Caution club plus: A quality improvement fall prevention project

By

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has been approved

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Abstract

Purpose: Analyses of falls experienced at Midwestern Hospital (MH) between September 1, 2017 through February 28th, 2018 found that of the 102 patients that experienced a fall, the number was highest in patients seeking treatment for strokes (Marianjoy Patient Safety Project, 2018).

Problem: Experiencing a fall impedes progress towards recovery, independence, and patient confidence. Fall-related injuries are also linked to higher hospitals costs and prolonged length of stay.

Methods: The Caution Club Plus fall prevention project is classified as a quality improvement project. All participants were evaluated with the Marianjoy fall risk assessment tool (MFRAT) and received standard care. When a patient scored a "six" or higher on the MFRAT, they attained Caution Club Plus status. The nurse ordered continuous video monitoring (CVM) and direct handoff (DH).

Findings: Out of the 154 patients, 22.1% scored a "six" or higher on the MFRAT. A total of 53% had CVM ordered when a "six" or higher was scored. "Direct handoff" and CVM were ordered 38.2% when the patient scored a "six" or higher on the MFRAT.

Conclusion: The fall rate on one east dropped from 4.0/1000 hospital days to 1.5/1000 hospital days. The goal was to maximize the use of technology to support successful monitoring of the patients. MH sets an example for all acute care facilities by their improvement in fall prevention.

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Chapter I: Introduction

Caution Club Plus: A quality improvement fall prevention project

Patients in a Midwestern Hospital (MH) acute inpatient rehabilitation facility are challenged with neuromuscular and musculoskeletal impairments secondary to cerebrovascular accident (CVA), traumatic brain injury (TBI), and spinal cord injury (SCI). Patients with these conditions require extensive physical and occupational therapy to reach the highest level of independence possible while struggling with mobility issues. The clinical focus of this project was fall prevention in this vulnerable population. Exploring and enhancing the safety and quality care measures for patients in this acute inpatient rehabilitation setting was essential to the goals and mission of MH.

Background and Significance

Patients seeking treatment after an acute CVA or stroke have impaired independence, feelings of defeat, and thoughts of being dependent on others for life. According to the Centers for Disease Control and Prevention (CDC, 2015), 22,900 older people in 2011 died because of a fall-related injury. Once this occurs, patients may experience feelings of depression and anxiety (Wexler & D'Amico, 2015). A psychological consequence of falls is the person's fear of a recurrent fall, which can result in functional deficits and self-imposed activity restrictions (Batchelor, Hill, Mackintosh, & Said, 2010). A study found a 67% improvement on the fear of falling outcome measure after completing a strength and balance program in a community setting (Leggett, Jess, McNamara, 2017). Individualizing a standardized fall prevention program addresses the psychological, physical, and functional aspects of falling and

aids the patient in completing the hard work of rehabilitation (Wexler & D'Amico, 2015).

A study found a 50% fall rate reduction after implementing a nursing intervention for fall

prevention which supported an environment that promoted leaders to coach and mentor

the staff (Gould, Mann, Martin, Erwin, Swanson, 2018). The commitment of the patients

and staff to reach the goals of completing rehabilitative therapy, gaining the strength to

function independently, and being able attain his/her highest level of walking

independently is invaluable. Experiencing a fall impedes progress towards recovery,

independence, and patient confidence.

Needs Assessment

The impetus of preventing falls and fall-related injuries was to improve the quality

of care in the organization which has the potential to be adopted nationally. MH had a

validated fall risk assessment tool that was utilized during the admission process to

identify the patient's risk for falls (Ruroede, Pilkington, Guernon 2016). However, there

was a gap in practice. The gap was, not effectively using the information obtained from

the tool, to implement safety strategies for high fall risk patients in the clinical setting. A

prior analysis of the fall statistics at MH identified of the 28.9 percent of patients that fit

into Caution Club, 21.18 percent of patients fit into the traditional Caution Club and

7.7% of patients would fit into Caution Club Plus. The patients in the Caution Club Plus

category pose the highest risk of fall-related injuries. There is a gap in the research

literature concerning fall risk screening tools for rehabilitation patients that are able to

evaluate single and multifactorial interventions for fall prevention in the stroke

population. One study found compared the use of the Hendrick fall risk tool to five

specific fall risk indications pertaining to the neurological population (Bergman &

Papendick, 2014). The five indications included history of falls within past year, unilateral neglect (motor, sensory, or visual), communication deficits (aphasia and dysarthria), use of a home assistive device, and unsteady gait (Bergman & Papendick,2014). Results found that four of the five indictors were statistically significant as being a risk factor for falls in neurological illness population (Bergman & Papenick, 2014). At MH, the MFRAT includes all statistically significant factors including unilateral neglect, communication deficits, and history of falls found in the Bergman and Papenick study and was used as an initial assessment for the DNP project Caution Club Plus.

The literature review supported the need to conduct a project on fall prevention in the stroke survivor population. There were statistically significant results demonstrating a gap in research on a standardized fall prevention program in a high-risk clinical group (Batchelor, Hill, Mackintosh, Said, 2010). The emphasis on patient outcomes has been a nursing focus since the work of Florence Nightingale. Currently there is limited valid data on nursing outcomes related to fall prevention in hospital settings (Lee, 2018).

Problem Statement

The Joint Commission's database reported fall-related injuries as a top ten sentinel event (Joint Commission, 2015). Limited literature is available on quality improvement efforts to initiate a successful fall prevention program in an inpatient rehabilitation hospital. The significance of the patient phenomenon of interest was selected based on recent analyses of falls experienced at MH between September 1, 2017 through February 28th, 2018. The data suggests that of the102 patients that experienced a fall, the majority were patients seeking treatment for a stroke (Marianjoy

Patient Safety Project, 2018). Reviewing the MH fall distribution report from the aforementioned timeframe, it was found that the stroke rehabilitation impairment groups had the highest percentage of falls at 31.4 percent (Marianjoy Patient Safety Project, 2018). These additional injuries resulted in physical and psychosocial patient trauma and costly, prolonged hospital stays.

An inpatient fall, negatively impacts the patient and the institution. Fall-related injuries are associated with higher hospitals costs and prolonged length of stay (Joint Commission, 2015). Costs to patients who suffer from a serious fall average $13,316 associated with an additional six to twelve days in the hospital (Bouldin et al., 2013).

Staff nonadherence to the existing procedures resulted in 20.4 percent of the falls (Ruroede et al., 2016).   Adherence strategies promote long-term change, therefore adherence to new interventions should be maintained (Hempel et al., 2013). To promote adherence, it is best to evaluate the interventions that are most effective and implement them in harmony with current practices. Finding and implementing an intervention that is highly ranked among the staff may improve staff adherence. It is found that nurses favoring the new intervention will yield higher adherence rates, follow the evidence-based guidelines, and prevent falls (Lee, 2018).

Project Aim

Caution Club Plus (CCP) standardized the fall information collected during the admission process and facilitated the fall prevention program. At MH, the nurses used the Marianjoy fall risk assessment tool (MFRAT) to assesses whether the patient was at risk for a fall. The MFRAT is a validated and reliable fall risk assessment tool (Marianjoy Rehabilitation Hospital, 2007). A study conducted to validate the MFRAT found it was

75.7 percent accurate in identifying the risk for falls in a specific patient population at

Midwestern hospital (Ruroede et al., 2016). The MFRAT is a tool composed of ten

indicators including: communication deficits, impaired cognition, altered bowel and

bladder elimination, unilateral neglect, lower extremity paresis, upper extremity paresis,

sensory deficits, a history of previous fall in the past three months, impulsive behavior,

and special medications including antipsychotic and antidepressants (Marianjoy

Rehabilitation Hospital, 2007). A study that evaluated the prevalence and risk factors

contributing to a fall found persons experiencing falls were more likely to have been

ambulatory before admission and presented with new-onset muscle weakness (Cox,

Buckholz, Bradas, Bowden, Keber, McNett, 2017). Item analysis of the MFRAT scores

found that subsequent falls were associated with sensory deficits, including: hearing,

sight, touch, and altered bowel/bladder elimination related to urgency, incontinence,

retention, and diarrhea (Marianjoy Patient Safety Project, 2018). Sensory deficits and

impaired gait are known as intrinsic risk factors. Interventions such as performing a

thorough medication reconciliation to identify high-risk drugs are used to improve

intrinsic risk factors. Evaluating the physical environment for safety hazards is used to

improve extrinsic risk factors and reduce falls (Quigley, 2015).

     At MH, the MFRAT is scored by placing a value of "one" if the patient fits the

indicator described and "zero" if the patient does not fit the indicator described

(Marianjoy Rehabilitation Hospital, 2007). The score is added to determine the total

score and a patient's risk for falls. Prior to initiating CCP the policy was if a patient

scored "four" they were considered a high-risk patient and were placed on Caution Club

(CC) (Marianjoy Rehabilitation Hospital, 2007). Prior analysis of patient fall risk at MH

determined that 28.9 percent of total patients at MH met the criteria for a CC

designation (Marianjoy Patient Safety Project, 2018). If a patient is placed on CC the

protocol includes placing a fall risk band on the patient, and a magnet on the door

identifying to all team members that the patient in the room is at risk of falling (Marianjoy

Rehabilitation Hospital, 2007). In addition, the patient has a bed and chair alarm on and

a gait belt is used for all transfers (Marianjoy Rehabilitation Hospital, 2007). The patient

should not be left in the bathroom alone and is monitored for impulsive behaviors

(Marianjoy Rehabilitation Hospital, 2007). Data shows that one third of hospital patient

falls are associated with bathroom use (Lunsford & Wilson, 2015).

Educational efforts to promote risk management while evaluating fall occurrences

have proven to be beneficial. A 49 percent reduction of hospital fall rates was found

from the year 2008 to 2014 related to initiating a validated fall assessment tool,

adhering to fall risk precautions, and continued risk management monitoring (Ruroede

et al., 2016).

Objectives

The first aim of the project is accomplished by implementing a standardized fall

prevention program at MH over a fifteen-week period.

The second aim of the project is accomplished by enhancing and modifying

current practices of CC to further decrease hospital related falls.

Clinical Question

In the stroke patients at Midwestern hospital, how does a fall risk prevention

program of Caution Club Plus compared to the standard Caution Club affect inpatient

hospital falls between January 16th 2018 - April 30th 2018.

Congruence with Organizational Strategic Plan

Creating an individualized fall prevention program by identifying the pertinent data collected, incorporating the evidence-based findings of the literature review, and addressing the needs of patients post CVA supports the organization's mission of "patient first, safety always" (Marianjoy Patient Safety Project, 2018).

The evidence supported exploring current trends and implementing new policies and procedures to prevent falls in the acute rehabilitation setting. Current research and practice show a lack of standardization in fall prevention programs while promoting a multicomponent strategy that is individualized. (Wexler & D'Amico, 2015). Organizations have identified decreased falls as indictors of improvement in the quality of nursing care in acute care settings (Lee, 2018).

Synthesis of Evidence: Search strategy

A critical step in the search process is the method of gathering current evidence that is scholarly and peer-reviewed to collect information to address the clinical question. This search was conducted through collaboration with a health science librarian at the Bradley University. The Cumulative Index of Nursing and Allied Health Literature (CINAHL) was utilized to evaluate the gap in evidence to support the PICOT question. Key searches of PubMed and Google Scholar were also used with search filters for: "community-dwellings", "rehabilitation" "stroke" "fall prevention" "quality care measures". The inclusion criteria were limited to English language published from 2013-2018. Another tool that facilitated the project's process was evaluating current fall trends at the hospital and conducting an item analysis of the fall risk assessment score and the patients that experienced a subsequent fall.

The evidence evaluation table consisted of fifteen research studies that were relevant to the clinical question on fall prevention of patients seeking treatment at an acute rehabilitation hospital (See Table 2).

Synthesis of Evidence: Appraisal of Evidence

Three systematic reviews were evaluated. These studies documented the effectiveness of fall prevention interventions across the nation. A total of 11,965 patients were involved in the studies reviewed, with a total of 1,244 publications reviewing over 88 million patient days of observations. The settings of the trials included health care facilities, rehabilitation hospitals, United States acute care hospitals, community dwellings, a South Korean general hospital, and a neurological unit setting. The strengths of the studies listed included a large sample size across the nation as well as an international study that utilized recognized nursing outcomes classifications (NOC). Weaknesses included a lack of definitive results to borderline significance achieved on length of hospital stays (Vassallo, Vignaraja, Sharma, Hallam, Binns, Briggs, Ross, Allen, 2004). The use of convenience sampling did not portray a diverse dynamic sample (Lee, 2018).   A study on a single unit will not provide evaluative information of the interventions on a variety of units and hospitals.

A study on falls and fractures two years post-acute stroke found 23.5% of patients fell at least once after their stroke and 5.4% had sustained an injury post fall (Callaly et al., 2015)**.** Research conducted on the prevalence and trends of falls found the highest incidence of falls occurred on medical units which promote mobility when compared to surgical and intensive care units in which the primary focus is medical stabilization (Bouldin et al., 2013). Patients participate in about four hours of therapy a

day at MH. Evidence supports that fall prevention exercise programs reduced overall

fall related injuries by 37 percent and reduced serious injury as a result of a fall by 43

percent (El-Khoury, Cassou, Charles, Dargent-Molina, 2013). A quasi-experimental

study was conducted in a rehabilitation hospital to assess if fall prevention programs

were statistically significant in reducing the number of falls (Vassallo et al., 2004). The

results showed a decrease in falls in the experimental group to 14.2 percent versus the

control group rate of 20.2 percent (Vassallo et al., 2004). However, when considering

the lengths of stay, the results were not significant (Vassallo et al., 2004).

Among hospitalized patients, about 38 to 78 percent of falls are classified as

anticipated physiologic falls linked to a history of a falling, altered mental status,

unstable gait, and altered toileting needs (Lunsford and Wilson 2015). Anticipated falls

and fall-related injuries are categorized as healthcare-acquired conditions (HAC) which

are prohibited from Medicare and Medicaid reimbursement (Hester, 2015). The lack of

reimbursement to the hospital increases the responsibility on the staff to ensure the

patients are safe and fall free (Hempel et al., 2013). Due to the economic burden the

hospital may pressure the caregivers to reduce falls. The Affordable Care Act altered

the reimbursement model by incentivizing hospitals that improved patient outcomes,

including those associated with injurious falls (Hester, 2015). Current financial

projections report by 2020 there will be a $47 million burden on hospitals treating

injurious falls (Hester, 2015). The increase in cost is associated with an increased

length in hospital stay. Comparing patients who experienced a fall and patients who do

not experience a fall, patients diagnosed with an acute ischemic stroke who had a fall

had a length of stay of approximately seven days compared to four days if they didn't

have a fall (Cox, Buckholz, Bradas, Bowden, Kerber, McNett, 2017). Seventy-five

percent of the patients that experienced a fall, required ambulation assistance, and had

decreased functional outcomes at discharge compared to 47 percent of patients that did

not fall (Cox, et al., 2017).

Theoretical Framework

The integration of nursing theories into clinical practice is a valuable tool often

overlooked in research studies. A theory known as Swanson's Caring Theory was

developed to promote a caring environment for women dealing with trauma after a

miscarriage (Gould et al., 2018). A 36-bed neurological unit adopted Swanson's Caring

Theory to focus on fall prevention on a high fall risk population (Gould et al., 2018). The

Swanson's Caring Theory consists of five tools to guide the behaviors and practices of

nurses (Gould et al., 2018). Of the five prominent components, the first is "Knowing"

why the patient is seeking care and evaluating possible risk factors while eliminating

assumptions or judgments (Gould et al., 2018). Next is "being with" the patient both

physically and emotionally supporting their needs regarding fall prevention (Gould et al.,

2018). The "doing for" component includes fall prevention interventions including

universal precautions, appropriate use of bed and chair alarms, use of fall prevention

equipment (floor mat), and communication during handoff (Gould et al., 2018).

"Enabling" is providing valuable education to the patient and family to validate difficult

and unfamiliar events (Gould et al., 2018). Lastly, "maintains belief" is promoting

positive attitudes towards the situation offering optimism while transitioning through the

change in the situation (Gould et al., 2018).

The leaders on the neurological unit in the study incorporated the Swanson

Caring Theory and the Lean Methodology used by Buddhist monks to develop the

"Caring Card Model" (Gould et al., 2018). The leaders on the unit performed "Caring

Card Rounds" and would award each staff member with a sticker to place on his or her

name badge holder on the green side of the card if compliance on fall prevention was

met. If the measures were not met, the nurse would display the red side of the card and

each week the staff could visibly see his or her progress with the number of green cards

verses red cards. To avoid punitive action, the tone was supportive with a coaching

component that identified barriers and follow-up actions (Gould et al., 2018). The Caring

Card pilot project resulted in a decrease in fall rates from 11.60 falls per 1000 patient-

day to 5.81 falls (Gould el al., 2018). The significant reduction in falls were recognized

as being associated with the positive leader-staff relationship. Their collaboration

improved safety and quality of care on the unit (Gould el al., 2018). Integrating aspects

from the Caring Card Model encouraged the team at MH to work together to promote

wellness and independence in a fall prevention program. The Caring Card Model was

applied to the fall prevention program of CCP by incorporating the five components. The

"knowing" why is applied by evaluating each new admission with the MFRAT and

scoring the total risk factor. The "being with" is exemplified with the use of the

continuous visual monitor and direct handoff to support each patient's needs. The

"doing for" is also demonstrated with the interventions listed above along with

communication between all team (patient, family, nursing staff etc.) members.

"Enabling" by educating the patient and family on the new policy of CCP to further

promote safety. Lastly, "maintaining belief" by working as a team encouraging each other to reach the common goal of prevention of falls on the unit.

Chapter II: Methodology

Methods

Caution Club Plus fall prevention project is classified as a quality improvement project. The purpose of the project was to improve the efficiency of MH's current fall prevention program of CC by enhancing safety. As a quality improvement project, Caution Club Plus was approved by the Evidence-Based Practice Quality Improvement Committee (EBPQI) at MH and reviewed by Bradley University's committee on the use of human subjects in research (CUHSR).

Project Design

Caution Club Plus was initiated as a pilot project on the stroke unit. A pilot study on the stroke unit allowed the team to evaluate feasibility, cost, and make iterative cycles of improvement before implementing CCP hospital-wide.

Setting

Caution Club Plus took place at MH., an acute rehabilitation medical center featuring 127 private rooms on six specialized units. The units are categorized as brain injury, stroke, neuromuscular, orthopedic/musculoskeletal, pediatrics, and spinal cord injury. MH is a research organization promoting innovative evidence-based treatment while receiving international awards and accreditation by the Joint Commission and Commission on Accreditation of Rehabilitation Facilities (CARF). Midwestern Hospital promotes independence as each patient receives four hours of therapy based on the patient's individualize needs, Monday through Friday with a shortened day of Saturday.

Population/Sample

The quality improvement project was initiated on a unit with a stroke population of 27 patients. A total of 154 patients admitted from January 16TH - April 30TH were evaluated using the MFRAT and placed on CCP based on their calculated score.

Tools/Instruments

The primary tool used to evaluate the phenomenon of interest was the MFRAT, a validated fall risk screening tool that was created specifically for inpatient rehabilitation fall risk identification (Ruroede, Pilkington, Guernon 2016) (See Appendix A). An audit spreadsheet was also used by the evaluating investigator if the interventions were ordered (CCP, CVM, and direct handoff) according to the calculated score (See Appendix I). The evaluating investigator also examined pre-existing data, including MFRAT score on admission by the nurse and corrected MFRAT score by an assessing auditor. This information was used to determine if the nurses were accurately using the MFRAT tool. In order to gather current information on how accurate the nurses are using the MFRAT, the investigator created a questionnaire on "survey monkey" (see appendix G). The questionnaire assessed the staff's knowledge on MFRAT, after being educated (See Appendix B) and prior to the initiation of the quality improvement project.

Project Plan

The steps in the procedure for project implementation involved using the MFRAT and, if the patient scored a "six" or higher, he or she was placed on CCP. Patients designated as CCP followed all interventions of the traditional CC with the addition of (DH) and (CVM). Direct handoff is a clinical practice that communicates to the staff that eyes must be kept on the patient at all time (Marianjoy Policy and Procedures, 2017).

Each staff member is accountable for the safety of the patient and must ensure secure hand-off to another person when transferring patient care (Marianjoy Policy and Procedures, 2017). The continuous video monitoring is a means of maintaining "eyes on the patient". The camera system can be utilized while the patient is alone in the room. The CVM is placed in the patient's room after the patient is informed about the need for the monitor as an ongoing MH process of preventing falls. Careful monitoring was done by a trained patient care technician. See Appendix E for step by step description of the implementation process. The goal was to maximize the use of technology to support successful monitoring of the patients.

The investigator performed an audit taking note of the MFRAT scores on admission and if the interventions were ordered per protocol. The monthly audits were reviewed by the investigator, clinical quality leader, and risk manager. The fall spreadsheet results were analyzed during the fall committee meeting. The database eRehab was used to pull data with the use of Vlookup to cross reference the fallers, and highlighting who fell on 1 East during the project timeframe.

The spreadsheet consisted of the percentage of compliance with the CCP protocol. A fall analysis reported each month the fall rate per 1000 patient days. Lastly, the investigator evaluated the questionnaire on staff knowledge of MFRAT to determine training needs (See Figure 5). The results of the questionnaire illuminated discrepancies between under scoring and over ordering of CCP.

Data analysis

The process of data analysis reported the percentage of CCP intervention compliance and the fall rate each month. The de-identified data was compiled by the

investigator and entered into an Excel spreadsheet at MH. The clinical quality leader

and investigator met to transcribe a narrative for the fall committee. Prior analysis of the

percentage of MFRAT agreement over three months, prior to initiating the scholarly

project, was reviewed to determine the need for further education.

Institutional Review Board/Ethical Issues

Caution Club Plus met the criteria for quality improvement according to the

Evidence-Based Practice Quality Improvement Committee (EBPQI) at MH. The project

protects the participants by introducing an improved process with no risk to the patients.

Prior to implementing the continuous video monitor, the staff provided the patient and

the family with an information sheet explaining the role of the CVM (See Appendix J).

To keep patients and families informed, the staff updated CCP patients of the

interventions intended to protect the safety of the patient while promoting

independence. To protect the privacy of the patient, the CVM (a live video) did not

record any patient video or audio. Also, to further protect the privacy of the patient, if

the patient is being physically exposed during nursing care, the staff asked the video

monitor technician to initiate the privacy mode.

Chapter III: Organizational Assessment/Cost Effectiveness Analysis

Organizational Assessment

MH has a validated fall risk assessment tool, trained rehabilitation staff, and

seventeen safety video monitors. However, there was a lack in standardization of fall

information including, how to objectively examine the data collected and when more

extensive safety interventions should be applied. Barriers to implementation included

staff compliance, the knowledge required to accurately score patients, and willingness

to seek help when unsure. Interprofessional collaboration of the staff nurses, patient

care technicians, therapists, and patient care transporters was necessary to ensure

compliance of the policy to directly observe the patient at all times.

Cost Factors

The budgetary needs to conduct CCP included trained rehabilitation nurses and

technicians, as well as the CVM provided by AvaSys tele-sitter solution. The AvaSys

tele-sitter costs on average $82,000 in the first-two-year period; however, AvaSys use

has a documented return of 29.2 times the initial investment (AvaSure, 2015). At MH,

the facility ordered 14 wall mount monitors and 3 mobile carts costing a total of

$151,053 including installment of the devices, clinical program development, and a

custom monitoring station. The costs of a patient care technician at MH is approximately

$14/hr., costing on average $336.00 per hospital day. An estimated fall without injury is

$3,500 (Klymko, 2016). A fall with a serious injury could increase the cost from $16,500

to $27,500 on average (Klymko, 2016). When comparing the costs of the video

monitoring system to the costs of a 1:1 sitter the cost of the AvaSys tele-sitter will yield

a return on the initial investment over the years by reducing arrangements for 1:1

monitoring and falls (See Table 1).

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Chapter IV: Results

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Analysis of the implementation process

Caution Club Plus was implemented after approval by the Marianjoy Evidence-

Based Practice Quality Improvement Committee (EBPQI) on December 11[th,] 2018. The

project was approved by CUHSR on January 16[th,] 2019. The data presented in this

paper was captured from patients admitted on January 16th 2019- April 30th 2019. The

project succeeded in reducing falls on 1 East, the stroke unit, by determining patient risk

for falls and implementing interventions of "direct handoff" and "continuous video

monitoring" in addition to the traditional CC protocol.

An initial analysis was conducted to determine the accuracy of MFRAT scoring.

Based on pre-existing data on fall analysis there was a 48.6% compliance score in

August 2018. The items that most often did not match on the MFRAT were lower

extremity paresis and determining if the patient was placed on "special medications".

The fall rate is a measure of 1000 patient days. The fall rate in August was 3.8. The

compliance score went up to 61.5% in September'2018 with a fall rate of 4.0. Based on

the data collected, the team educated the staff on the "1 east unit", and repeated the

education on October 5th as part of ongoing effort to continue to promote fall prevention

(see appendix B). The fall rate went down to 1.3 in October 2018 and continued to be

low at 1.4 in November 2018.

When the design for the project was established, the stroke unit on1 east had

access to the majority of the CVMs. Unfortunately, once the project rolled out after

CUHSR approval (January 16th) the entire hospital had access to the use of CVMs for

various reasons including elopement risk, suicide watch, and drug seeking. Therefore,

the project was altered by evaluating if the intervention of "direct handoff" alone would

improve fall rate.

The fall rate in January was 4.0. A survey of ten questions was sent out on

February 7th on behalf of the fall committee team to determine if the education

presented on October 5th improved the accuracy of MFRAT scoring (see appendix G).

The survey analysis found an 80.56% percent accuracy in determining "special

medications" and with an 88.89% accuracy in determining if the patient had lower

extremity paresis (see figure 5). After the data was collected and the results were

evaluated using the intervention of "direct handoff", the investigator decided to go back

to the aforementioned timeframe and collect data on the initiation of CVMs. It had been

acknowledged that limited accessibility to the CVM devices might reduce compliance.

The data collected was then included in the project which followed the initial project plan

of analyzing both interventions "direct handoff" and "continuous video monitor". The

initial plan of reducing falls on 1 East from 4.4/1000 days to 2.2/1000 days was met.

However, the compliance of ordering the interventions was not as high as expected.

Analysis of project outcome data

Out of the 154 patients a total of 22.1% scored a "six" or higher on the MFRAT

and 16.9% of the total patients regardless of MFRAT score were placed on "direct

handoff" (See Figure 1). Also, out of the 154 patients, a total of 34% had CVM ordered

when only 22.1% of patients scored a "six" of higher (See Figure 3). This means, more

patients were placed on CVM even though they did not score a "six" or higher on the

MFRAT. This indicates despite the score telling them not to, nurses were over ordering

CVM on patients they believed were at risk. The process measures of determining if the

clinical nurses followed the protocol of ordering "direct handoff" and CVM if the patient

scored a "six" or higher on the MFRAT was 38.2% (See Figure 1). Separating the two

interventions, there was a 53% compliance rate of scoring a "six" or higher on the

MFRAT and placing the patient on CVM (See Figure 3). There was a 38.2% rate of

scoring a "six" or higher and being placed on "direct handoff" (See Figure 1). Therefore,

the initial limitation of not having enough CVMs did not have a critical affect as the

nurses were more compliant with ordering CVM verses "direct handoff" when there was

not a limitation on ordering "direct handoff". The outcome measure of fall rate dropped

from 4.0/1000 patients' days in January to 1.5/1000 patient days in April (See Figure 2).

Chapter V: Discussion

Findings

The evidence indicated that enhancing and modifying current practices of

Caution Club further decreased hospital related falls. The objectives of the scholarly

project were to standardize the fall information collected during the admission process

and facilitate a fall prevention program. The scholarly project was implemented on the

stroke unit collecting data over a fifteen-week period. The stroke population selected

based on pre-existing analyses of falls experienced at MH between September 1, 2017

through February 28th, 2018. The data suggests that of the102 patients that

experienced a fall, the number was highest in patients seeking treatment for a stroke at

31.4 percent (Marianjoy Patient Safety Project, 2018). Also, further analyzing pre-

existing data, 39% of patients on the stroke unit would meet criteria for Caution Club

 while 18% of patients would qualify for Caution Club Plus (Marianjoy Patient Safety

Project, 2018). Providing the highest level of care to the 18% of patients captured the

majority at high-risk for experiencing a fall. Nurses have the professional discretion to

override scoring convention under the hospital policy. If they believed a patient was at

risk for a fall but does not meet criteria of Caution Club Plus he or she could still

implement necessary interventions. This phenomenon is exemplified when in the

scholarly project 34% of patients had CVM ordered when only 22.1% of patients scored

a "six" of higher (See Figure 3). Conversely, nurses may decide a patient that has a

score of "six" or higher does not need CVM or "direct hand-off" interventions as the

patient demonstrated good safety awareness to avoid overuse of available resources.

This may be one of the reasons, the compliance score was 38.2% with both

interventions ordered for a patient with a score of "six" or higher on the MFRAT (See

Figure 3).

Limitations or deviations from project plan

Limitations to this scholarly project included the limited availability of CVMs and low

compliance rate. MH has a total of seventeen safety cameras and only sixteen can be

used at one time. The cameras must be shared throughout the hospital consisting of

100 acute inpatient **r**ehabilitation beds and 27 subacute beds for patients. Another

limitation was the low compliance rate of 38.2%. (part due to the lack of available

CVMs). However, the low compliance of "direct handoff" is a significant limitation since

there is not a cap for putting patients at risk for a fall on "direct handoff". Additionally,

preexisting data from July2018 - Sept2018, found an average of 58.2% agreement

when two nurses scored the Marianjoy Fall Risk Assessment (MFRAT). The low

agreement rates led to less patients being identified as a fall risk when in fact they were

at risk. In these cases, the fall reduction interventions were not in place at the time of

their falls. An analysis was not preformed after the education was initiated to determine

if the agreement rate was improved. The survey analysis found an 80.56% percent

accuracy in determining if "special medications" were prescribed and an 88.89%

accuracy in determining if the patient had lower extremity paresis. These two items had

the highest rate of being mis-scored on MFRAT (see figure 5). Therefore, although pre

existing data found "special medication" and "lower extremity paresis having the highest

rate of being mis-scored, the majority of nurses answered these questions correctly on the questionnaire.

Implications

The data found in the scholarly project has the potential to expand to other inpatient rehabilitation floors. Expanding CCP to the other inpatient rehabilitation floors (brain injury, neuromuscular, musculoskeletal, and spinal cord injury) will create a program/process/system that results in greater safety, efficiency, and satisfaction. The scholarly project has a high sustainability to change as Caution Club Plus modified the current fall prevention policies by adding two interventions to current practice on the units. To promote adherence, it may be best to evaluate the interventions that are most effective and implement them without drastically changing current practices. Caution Club Plus will be part of an ongoing operation of MH to reduce falls. In 2008, the fall rate per 1000 patient days was 8.6 which steadily dropped to 2.6 falls per 1000 patient days. (See Figure 4). The numbers showed the ability to reach a goal by continuing to make needed change. Each person on the team has the capability to contribute to the success of creating an award-winning environment.

Potential project implementation modifications to improve future performance include purchasing more CVMs, adding Caution Club Plus to the mandatory annual education for staff, and increasing compliance with the guidelines for use.

Significance to Nursing Practice

Caution Club Plus is a nursing driven project. Nurses play a pivotal role in preventing a patient from falling. Nurses are on the forefront of patient care, and are able to make a significant difference in the well-being of a patient. CCP was within the scope of nursing care and he or she must use professional discretion in accurately determining a patient's risk for a fall by using instruments like the MFRAT and placing the patient on the appropriate interventions with ongoing assessments. Suggested changes in nursing practice is establishing a mindset that "chasing zero" is achievable.

MH is an acute rehabilitation hospital working with patients that have experienced a drastic change in mobility and independent function. Therefore, falls are anticipated. The scholarly project and the mission at MH hope to change the culture of its rehabilitation hospital with a collaborative goal between all disciplines of making zero falls the standard. MH sets an example for acute facilities as being the rehabilitation facility that is using evidence to inform practice decisions.

Chapter VI: Conclusion

Value of Project to Health Care and Practice

The scholarly project Caution Club Plus fit the organization's mission of "patient first, safety always". Caution Club Plus added value and impacted healthcare by promoting patient safety in a vulnerable population. A fall-related injury is associated with higher hospitals costs and prolonged length of stay (Joint Commission, 2015). Costs to patients who suffer from a serious fall average $13,316 associated with the additional six to twelve days in the hospital (Bouldin et al., 2013). Limited literature is

available on quality improvement efforts to initiate a successful fall prevention program in an inpatient rehabilitation hospital. Therefore, MH's focus on safe patient handling while facilitating an effective fall prevention program will continue to positivity impact healthcare and practice in this facility.

DNP Essentials

The DNP project Caution Club Plus aligned with the following DNP Essentials, II: Organizational and systems leadership for quality improvement and systems thinking. This scholarly project addressed content in essential II by successfully creating a quality improvement project on fall prevention while improving the current Caution Club protocol (AACN, 2006).

DNP Essential III: Clinical scholarship and analytical methods for evidence-based practice. This DNP project addressed content in essential III by applying evidence-based practice into the fall prevention program Caution Club Plus. Creating a fall prevention program by identifying the pertinent data collected, incorporating the evidence-based findings of the literature review, and addressing the needs of patients post CVA supports the organization's mission of "patient first, safety always" (Marianjoy Patient Safety Project, 2018).

DNP Essential IV: Information systems/technology and patient care technology for the improvement and transformation of health care. Caution Club Plus used patient care technology to improve patient outcomes in health care with the use of a camera system. The camera system can be used while the patient is alone in the room. The

goal is to maximize the use of technology to support providing higher quality care for the patients.

DNP Essential VI: Interprofessional collaboration for improving patient and population health outcomes (American Association of Colleges of Nursing,2006). Interprofessional collaboration for improving patient health outcomes is key in this project. Caution Club Plus addressed content in DNP essential VI with interprofessional collaboration to promote adherence. It is best to evaluate the interventions that are most effective and implement them without drastically changing current practices. Caution Club Plus was favored by the staff at MH. Finding and implementing an intervention that is highly ranked among the staff improves staff adherence.

Plan for Dissemination

A PowerPoint presentation will be presented to Bradley University along with the MAGNET program director at MH, my mentor. The presentation will address the impact a quality improvement project has on the acute rehabilitation population. I plan to submit my quality improvement project to the Marianjoy Rehabilitation Hospital's research compendium of published research. Also, I plan to take part in the 2019 healthcare professionals research and evidence-based practice symposium.

Attainment of Personal and Professional goals

Acute rehabilitation should be viewed as a place one intends to gain strength and continue to reach the highest level of independence possible while struggling with

mobility issues. Patients are supported and encouraged by nurses and therapists who truly believe in their patients and have a passion for the art of rehabilitation. MH is well recognized in the community and the information about the intervention CCP will now be shared with a larger audience. The staff work hard to keep the reputation of MH as a place highly sought out for rehabilitation. Overcoming barriers has allowed the investigator to strive for success and never give up. The investigator gained personal growth by taking part in a simple but fundamental project that makes a difference in the lives of others. Supporting patients through policy changes and quality improvement is one of my professional goals. Communicating with organizational leaders and gaining their respect has had a significant impact on the professional relationships and the collaborative work that can be done to improve nursing practice. The investigator has an entire career to continue to take part in projects that will influence patients at a greater level, and mentor future students to achieve their goals.

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APPENDIX A – FALL RISK ASSESSMENT SCALE

Score	Criteria
1	**Communication Deficits** Inability to make basic needs known to staff
1	**Impaired Cognition** Difficulty understanding, reasoning and/or remaining oriented to people, place, time
1	**Altered Bowel/Bladder Elimination** Any altered bowel and/or bladder function issues related to incontinence, retention, infection, constipation, urgency, diarrhea, etc.
1	**Unilateral Neglect** New onset of inability of be aware of one side of the body
1	**Lower Extremity Hemiparesis** New onset of LE Hemiparesis
1	**Upper Extremity Hemiparesis** New onset of UE Hemiparesis
1	**Sensory Deficits** Deficits in hearing, sight or touch
1	**History of Previous Fall** In past 3 months
1	**Impulse Behavior** Actions taken by an individual without thought of consequences, insight into physical limitations, or weight-bearing status safety.
1	**Special Medications** Antipsychotic, Antidepressants.
Total _____	Signature _____

Appendix B: Ongoing Education on MFRAT

According to the descriptions of the 10 items on the MFRAT

Normal view   Neglect and Anosognosia

(example of neglect) ----->
Unilateral Neglect:

A new onset of the problem. Unilateral neglect is defined by the inability of a person to process and perceive stimuli on one side of the body or environment. Look out for patients who only look to one side but not the other or don't seem to be aware of one side of their body. You can ask the patient to track your finger side to side if you aren't sure and see if their eyes move. **Score one point if the unilateral neglect is a new onset.**

Upper and Lower extremity paresis:

A new onset of paresis or weakness. This doesn't have to be complete paralysis of an extremity, but weakness as compared to their baseline or compared to their intact side. Most commonly associated with spinal cord injury, brain injury and stroke.

Special medication:

We are doing better with special medication! Please remember the only classifications of medication that count include:
Antipsychotics and Antidepressants
Commonly used at Marianjoy: Zoloft, Lexapro, Seroquel, Cymbalta, Valium, Ambien, and Xanax.

Appendix C: CVM Patient Discontinuation Form

Marianjoy
Rehabilitation Hospital
part of
Northwestern
Medicine

| Date/Time Discontinued From CVM: |
| Total Hours Patient on CVM: |

CONTINUOUS VISUAL MONITORING (CVM) PATIENT DISCONTINUATION FORM

Reason for DISCONTINUATION:

	Requires 1:1 direct observation (sitter in room)		Family refuses
	Continuous monitoring no longer required		Patient transferred to long term care
	Discharged from hospital		Acuity change (transfer to ICU)
	Camera re-assigned to higher need patient		Other

Appendix D: CVM Patient Admission Report Form

Marianjoy
Rehabilitation Hospital
part of
NM Northwestern Medicine

Camera Number:	Date Admitted
_____	_____
Room Number:	Time Admitted
_____	_____

CONTINUOUS VISUAL MONITORING (CVM)
PATIENT ADMISSION REPORT FORM

Patient Name: _____

Nickname or Preferred name: _____

Gender: Male   Female

Preferred Language: _____

Age: _____

Preferred Announcement Voice: Male   Female

RN Name: _____

RN Number: _____

Backup Name (Nursing Assistant) _____

Back-up Number: _____

Reason(s) for CVM: (Select ALL that apply)

	Fall Prevention		Alcohol/Substance Withdrawal
	Elopement		Aggressive/Violent
	Safety of Tubes/Lines		Delirium/Restless/Confusion
	Suicide Precautions		Other

Please circle the **Primary Reason** for CVM above: (From RN Report)

Additional Considerations:

	Peripheral IV		Central Lines/Drains
	Medical Restraints		Monitoring
	Hard of Hearing		NG/G/J- tubes
	Mobility Aid (Walker, etc.)		Other

Additional Notes:

Appendix E: Step by Step Caution Club Plus Plan

The Caution Club Plus pilot project will be implemented as follows:

All post-CVA patients on the stroke unit will be evaluated on admission utilizing the MFRAT from January 16th 2019 – April 30th 2019.

The nurses, rehabilitation care technicians, and therapist will be informed of the pilot study CCP.

When a patient scores a "six" or higher on the MFRAT, the patient will meet CCP status.

Patients at the CCP status will be provided an information sheet on the purpose and use of direct handoff (DH)and the continuous video monitor (CVM).

The nurse will order CVM and DH. Also, place the CVM sign and DH magnet on door and sign on patient wheelchair.

MFRAT scores with appropriate interventions will be audited by investigator.

Fall Committee will meet monthly to go over results and make necessary adjustments.

Appendix F: Direct Hand-off and Continuous Video Monitor Interventions

The interventions of Direct Hand-off (DH) and continuous video monitor (CVM) will be implemented as follows:

Direct Handoff

- When a staff member is receiving a patient on "direct handoff" he or she is accountable for the safety of that patient.

- Before moving on to another task, the staff member must secure a hand-off to another staff member to ensure the safety of that patient.

- The hand-off of patient care to another individual must be completed person to person.

- A DH sign is attached to the patient's wheelchair to visually identify patients at high risk for falls as well as a magnet on the patient bedroom door. Visual included in appendix.

Continuous Video Monitor (CVM)

- Remote visual monitoring by a trained patient care technician.

- The system is available with a live feed, allowing for real time communication between patient and patient care technician.

- Monitors are wireless, portable, and the audio/video feed is protected by being transmitted over the hospitals' secure network avoiding HIPPA violations (AvaSure).

- Patients that score a "six" or higher on the MFRAT categorized as a safety concern, will be automatically placed on the CVM.

- Once a patient is placed on CVM, an order will be placed in the chart and a copy to the CVM office.

- Nursing documentation will include the date and time of the initiation of monitoring and the reason for CVM. The phone number of a patient care technician and staff nurse will be available for communication with staff regarding any safety concerns. Nursing is to educate the patient and family on the purpose and use.

- CVM staff will report to the RN the need for frequent interventions (at least four times in one hour).

- Discontinuation of CVM will be based on reassessment of MFRAT and nursing clinical judgement based on patient activity.

Appendix G: MFRAT Questionnaire

Please indicate what unit you primarily work on:

    A. 1 East
    B. 1 West
    C. 2 East
    D. 2 West
    E. 3 East
    F. 3 West
    G. Float/Registry

1) Nurses have the professional discretion to override scoring conventions, and order Caution Club, even if the patient scores <4 on the Marianjoy Fall Risk Assessment Tool (MFRAT)?

A. True

B. False

2). T.K. is returning to his room after a long day of therapy. He is having difficulty articulating himself due to slurred speech and is unable to make his basic needs of pain and toileting known to staff. When scoring the MFRAT, he would trigger a "1 or Yes" for?

A. Impaired cognition

B. Communication deficit

C. Sensory deficit

D. None of the above

3). S.J. is unable to speak due to expressive aphasia, but she is able to point, use pictures on her communication board, or facial expressions to make staff aware of her needs. She would score a "1 or Yes" for communication deficits on the MFRAT.

A. True

B. False

4). A.G. has a history of dementia. She is more alert and oriented during the day but in the evening, she doesn't remember she is in the hospital, seem to recognize her son that comes to visit, and gets mixed up about what year it is, thinking it is 1970. On the MFRAT, she would trigger a "1 or Yes" for:

A. Communication deficits

B. Impaired cognition

C. Sensory deficits

D. None of the above

5). The nurse walks into the room and notices that R.K. is sitting on her right hand watching T.V. The nurse points out to R.K. that she is sitting on her hand and the nurse will need to reposition her arm back on the lap tray of the wheelchair. R.K. has a confused look on her face and tells the nurse "I am not sitting on my hand" while waving her left arm in the air. She would score "1 or Yes" on the MFRAT for:

A. Unilateral neglect

B. Lower extremity paresis

C. Impaired cognition

D. None of the above

6). M.B. recently underwent a cervical spine surgery and post op, has weakness in both arms when compared to her baseline. The patient would score "1 or Yes" on the MFRAT for?

A. Unilateral neglect

B. Lower extremity paresis

C. Upper extremity paresis

D. None of these

7). A. M. is taking Colace daily for constipation but is continent to both bowel and bladder and does not wear a protective undergarment. The patient score a "1 or Yes" on the MFRAT for altered bowel/bladder elimination?

A. True

B. False

8). Which medication is considered a "special medication" according to the MFRAT?

A. Norco

B. Ultram

C. Melatonin

D. Sertraline (Zoloft)

9). J.H. recently had a stroke. Upon assessment, his left arm and left leg strength are 2/5, meaning he can move his extremity in a gravity eliminated position through the full range of motion. Which item(s) would he trigger a "1 or Yes" on the MFRAT?

A. Lower extremity paresis

B. Upper extremity paresis

C. None of the above

D. Both A and B

10). The nurse walks into the room and notices that N.K.'s right arm is wedged between her hips and wheelchair armrest as she is watching TV. The nurse cues her that her arm is getting pinched. N.K. thanks her and repositions her right arm herself, mentioning those pins and needles she feels in her arm make it hard to feel where it is positioned sometimes. She would score "1 or Yes" for?

A. Unilateral neglect

B. Sensory Deficits

C. None of the above

D. Both A and B

Appendix H: Caution Club Plus Project Information for 1 East Staff

What is Caution Club Plus (CC+)?

When a patient scores of **6 or higher** on the Marianjoy Fall Risk Assessment (MFRAT), the nurse will order:

1. Continuous Visual Monitoring.
2. Direct handoff

Where

CAUTION
FALL PROTECTION REQUIRED

1. Pilot on **1 EAST,** since that is our greatest population of stroke patients!

Who

1. **All patients** who are newly admitted on 1 East **on or after December 11st**.

When

1. *Pilot will start day on: **Tuesday, December 11st, 2018***

How

1. I will be auditing to ensure the Marianjoy Fall Risk Assessment is completed on every patient during the trial to ensure scoring is accurate.
2. Also, compliance with ordering Direct Handoff (arms reach) and CVM will also be tracked.

Please contact me directly at Natalie.Hassoun@nm.org with your feedback and concerns to make any refinements to the program! I appreciate all your effort in helping facilitate the fall prevention program with a shared goal of reducing the number and severity of falls.

Caution Club Plus (CC+)

Overview & Purpose

After data analysis, it was determined Marianjoy patients at highest risk for falls are those who score >6 on MFRAT and those with the diagnosis of stroke.

For my capstone project at Bradley University, I have teamed up with the fall prevention committee to identify and implement evidence based practice to reduce the number and severity of falls in support of Patients First, Safety Always!

Objectives

1. To standardize fall information
2. To monitor and analyze fall rates and trends
3. To recommend and implement improvement initiatives for fall prevention
4. To improve interdisciplinary approach to fall prevention

DNP Essentials

1. Essential II: Organizational and Systems Leadership for Quality Improvement and Systems Thinking
2. Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice
3. Essential IV: Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care
4. Essential VI: Interprofessional Collaboration for Improving Patient and Population Health Outcomes

Appendix I: Audit Spreadsheet

Admission Date	Nursing Assessment #4 MFRAT Score	Corrected MFRAT Score	Caution Club Ordered? (MFRAT ≥ 4)	Direct Handoff Ordered? (MFRAT ≥ 6)	CVM Ordered? (MFRAT ≥ 6)	Items that didn't match on the MFRAT	Items that didn't match

Appendix J: CVM Patient Information Sheet

Marianjoy
Rehabilitation Hospital
part of NM Northwestern Medicine

Department of Professional Practice

Continuous Visual Monitoring (CVM):
Supporting Patient Safety

At Marianjoy Rehabilitation Hospital, patient safety and privacy are our highest priorities. For this reason, we are using Continuous Visual Monitoring ("CVM"), a patient monitoring device that helps decrease your risk of falls. Falls may cause injuries ranging from scrapes and bruises, to broken bones or serious head injuries. This can lead to a longer hospital stay.

How Continuous Visual Monitoring Works:

The CVM device is a tool that we use to ensure that you are safe, even if you are alone in your room. It has a video camera and two-way audio, which allows a trained staff member to see and speak to you. When you are trying to get up, the staff member will ask you to stay in bed until a healthcare provider arrives in the room to provide help.

Staff members will monitor you from a central room by watching a video feed. They can see you all of the time—except when the device is set to "privacy mode." However, the only time they can hear you is when they talk to you over the speaker. Continuous Visual Monitoring does not ever record video or audio.

A member of the nursing staff is always available whenever you need anything. Use your nurse call button to ask for help.

CVM Wall Monitor

- When the CVM light is on, the staff member who is monitoring you can see you.

- When the light is off, the privacy cover is on, and they cannot see you. The privacy cover is used when your doctor or nurse is providing care, and when you are dressing, bathing, or using the toilet. When the doctor or nurse is finished, they will ask the staff member to remove the privacy cover and resume monitoring.

Your nurse decides if you no longer need visual observation using the monitor. When your health has improved, and you are safe from falls or injury, continuous visual monitoring can be stopped.

Questions about Continuous Visual Monitoring? Ask your nurse for more information about the CVM monitoring device

3/29/2018

Appendix K: Patient Direct Handoff Information Sheet

(Marianjoy Rehabilitation Hospital, 2017).

Table 1: Caution Club Plus Costs

Upfront costs

14 wall mount monitors	$89,040
3 mobile carts	$23,988
Installment	$17,630
Clinical program development	$15,300
Monitor station	$5,095
Total	151,053

Annual Fee

Call center	$23,831
Software license	$98.50
Total	23,929.50

Patient care technician (PCT)

Base pay	PM shift differential	Night shift differential
$13	$1	$1.25

Average cost for one PCT per one hospital day	$336/ hospital day

Table 2: EET table

EET

https://1drv.ms/x/s!AjfNBaSWRxQegQcQlLsoi3uFVDs0

Figure 1: 1 East Patients Direct-Handoff Compliance

1 East Patients January '19-April'19

Category	Percentage
>6 on MFRAT	22.1%
Direct Handoff ordered	16.9%
>6 on MFRAT AND Direct Handoff	38.2%
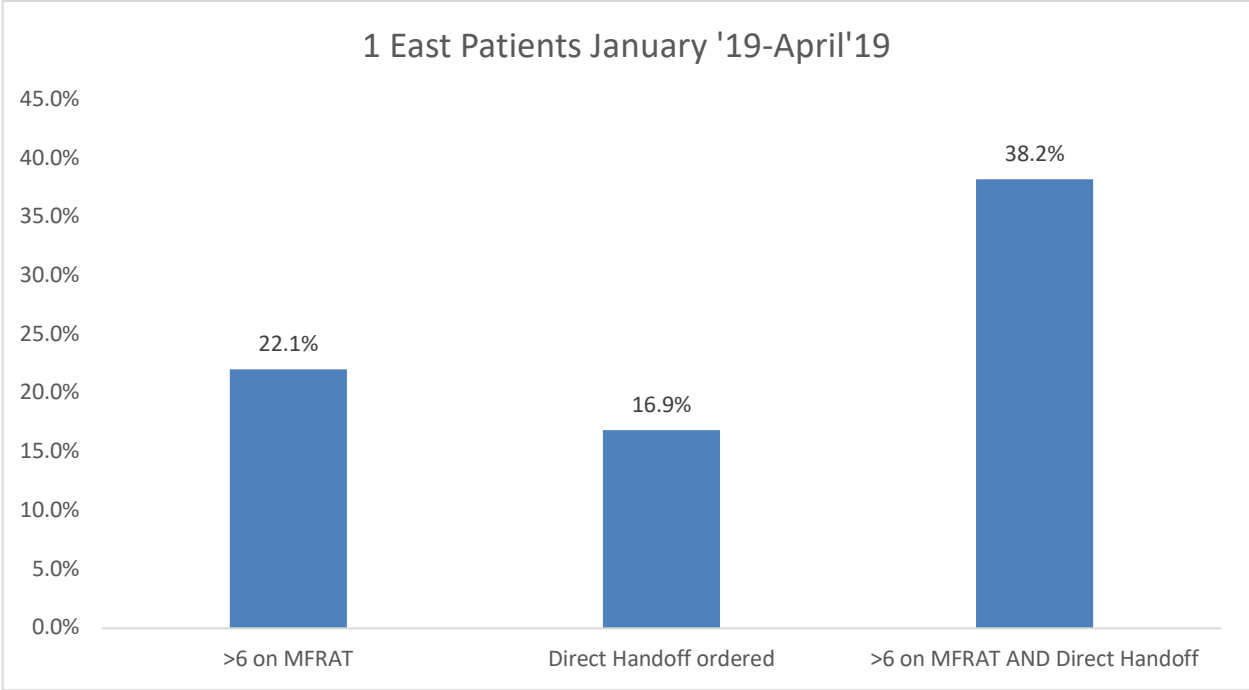
Figure 2: 1 East Fall Breakdown

1 East Fall Breakdown January '19-Apr'19

- Potentially preventable?
- Falls CC+ Not Followed, 28.6%
- Other Falls, Not indicated for CC+, 57.1%
- Falls with CC+, 14.3%

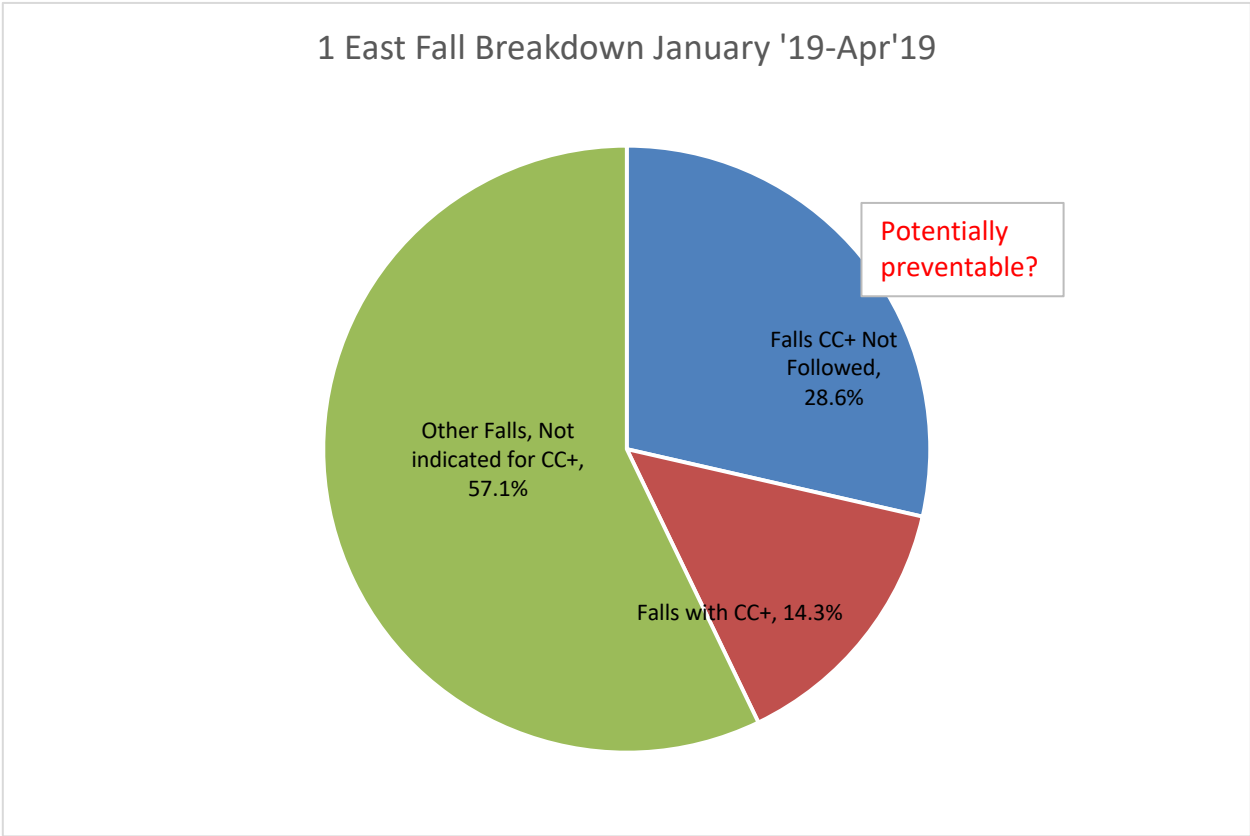Fall rate = Per 1000 Patient days on 1 East
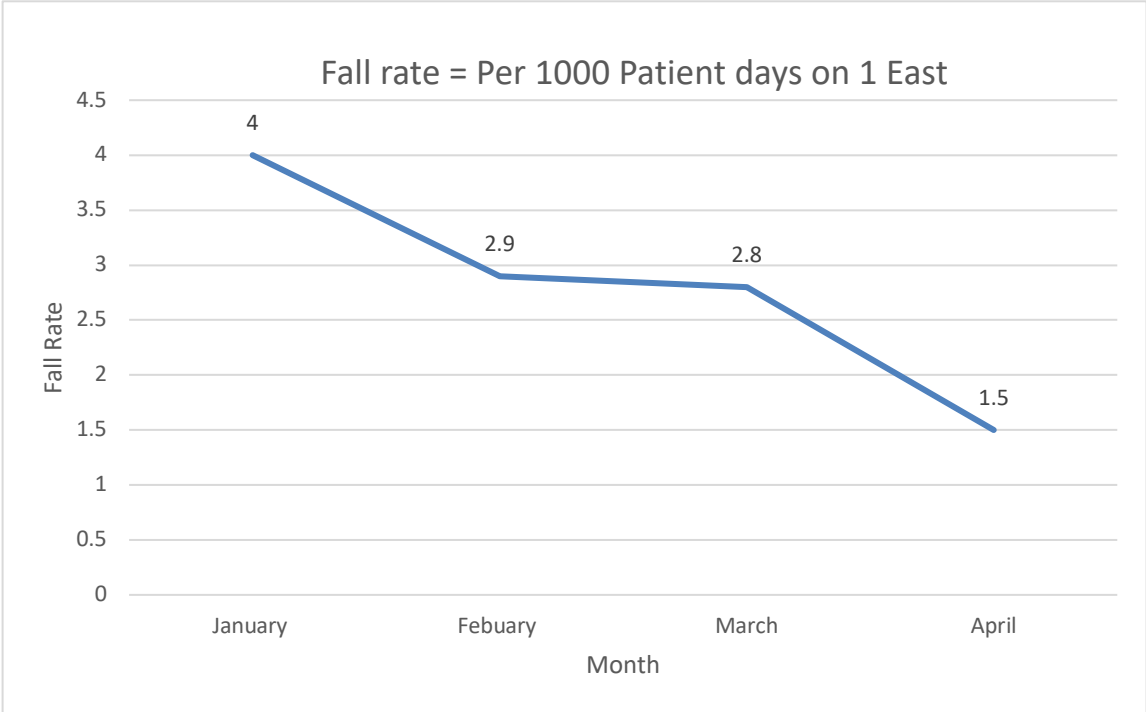
Figure 3: 1 East Patient Results CVM plus DH Compliance
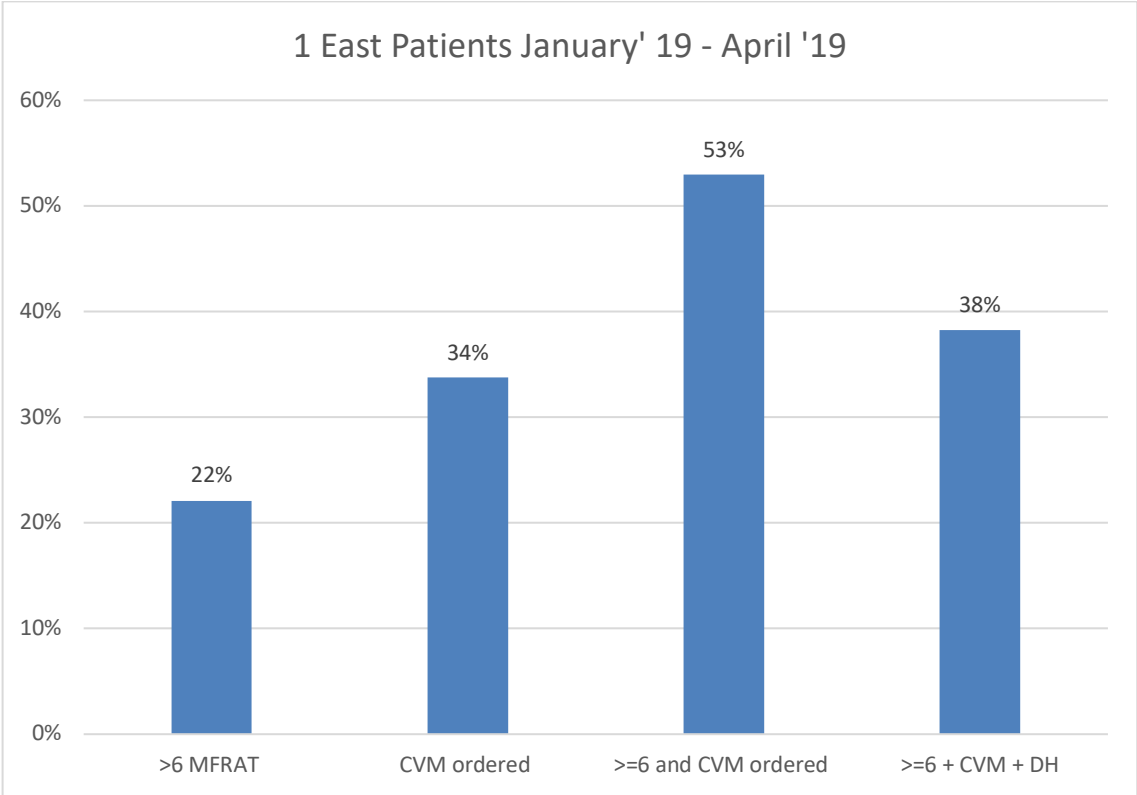
Figure 4: Fall Rate/1000 Patient Days 2008-2019 (YTD)

Fall Prevention
FY 2008 – FY 2019 (YTD)

Fall Rate / 1000 Patient Days 2008-2016

Marianjoy
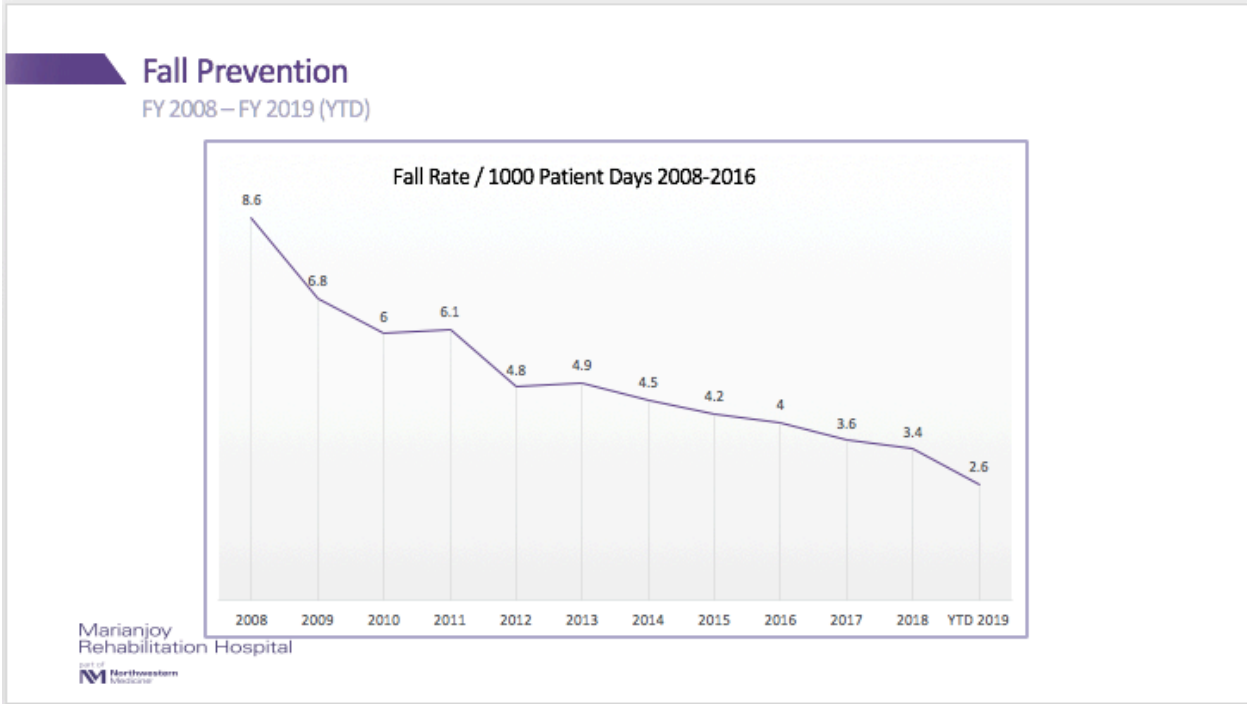Rehabilitation Hospital
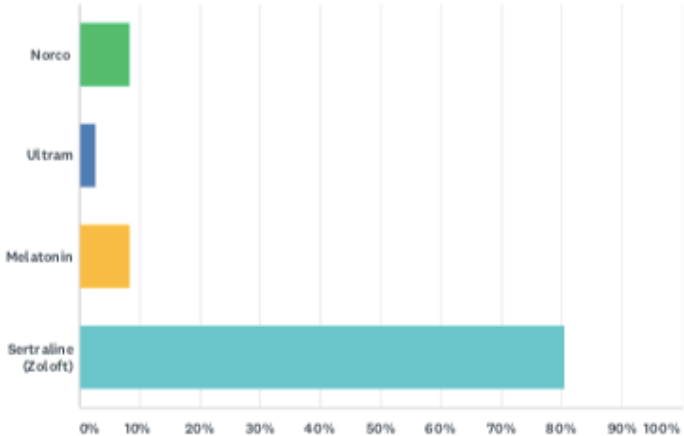part of Northwestern Medicine

Figure 5: MFRAT Survey Analysis

Marianjoy Fall Risk Assessment Tool (MFRAT) Questionnaire

Q9 Which medication is considered a 'special medication' according to the MFRAT?

Answered: 36   Skipped: 0

ANSWER CHOICES	RESPONSES	
Norco	8.33%	3
Ultram	2.78%	1
Melatonin	8.33%	3
Sertraline (Zoloft)	80.56%	29
TOTAL		36

Marianjoy Fall Risk Assessment Tool (MFRAT) Questionnaire

Q10 J.H. recently had a stroke. Upon assessment, his left arm and left leg strength are 2/5, meaning he can move his extremity in a gravity eliminated position through the full range of motion. Which item(s) would he trigger a '1 or Yes' on the MFRAT?

Answered: 36   Skipped: 0
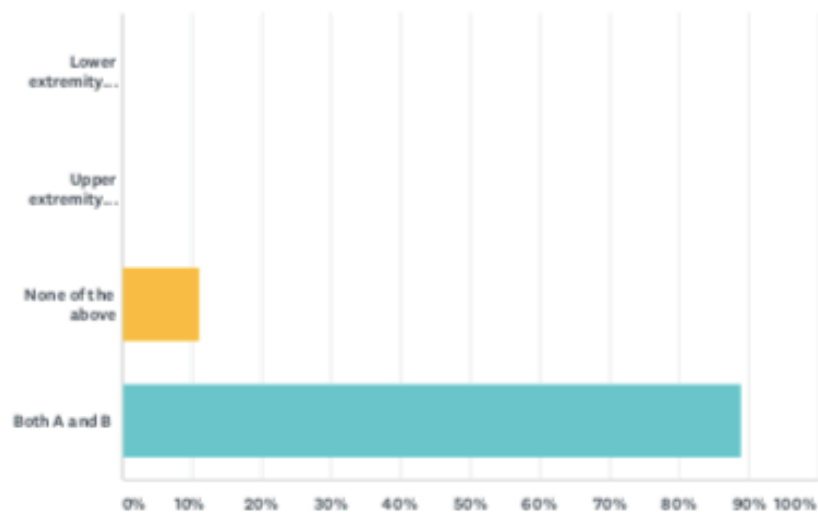
ANSWER CHOICES	RESPONSES	
Lower extremity paresis	0.00%	0
Upper extremity paresis	0.00%	0
None of the above	11.11%	4
Both A and B	88.89%	32
TOTAL		36