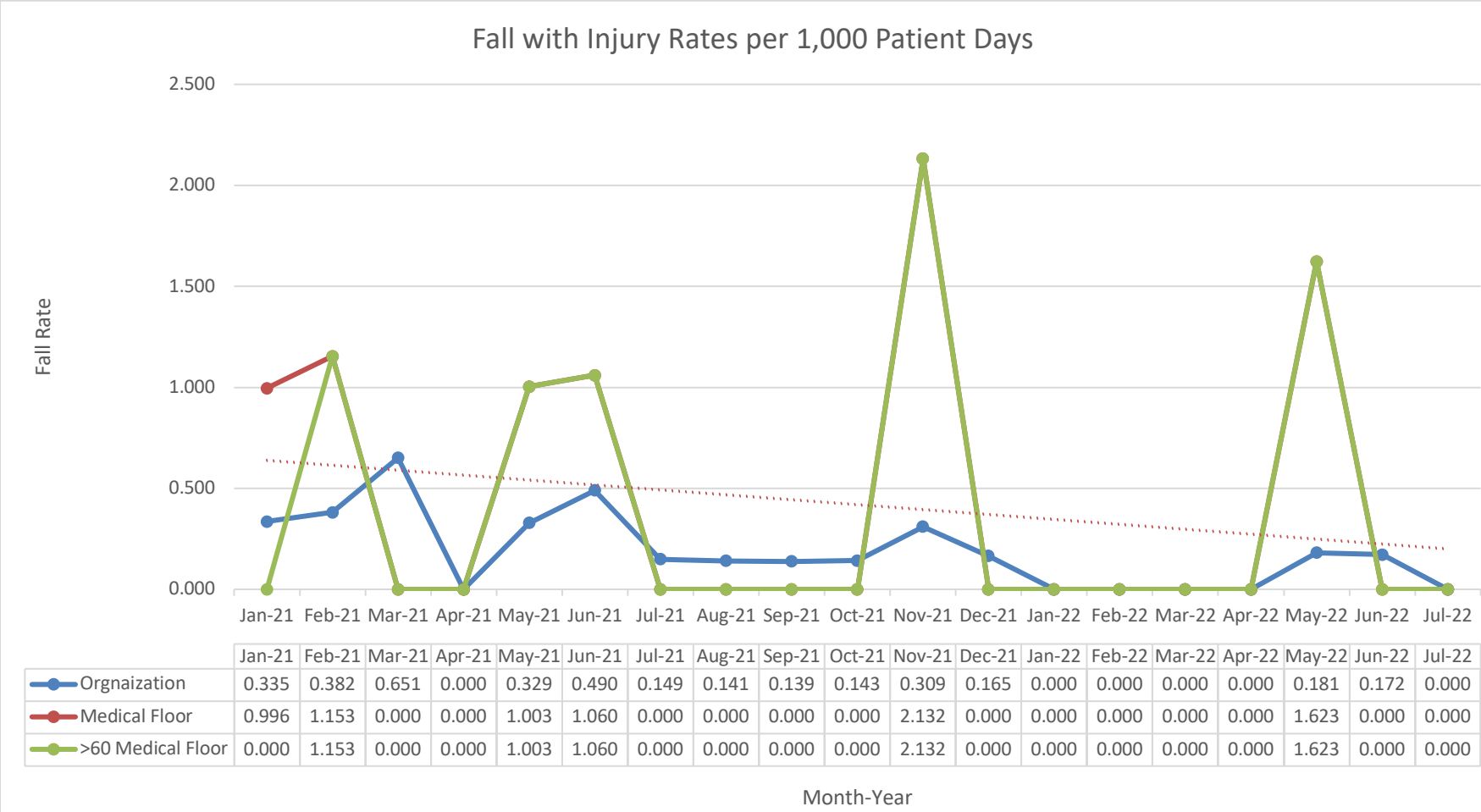
Fall Rate Trending



	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22
Organization	4.69	4.20	3.42	1.56	4.12	3.27	3.87	4.23	3.19	3.72	4.49	4.78	2.75	4.26	4.59	2.90	3.25	3.95	1.98
Medical Floor	12.95	5.77	5.20	3.38	4.01	6.36	5.06	7.46	5.64	4.84	6.40	8.12	1.84	6.50	6.72	1.54	4.87	10.55	2.12
>60 Medical Floor	7.97	3.46	3.12	2.25	3.01	5.30	3.03	6.52	3.76	4.04	5.33	4.06	0.00	4.33	3.84	1.54	1.62	6.33	2.12

Appendix V

Fall with Injury Rate Trending



	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22
Orgnaization	0.335	0.382	0.651	0.000	0.329	0.490	0.149	0.141	0.139	0.143	0.309	0.165	0.000	0.000	0.000	0.000	0.181	0.172	0.000
Medical Floor	0.996	1.153	0.000	0.000	1.003	1.060	0.000	0.000	0.000	0.000	2.132	0.000	0.000	0.000	0.000	0.000	1.623	0.000	0.000
>60 Medical Floor	0.000	1.153	0.000	0.000	1.003	1.060	0.000	0.000	0.000	0.000	2.132	0.000	0.000	0.000	0.000	0.000	1.623	0.000	0.000

Medical Floor falls with injury and >60 Medical Floor falls with injury were the same resulting in the green line being superimposed on the red line.

Appendix W

Updated Statement of Operations

Statement of Operations		
Operating Income		**$0.00**
	Revenue Total	**$ 56,683.00**
Source	**Description**	**Amount**
In-kind contributions by the organization and the DNP student as project manager. This is a subsidized project with no additional associated revenue.	In-kind equipment/technology	$ 27,912.00
	In-kind materials and supplies	$ 170.00
	In-kind personnel wages: Director of Patient Safety and Risk Management, Project Manager, IT Coordinator, Manager of Medical Floor, Fall Prevention Committee members, Medical Floor nursing staff, Administration, and Accounting	$ 28,301.00
	In-kind for space	$ 300.00
	Expenses Total	**$ 56,683.00**
Expenses	**Description**	**Amount**
Equipment/Tech		$ 27,912.00
Materials & Supplies		$ 170.00
Personnel		$ 28,301.00
Space		$ 300.00
	Net Operating Income	**$0.00**