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Research Article

Falls Risk Prevention Bundle to Reduce Falls in an Inpatient Psychiatric Unit

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Abstract

Inpatient psychiatric patient falls are a significant patient safety concern that can result in distress, injury, or death. According to a systematic review, multifactorial evaluation and intervention can reduce falls by 20-30%; however, few large-scale implementation studies have been conducted. A fall risk prevention safety bundle quality improvement initiative was implemented and evaluated. Essential components of this multifactorial assessment and intervention included fall risk reassessment after medication administration, bedside shift report, updated patient care plans to correspond to updated falls risk assessment, and daily leadership huddles using a dashboard system is exhibited as a care bundle in this publication. Falls score assessment after medication administration was the core strength of the project, and staff compliance was most notable during this phase. The findings could serve as a knowledge base for unit leaders to develop assessment protocols and establish education and training programs to promote patient safety. The project may inform future projects to make fall risk assessments clinically relevant in inpatient psychiatric settings to reduce fall injury rates.

Keywords: Psychiatric inpatient falls; Fall assessment; Patient falls with injury; Patient falls without injury; Fall score reassessment after medication administration; Fall safety bundle

Introduction

There is an ongoing effort to reduce the number of falls in hospitals worldwide. Fall prevention strategies have evolved into safety standards in all aspects of healthcare. Fall rates remain an ongoing problem in various inpatient units. Patients in psychiatric facilities have comorbidities and healthcare needs, placing them at increased risk of falls and falls with injury. Though falls in medical-surgical units have received much attention, falls in inpatient psychiatric units have received less attention [1].

This project aimed to reduce psychiatric patients' falls/falls with injury over ten weeks. The focus of this project was to implement a falls safety bundle to help inpatient mental health patients to avoid falling. The fall bundle incorporates evidence-based strategies such as fall assessment and reassessment when changes to psychotropic medications, discussion of diagnosis-specific fall strategies, and environmental safety assessments during bedside shift reports and safety huddles using the EMR dashboard system [2].

The project was designed as a quality improvement initiative to improve staff compliance with strategies to reduce patient falls. The project took place within an inpatient behavioral health unit at a private, not-for-profit health care network, with 5,300 employees serving 15 counties in the southeast area of the United States. The facility has four hospitals with 610 beds and demonstrates a commitment to treating the whole patient and providing quality health care for the entire community, especially those in need. It is committed to patient safety, quality, and performance excellence. The population that underwent the practice change was the nursing and ancillary staff who work in the behavioral health unit.

Fall reduction strategies appropriate for patients on a regular medical-surgical floor may not suit behavioral health patients [3]. The Hester Davis falls assessment tool is the current tool used to assess falls on the project unit, and this may not capture fall risk for behavioral health patients. Stable medical-surgical patients stay in their rooms most of the time, and healthcare is provided in their rooms. Psychiatric patients are not in their room most of the day unless they experience side effects from detoxification or manifestations of their illness. Typically, these patients ambulate around the milieu and interact with one another or attend therapy

groups throughout the day.

Methodology

A university IRB reviewed the project and deemed it as not human subject research. The project organization granted permission to conduct the quality improvement initiative. This included ethical considerations for both HIPPA and the facility's privacy code for behavioral health patients. Only personnel with special authorization can access patient charts. Because of this, an administrator at the organization was used as a proxy to access the data. All data were de identified and reported in aggregate.

The fall safety bundle was divided into four phases. Each step was bi-weekly and evaluated sequentially. The doctoral student served as the project lead and was present throughout the different project phases. Education was provided to both day and night shift personnel. After the personnel had been updated, bulletins were displayed in various locations throughout the nurses' station to remind the employees of the project's start date and phases. The first strategy included a fall score reassessment after medication change. During this time, the project team noted an issue in this new reassessment process. The nurses were unsure when to reassess the patient after medication changes. This prompted a quick training session with existing personnel, and the charge nurse assisted in ensuring that other shifts were aware of the timeline; reminders were also produced to hang in the nurses' station.

Bedside reporting was the strategy evaluated. The chosen hospital encourages nurses to do bedside shift reports, but bedside reporting is typically met with resistance like many organizations. Some nurses prefer to complete reports at the nurses' station, and they believe it is faster than performing reports at the bedside. Staff resistance was encountered during the weeks leading up to the planned phase. Nurses were encouraged to anonymously fill out shift report index cards for every bedside report completed. A bedside shift report checklist was also developed to standardize the reporting process. Only two cards were completed after Week 1 of the phase. The importance of the bedside shift report to the project's goal of reducing patient falls was reiterated to the staff. More cards were completed after Week 2, but not as many as anticipated, despite reminders and encouragement from the charge nurses.

The third phase involved the development of patient-centered care plans. This phase focused on improving staff compliance with care plan updates according to the reassessment fall score after drug administration. Because the project lead was not permitted to audit patient charts, the administrative proxy collected care plan compliance data by running a report in EPIC. The proxy conducted chart audits to ascertain the percentage of updated care plans due to changing fall assessment scores. The student project lead visited the unit several times a week to provide support and review ongoing compliance data with staff, providing additional support and training when needed.

Daily leadership huddles using an electronic EMR dashboard comprised the project's final phase. The dashboard was piloted between Weeks 8 and 9. During this phase, the unit's daily leaders and charge nurses completed centralized huddles to inform the other unit leaders of any significant events that day, such as patient acuity or escalated patients in security. The dashboard is designed to ensure that crucial information about a patient, including missing or incomplete fall risk scores, administered medication, etc., is provided. The dashboard served to inform the nursing staff when there is missing documentation for a patient.

Design, Measures, Data Collection, and Tools

The effectiveness of practice change was tested using the PDCA design, and data were evaluated using a quantitative method. By assessing staff compliance with bundle elements and overall fall reduction rates, the project team members were able to determine if the project successfully reduced patient falls within the behavioral health unit. The primary outcome measure was a decrease in falls/falls with injury calculated as a rate per 1,000 patient days. A fall is defined as "an event that results in a person coming to rest inadvertently on the ground or floor" [1]. Fall rates were calculated using Agency for Healthcare Research and Quality (AHRQ) fall rate formula:

(Total number of patient falls/number of patient days) X 1000

Data were collected by reviewing unit-specific fall incident reports. The incident does not have to cause harm to a patient, employee, or visitor, but it is classified as an incident because it threatens patient safety. Fall/fall with injury data was collected at the end of the project, analysed, and reported in aggregate.

Project Measures

The effectiveness of the practice change was evaluated by assessing staff compliance with bedside shift reports, falls assessment/reassessment, and the development of a patient-centered falls prevention care plan for patients at risk for falls. It is important to note that only the administrative proxy had authorized access to the EMR for patients in the behavioral health unit. To measure the stability of the new process, compliance data were collected weekly and reported in aggregate to the staff.

Bedside Report Compliance

A patient bedside shift report is technically defined as a clinical knowledge exchange between nurses and patients at the shift change [4]. It provides dedicated time for nurses coming on duty and those going off duty to interact with each other and patients regarding progress and care goals. Staff bedside shift self-reporting compliance cards were used to assess staff compliance

with bedside reports. Staff completed a pre-printed 3 x 5 index card with the date and yes/no, showing they completed the bedside report. The cards were placed into an envelope at the charge nurse desk and collected weekly by the project lead. To calculate beside report compliance, the numerator was the total number of completed shift report checklists divided by the denominator or the total number of opportunities for shift reports during the measurement period (weekly audits for 14 total shift report opportunities). The number was then multiplied by 100 and reported as a percentage.

Falls Assessment Compliance and Patient Care Planning

Compliance with patient-centered fall assessment and precautions was evaluated through a sampling of patient charts using an audit procedure. The administrative proxy obtained EMR automated reports. Compliance was calculated weekly throughout the project implementation period. This allowed the project leader to determine whether staff assessed the document, falls score and appropriate fall preventions. Patient care plans created based on the fall score assessment were recorded in the patients' healthcare charts. The care plans were then reconciled with falls incident reports to determine whether the care plan had been updated.

Documentation compliance of the care plan was calculated and evaluated weekly. The administrative proxy collected and de identified all the data before providing the total counts to the project lead. The DNP learner reported the data in aggregate.

Leadership Dashboard Use

Dashboard use was monitored weekly via reports generated through the EMR system. A report was developed to determine how many times the dashboard was opened and used. With assistance from leadership, thresholds for compliance were established since this is a relatively new reporting system, which proved difficult to measure over time. Instead, the team depended on anecdotal reports of dashboard use because of the inability to track usage electronically.

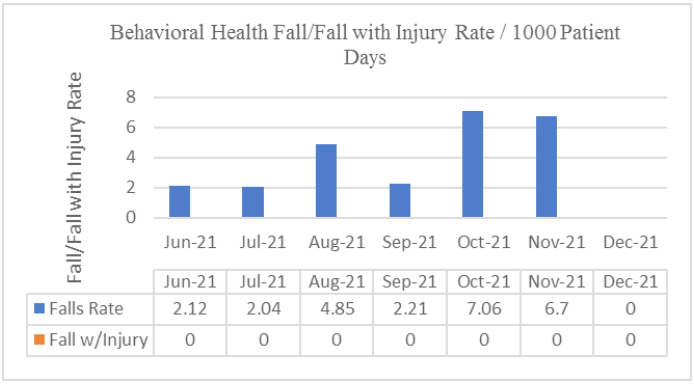
Tools

The Hester Davis Falls Assessment Tool is the accepted falls assessment tool approved by the organization. The tool includes age, date of last known fall, mobility, medications, mental status, toileting needs, volume/electrolyte status, communication/sensory state, and behaviour with multiple options per risk category. A score of 7-10 indicates low fall risk, 11-14 indicates moderate fall risk, and > 15 indicates high fall risk [5]. The Hester Davis Fall Risk Assessment Scale has been successfully validated in several research studies to predict and reduce patient-related falls in hospitals. Although proven as an efficient predictor of patient falls, the Hester Davis Toolkit does not consider symptoms unique to people with mental health conditions, such as the effects of psychotropic drugs or illness symptoms. Specific fall-prevention interventions for the psychiatric population were identified and incorporated into the patient-centered safety care plan.

The Hester Davis Fall Risk Assessment Tool is currently part of the EMRs of the facility. It is part of the admissions database, and it is performed during a patient's admission with a numerical value depending upon how the patient answers the questions about the scale. The number gives a low, moderate, or high falls risk assessment. A care plan is then created for the patient to coincide with the fall risk score.

Results

The project implementation was conducted over ten weeks, began October 11, 2021, and ended December 15, 2021. Before the project was initiated, the last documented fall rate for the inpatient behavioral unit was 7.07% for October 2021. Figure 1 displays the fall rate against the fall with injury rate.



	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21
Falls Rate	2.12	2.04	4.85	2.21	7.06	6.7	0
Fall w/Injury	0	0	0	0	0	0	0

Figure 1: Fall Rate and fall with Injury Rate.

Note: Project start date October 11, 2021. There were zero (0) falls with injury during the project implementation October 11th to December 12th, 2021.

Phase one consisted of reassessing patient fall scores using the Hester Davis Fall Screen after administering medications. During this time, it was documented that 426 patients had medication adjustments. Of the 426 patients, 387 (90%) had their fall score reassessed after medication administration.

Phase two consisted of nursing staff completing bedside shift reports at the change of shift. The overall compliance with bedside shift reporting was 54%. Out of 42 shifts, 23 bedside shift reports were completed. Completed bedside shift report index cards demonstrated greater compliance among day shift nursing staff.

Phase three consisted of staff updating patient care plans according to the newly updated fall risk score after medication administration. Out of 411 patients whose fall scores were reassessed, 396 (96%) care plans were updated appropriately on

the day shift, and 393 (95%) were updated on the night shift. By the end of this phase, daily compliance for day and night shifts was 100%.

Daily leadership huddles were held utilizing a newly built dashboard. Because the staff members do not document using this feature in the EMR, data were not accessible for this phase. However, based on anecdotal reports from charge nurses, the dashboards were reported as helpful in determining safety risks, including identifying those patients who may be at greater risk for falls.

Conclusion

This quality improvement initiative implemented strategies to mitigate patient falls in an inpatient behavioral health unit. Medications, gait, and patient symptomology are the top risk factors contributing to patient falls [6]. Behavioral health inpatient falls contribute to unsteady gait and taking multiple psychotropic medications [1]. The results from the project demonstrate the need for teamwork and adequate patient supervision to address patient falls in psychiatric inpatient units. Falls score assessment after medication administration was the core strength of the project, and staff compliance was most notable during this phase.

Furthermore, fall reassessment after medication administration and bedside shift reporting appear to impact reducing falls within the project setting. The findings of this project could serve to inform the development of assessment protocols and future training programs to promote patient safety. The current project corroborates the literature on contributing factors that increase fall risk for inpatient behavioral health. A bundled approach proved to be an effective strategy to decrease inpatient behavioral health falls at the project site.

The information from the literature matched the current investigation's inpatient mental health patient fall assessments. According to the project's findings, it is critical to do a full fall-risk assessment on all patients to evaluate the various symptoms they might be experiencing. Inpatient psychiatric units require trained staff and a multidisciplinary team approach to reduce falls. A useful fall assessment tool is necessary to capture the level of fall risk based on patient symptoms. Improper use of fall assessment instruments in the therapeutic setting may only increase the chance of patients falling and injuring themselves. The degree of patient monitoring should be determined by the severity of the symptoms and the level of risk. Changes in gait related to medication administration occur practically every day of the behavioral health patient's hospital stay, necessitating frequent fall-risk assessments. The participants saw the importance of fall prevention education and continued training for multidisciplinary team members as critical in achieving fall prevention.

Practice Implications

The project is relevant to nursing, healthcare organizations, and patients. The complexities surrounding psychiatric patients pose potential risks for falling, leading to injury resulting in prolonged hospitalization, increased costs, and poor health outcomes. A fall prevention safety initiative is necessary to reduce the number of falls within the inpatient psychiatric unit, and implementing a psychiatric fall safety bundle for this patient population should provide equitable patient care. Hospitals should be motivated to reduce patient falls in all inpatient areas. Reducing falls improves the quality of patient outcomes and should be a priority for all healthcare organizations [6,7].

Declaration of Interest: There were no personal relationships or finding for this research project or preparation of the article.

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