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Improving Fall Risk Assessment and Documentation: A QI Project

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The document mentioned above has been reviewed and accepted by the student's advisor, on behalf of the advisory committee, and by the Assistant Dean for MSN and DNP Studies, on behalf of the program; we verify that this is the final, approved version of the student's DNP Project including all changes required by the advisory committee. The undersigned agree to abide by the statements above.

Ashley N. Kohari, Student

Dr. Lynne Jensen, Advisor

DNP Final Project Report

Improving Fall Risk Assessment and Documentation: A QI Project

Ashley N. Kohari BSN, RN

University of Kentucky

College of Nursing

Spring, 2018

Lynne Jensen, PhD, APRN-BC - Committee Chair

Elizabeth Tovar, PhD, APRN - Committee Member

Jessica Sass, APRN - Committee Mentor

Dedication

I would like to dedicate this project to my husband, Tyler, my daughter, Kennedy, my parents, my in-laws, and my support group/friends in this program. Thank you for putting up with the stress, long hours, and tears over these last three years. Thank you for pushing me to get through this program. I would not have made it without the support and encouragement from all of you. Kennedy, thank you for your unconditional love; you have made it so worth it.

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I would like to express my gratitude to my advisor and committee chair, Dr. Lynne Jensen. You have stood by my side and supported me through everything during these past three years. From the phone calls to make sure I stayed on track after I had my first baby one year into the program, to the long hours in your office making sure my project write-up and defense PowerPoint was polished, to the evening texting and phone calls, I am thankful for your support and encouragement. You believed in me more than I believed in myself. The way you handle and excel in so many roles from an advisor to many graduate students, a committee chair, a practicing nurse practitioner, a clinic manager, a wife, a mother, and a grandmother is moving. I also would like to thank my committee members, Dr. Elizabeth Tovar and Jessica Sass for your guidance and taking the time to serve on my DNP committee. Thank you for being present for meetings, offering advice and encouragement, and remaining so positive throughout my DNP project. Thank you both for making this project possible.

To my colleagues, I thank you. Without all of you, I am certain I would not have made it, at least without my sanity.

I also want to thank Whitney-Kurtz-Ogilvie for your contribution by offering your expertise to help with revise this paper.

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Abstract

BACKGROUND: Unintentional falls commonly arise and can cause significant harm including fractures, head injuries, and death. Assessing each patient for falls and performing a fall risk assessment is recommended by the American Geriatrics Society and the Center for Disease Control and Prevention, and is mandated for institutional reimbursement. Fall risk assessment has been shown to decrease the rate of falls and healthcare costs.

PURPOSE: The purpose of this quality improvement project was to improve compliance for fall risk screening and documentation to meet MACRA requirements in a family medicine clinic.

OBJECTIVES: The objectives for this project were: 1. Conduct PDSA cycles to determine best practice for the assessment and documentation of fall risk within one team. 2. Implement best practices clinic-wide for assessment and documentation of fall risk as identified in PDSA cycles. 3. Compare fall risk documentation reports pre and post-implementation.

METHODS: Conducted and analyzed three PDSA cycles between October 2017-March 2018.

SAMPLE: All patients who were seen from October 01, 2017 to March 01, 2018 were included in this study. This clinic had a total of 16346 patients.

RESULTS: Overall, there was improvement with fall risk screening and documentation. Clinic-wide fall risk documentation compliance improved from 1.2% pre-intervention to 29.2% post-intervention.

DATA ANALYSIS: Monthly data reports were collected and compared to assess compliance to fall risk screening and documentation.

CONCLUSION: Utilizing the Model for Improvement through PDSA cycles is an effective way to generate change. Successful strategies to improve compliance included frequent reminders and administrative support. Identified barriers included time constraints and staff motivation.

Improving Fall Risk Assessment and Documentation: A QI Project

Final DNP Project Report Overview

Falls are a leading cause of morbidity and mortality in the United States and are considered to be one of the top 20 most expensive medical conditions (CDC, 2016a). Approximately 31 billion dollars are spent annually due to the treatment and management of falls (CDC, 2016b). Each year, 2.8 million American adults are treated in emergency rooms secondary to falling (CDC, 2016a). The consequences related to falls include broken bones, head injuries, and death (CDC, 2016b). The number of unintentional deaths due to falls in adults older than 65 years increased each year from 2005-2014 (CDC, 2016a). In Kentucky, falls are a major cause of traumatic brain injury in adults 65 years and older, and in 2014 there were 8,164 hospital admissions secondary to falls in the state (KSAC, 2014).
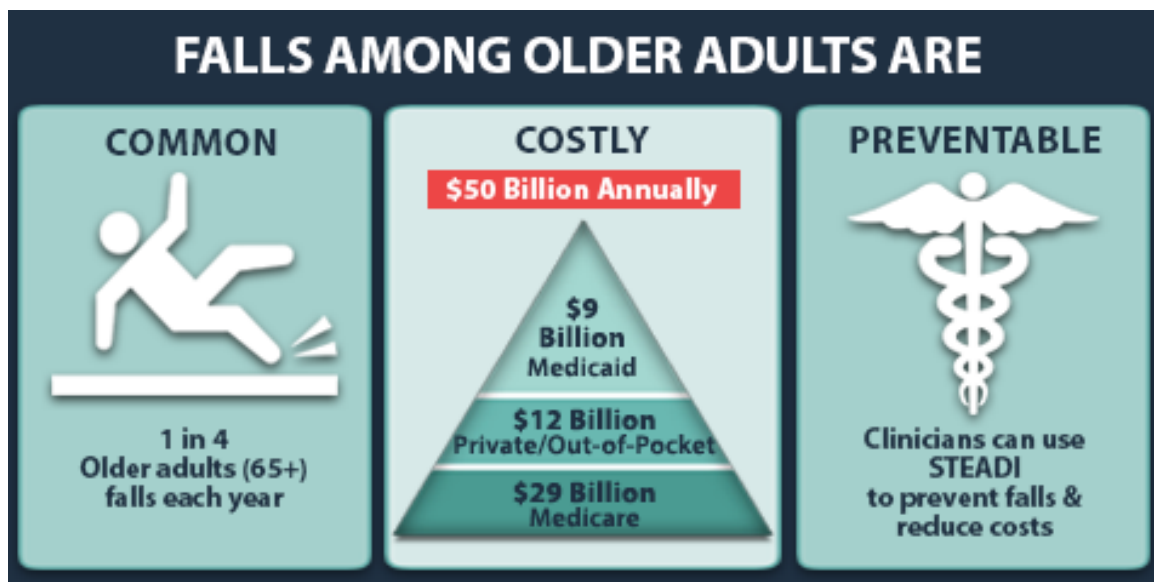

Figure 1. Falls Among Older Adults: Prevalence, Cost, and Prevention (CDC, 2016c).

The first step in preventing falls is to identify patients who are at an increased risk for falling. The American Geriatric Society (AGS) and the Centers for Disease Control and Prevention (CDC) recommend that all providers perform a fall risk assessment on all older patients (AGS, 2017; CDC, 2017a). A Cochrane systematic review by Gillespie et al. (2012), concluded that fall risk assessments decrease the rate of falls and associated decrease healthcare costs.

Background

Risk Factors

Falls are the leading cause of hospitalization and injury-related death in adults aged 75 and older (Elaswy & Higgins, 2011). The geriatric population is at an increased risk for falls due to physiologic changes and altered pharmacokinetics due to age (Phelan, Mahoney, Voit, & Stevens, 2015; Tanzi, 2012). Chronic conditions, acute illnesses, medications, footwear, alcohol and drugs, and assistive devices place an individual at an increased risk for falling (Phelan et al., 2015). Conditions including weakness, visual deficits, wearing multifocal glasses, balance deficits, mobility limitations, gait deficits, cognitive impairment, impaired ADL, and postural hypotension may contribute to unintentional falls (Masad & Morris, 2001; Lord, Dayhew, & Howland, 2002).

Falls also often occur due to environmental hazards. Potential hazards include steps, rugs, cords, insufficient lighting, and slippery floors (Stevens, Holman, & Bennett, 2001). Interventions to improve the safety of a person's home can effectively decrease the risk of falls. This is especially important for patients who have a high risk of falling, such as those who have visual impairments, low blood pressure, impaired mobility, unsteady gait, poor balance, foot problems (e.g. peripheral neuropathy), a history of falls, frequent toileting needs, altered mental

status, conditions such as seizures and/or delirium, osteoporosis, the use of assisted devices, and the use of certain medications (Lunsford & Wilson, 2015; Stevens, Holman, & Bennett, 2001).

Maher, Hanlon, and Jajjar (2014) define polypharmacy the use of more drugs than are medically necessary. Medications that are not indicated, ineffective, duplicative contribute to polypharmacy. More than 50% of older adults experience polypharmacy. Polypharmacy increases risks, adverse-drug events, drug-interactions, medication non-adherence, reduced functional capacity, falls, cognitive impairment, urinary incontinence, and health care costs (Maher et al., 2014). Benzodiazepines, opioids, sedatives, anticonvulsants, antipsychotics, antidepressants, anticholinergics, muscle relaxants, blood pressure medications, and antihistamines commonly contribute to falls (Moncada & Mire, 2017; Park, Satoh, Miki, Urushihara, & Sawada, 2015; CDC, 2017b). It is important for providers to educate patients and caregivers about the possible side effects of prescribed medications, including falls. The AGS recommends against prescribing a medication to a geriatric patient without first conducting a drug regimen review (Moncada & Mire, 2017).

The AGS developed the Beers Criteria guideline to improve the safety of prescribing medications to the elderly. The guideline lists medications to avoid or be cautious of when prescribing in the elderly population. The Beers Criteria include three categories to consider prior to prescribing a medication to a geriatric patient: medications to avoid in older adults regardless of diseases or conditions, medications considered potentially inappropriate when used in older adults with certain diseases or syndromes, and medications that should be used with caution in older adults (Tanzi, 2012). The Beers Criteria list 34 potentially inappropriate medications and drug classes, the rationale for avoiding these medications, the quality of evidence to support the recommendation to avoid the medications, and the strength of the

recommendation. First-generation anticholinergics are one medication class listed in the Beers Criteria to avoid in older adults due to decreased clearance with advanced age and risk of confusion, dry mouth, constipation and anticholinergic toxicity. Examples of first-generation anticholinergics include carbinoxamine, diphenhydramine, hydroxyzine, meclizine, and promethazine (Agency for Healthcare Research and Quality, 2015). New additions to the Beers Criteria include megastrol, glyburide, and sliding-scale insulin due to the risk of hypoglycemia, which can cause dizziness and syncope.

MACRA/Meaningful Use

The Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) reimburses for services based on the quality of care provided to Medicare patients through one of two quality payment programs: The Merit-based Incentive Payment System (MIPS) or Advanced Alternative Payment Models (Centers for Medicare & Medicaid Services [CMS], 2017). The primary care clinic where this project took place is reimbursed based on the MIPS program. One of the institution's 15 identified MACRA quality measures is fall risk assessment, specifically the percentage of patients aged 65 years and older with a history of falls who had a fall risk assessment completed in the last 12 months. Consequently, one component of payment to the healthcare system will be based on compliance to these quality measures. Additionally, fall prevention assessment is reimbursed as a part of the Medicare Annual Wellness Visit (Moncada & Mire, 2017).

Meaningful use is one component of MIPS in which providers will receive reimbursement and financial incentives based on the quality of care received by Medicare patients. The Centers for Medicare and Medicaid Services established specific objectives that eligible professionals and hospitals must achieve to meet meaningful use (CMS, n.d.). When

eligible hospitals and/or healthcare professionals validate the appropriate use of EHRs and reach

meaningful use goals, they qualify for incentive payment. On the other hand, eligible hospitals

and/or healthcare providers will be penalized, and therefore lose money, if these measures are

not met.

Identifying vulnerable patients who may be at risk for injury gives providers the

opportunity to provide preventative education to these individuals and their family members or

caregivers. Additionally, being aware that a patient has fallen allows the provider to determine if

there was an underlying cause to falling, such as a side effect to a medication or a medical

condition. This is important because fall risk management is a Healthcare Effectiveness Data

Information Set (HEDIS) measure, which assesses provider interventions and patient outcomes,

and furthermore effects payment for services (National Committee for Quality Assurance, 2016).

While MACRA requires screening for falls for all adults 65 years and older, the current policy at

the health care facility where this study was completed requires fall risk screening on every

patient at every visit.

A university health care system implemented an enterprise-wide fall screening protocol

in compliance with MACRA/MU requirements. The fall risk protocol states that every patient,

every time is screened for falls, there is documentation of the screen, and if the screen is positive

a falls protocol should be implemented. To track compliance, a monthly report is generated for

each clinic setting. In the fall of 2017, the family medicine clinic had zero percent compliance to

this protocol. The institutional goal for fall risk assessment is 85%.

Change Theory

Changing one's behavior can be challenging. Kritsonis (2005) explained that Lewin's

three-step change model acknowledges that driving forces that work in opposing directions help

to facilitate change by pushing individuals toward the desired direction of change. Lewin labels "unfreezing" as the first step in the process of making a change. During this step, participants are made aware of the problem. "Unfreezing is important to overcome the strains of individual resistance and group conformity" (p. 2). Ways to accomplish unfreezing include guiding negative forces away from the situation and/or reducing the negative forces that may hinder the change. Robbins describes activities that may help accomplish the unfreezing stage of change. These include motivation of the participants of change, demonstrating the need for change, and participating in the process of change (as cited in Kritsonis, 2005, p. 2).

The second step of Lewin's change model is movement. Kritsonis (2005) states that during this step, the target audience moves toward a new "equilibrium". During this step the participants in change seek alternatives and must understand the benefits of changing. Encouragement and persuasion are key factors that may help engage key employees in the change. Well-respected, authoritative leaders who show support for the change may also play a significant role in achieving success during this step (Kritsonis, 2005).

The final step Lewin identified in the change model is refreezing. This happens after the change has been implemented. The purpose of the step is to conform to the change and prevent the team members from going back to old habits. Kritsonis (2005) states "the purpose of refreezing is to stabilize the new equilibrium resulting from the change by balancing both driving and restraining forces" (Kritsonis, 2005, p. 2). Developing formal policies and procedures are ways to enforce the new change (Kritsonis, 2005).

PDSA

Quality improvement (QI) is defined as "systematic and continuous actions that lead to measurable improvement in health care services and the health status of targeted patient groups.

QI is a continuous process that employs rapid cycles of change over time" (Center for Health

Workforce Studies, 2016, p. 3). There are several methods of applying QI techniques to improve

quality care. Rapid-cycle quality improvement (RCQI) is one method that "identifies,

implements, and measures changes made to improve a process or a system" (Center for Health

Workforce Studies, 2016, p. 3). Rapid cycle quality improvement allows for quick turnaround,

thus providing rapid results. Rapid cycle quality improvement is constructed around the model

for improvement and revolves around trialing various methods of change. The method poses

three essential questions: 1. What are we trying to accomplish? 2. How will we know that a

change is an improvement? 3. What change can we make that will result in improvement? Rapid

cycle quality improvement encourages trial and error of several hypotheses to identify the best

approach to making a change to improve outcomes.

The Plan-Do-Study-Act (PDSA) cycle is a tool within model for improvement that tests a

change by "developing a plan to test a change (Plan), carrying out the test (Do), observing and

learning from the consequences of the tested change (Study), and determining what

modifications should be made to the test (Act)" (Institute for Healthcare Improvement, 2018,

Plan Do Study Act Worksheet section, para.1).

The steps in the PDSA cycle are as follows:

1. Plan: Plan out the change

2. Do: Implement the change within a small group

3. Study: Analyze and study data from change

4. Act: Improve or modify the change based on data

(Agency for Healthcare Research and Quality, 2013)

Figure 2, below is a diagram of the PDSA Cycle provided by the Institute for Healthcare
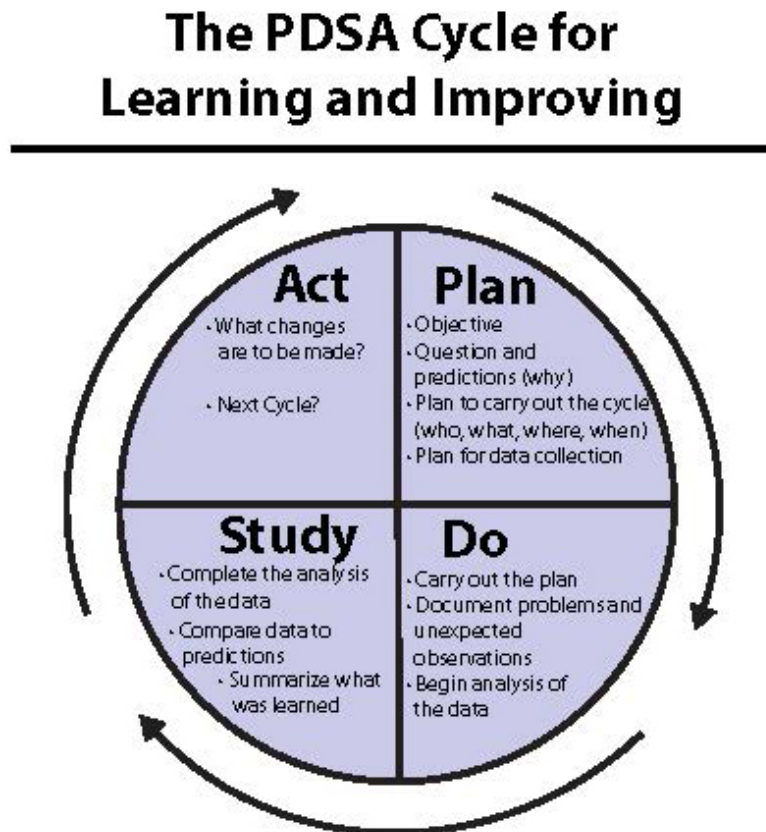
Improvement.

The PDSA Cycle for Learning and Improving

Act
- What changes are to be made?
- Next Cycle?

Plan
- Objective
- Question and predictions (why)
- Plan to carry out the cycle (who, what, where, when)
- Plan for data collection

Study
- Complete the analysis of the data
- Compare data to predictions
- Summarize what was learned

Do
- Carry out the plan
- Document problems and unexpected observations
- Begin analysis of the data

Figure 2. The PDSA Cycle for Learning and Improving. This figure describes each step in the

PDSA cycle (Institute for Healthcare Improvement, 2018).

Purpose

The purpose of this clinical research project was to increase compliance for fall risk screening

and documentation in the electronic health record to meet MACRA/Meaningful Use

requirements.

Study Objectives

Objective 1: Conduct PDSA cycles to determine best practices for the assessment and

documentation of fall risk while rooming patients for ambulatory visits within one team.

Objective 2: Implement clinic-wide best practices for assessment and documentation of fall risk as identified in PDSA cycles.

Objective 3: Compare fall risk reports pre and post implementation of screening procedures.

Methods

A pre and post intervention design using the Plan-Study-Do-Act cycle for quality improvement was implemented at an urban primary care practice within a University setting. Monthly reports of fall screening of all patients were analyzed clinic-wide.

Setting

This study took place at an urban primary care practice within a primary care clinic in a university setting.

Sample

All patients who were seen from October 01, 2017 to March 01, 2018 were included in this study. There were no exclusion criteria. This clinic had a total of 16346 patients. 7,321 of these patients are male, and 9,114 patients are female. 3,486 of the patients were 65 years old or greater. Races include American Indian/Alaska Native, Asian, African American, Hawaiian/Pacific Islanders, and Caucasian. Ethnicities include Hispanic or Latino and Non-Hispanic or Latino.

Procedures

Three PDSA cycles were conducted and analyzed between October 2017 and March 2018. Pre-intervention and post-intervention assessments were also obtained.

Data Collection

Monthly data reports were collected to assess compliance to fall risk screening and documentation.

Results

Phase 1: Pre-Implementation

A pre-implementation assessment was done to assess the current rooming process. The clinical services technician (CST) was observed while she roomed several patients. The process flow observed was: A CST called the patient from the waiting room by first and last name and obtained his/her height and weight. The CST then asked the patient about his or her chief complaint for the visit. Next, vital signs including blood pressure, heart rate, respiratory rate, temperature, and oxygen saturation were obtained and recorded in the patient's electronic health record (EHR). Finally, the CST verified the patient's preferred pharmacy and completed a medication reconciliation in the EHR. Time studies of this process were also completed. The average time it took to room a patient was seven minutes and 25 seconds. Pre-implementation fall risk documentation reports were reviewed and are displayed below.

Team A Falls Documentation Report October 01,2017- November 01, 2017 (starting point): 0.8%

Clinic-wide Falls Documentation Report October 01-2017-November 01,2017 (starting point): 1.2%

PDSA Cycle 1

Plan. A focus group meeting with team A CSTs was conducted to discuss the existing protocol for assessing and documenting every patient for fall risk. During the meeting, information was gathered from CSTs on why the protocol was not currently being followed, and how to best incorporate the protocol into their workflow. Additionally, MACRA/MU and MIPS were outlined, as well as the significance of obtaining fall risk status for insurance reimbursement, to provide excellent patient care, and to improve patient outcomes. Lastly, how

to document the fall assessment and identify a patient as a fall risk risk in the EHR was demonstrated.

Do. A meeting was conducted with the CSTs of team A in October of 2017 and the above plan was implemented. PDSA cycle one lasted one month from October 2017 to November 2017.

Study. Upon questioning the CSTs about any current barriers with assessing and documenting fall risk, it was consistent that they were not aware of the protocol. The fall risk documentation report for November 01, 2017 through December 01, 2017 for team A and clinic-wide was analyzed.

Act. Bi-weekly reminders were provided to team A CSTs to perform and document fall assessments with every patient encounter. It was recommended to ask patients about falls while obtaining height and weight so additional time was not taken during the rooming process. The falls documentation compliance report data are displayed below.

Team A Falls Documentation Report November 01, 2017-December 01,2017: 5.7%

Clinic-wide Falls Documentation Report November 01,2017- December 01,2017: 2.9%

PDSA Cycle 2

Plan. For PDSA cycle two, an additional focus group meeting was conducted with team A CSTs to discuss barriers to performing fall assessment and documentation and strategies to improve compliance.

Do. A meeting was conducted with the CSTs of team A in November of 2017 and the above plan was implemented. PDSA cycle two lasted one month from November 2017 to December 2017.

Study. Upon questioning the CSTs about any barriers with assessing and documenting fall risk, feedback was consistent with time constraints and forgetting to assess for falls as being barriers. The CSTs were concerned that they had "one more thing" added onto their rooming process without having additional time to gather the additional information. The fall risk documentation report for December 01, 2017 through January 01, 2018 for team A and clinic-wide were reviewed.

Act. A falls assessment visual reminder was taped to each bedside table, and these were used by the CSTs to room patients. However, during a weekly round it was noted that the reminders were deemed to be unhelpful and removed from the bedside tables. A supervising NP was brought in by using a top-down approach to reiterate the significance of complying with the protocol with every patient. The falls documentation compliance report was reviewed and the results are displayed below.

Team A Falls Documentation Report December 01,2017 – January 01,2018: 1.4%

Clinic-wide Falls Documentation Report December 01,2017- January 01,2018: 1.9%

PDSA Cycle 3

Plan. A clinic-wide staff meeting with was conducted to review and discuss the existing protocol for assessing and documenting every patient for fall risk. MACRA/MU and MIPS were outlined, as well as the significance of obtaining fall risk status for insurance reimbursement, to provide excellent patient care, and to improve patient outcomes. Visuals on how to document the fall assessment and identify a patient as a fall risk risk in the EHR were provided. A supervising nurse practitioner was present to help facilitate the meeting and provide a top-down approach to following the protocol.

Do. A clinic-wide staff meeting was conducted with all of the CSTs in the clinic in January of 2018 and the above plan was implemented. PDSA cycle three lasted one month from January 2018 to February 2018.

Study. After the meeting, several CSTs verbalized uncertainty with documenting the falls assessment in the EHR. Additionally, concerns were brought up about the amount of tasks expected of them during the rooming process and the lack-of-time to complete each task.

Act. The QI team remained available in the clinic to answer questions about documenting fall screens in the EHR. Weekly and bi-weekly reminders to CSTs to assess and document for falls on each patient were continued during PDSA cycle three. The supervising nurse practitioner made the CSTs aware of the potential for chart auditing to determine who was and was not performing per protocol. The fall risk documentation report for January 01, 2018 through February 01, 2018 for team A and clinic-wide were reviewed and are displayed below.

Team A Falls Documentation Report January 01,2018- February 01 2018: 8.9%

Clinic-wide Falls Documentation Report January 01,2018 – February 01, 2018: 13.4%

Table 1

Fall Risk Assessments Documentation Reports

Phase	Team A Fall Screening Report	Clinic-wide Screening Report
Pre-Implementation	0.8%	1.2%
PDSA Cycle 1	5.7%	2.9%
PDSA Cycle 2	1.4%	1.9%
PDSA Cycle 3	8.9%	13.4%

Post-Implementation	16.4%	29.2%

Note. This table summarizes the fall risk assessment documentation reports for the pre-implementation phase, each PDSA cycle, and one-month post-implementation.

Discussion

This goal of this quality improvement project was to improve the assessment and documentation of falls to provide excellent patient care and meet MACRA/MU requirements in an urban primary care setting. Taking the initiative to assess every patient for recent falls and fall risk allows health care providers to be proactive and prevent falls from happening or recurring. It is recommended by the American Geriatrics Society and the CDC to screen geriatric patients for falls during routine healthcare visits (AGS, 2017; CDC, 2017). MACRA/MU mandates that providers assess every patient aged 65 years and older for falls at least annually. Furthermore, this healthcare institution's policy states that every patient should be assessed for falls at each visit. Overall, the study results and analysis indicated an improvement in compliance to assessing and documenting patient falls in the EHR within a focus group and clinic-wide.

Facilitators

During PDSA cycle 1, team A improved documentation compliance from 0.8% to 5.7%. During this cycle, this team received weekly or bi-weekly reminders about the falls protocol. During these reminders the QI team asked the CSTs for feedback about the falls protocol, and for ideas to improve the workflow and allow fall screening to be incorporated more easily. Lewin's three-step change model identifies the first step to change as "unfreezing." According to Robbins (2003), strategies to improve success during this step include motivating participants to change and participating in the process of change (as cited in Kritsonis, 2005, p. 2). Being

frequently present in the clinic for the CSTs to ask questions and for frequent reminders about why the healthcare system is mandating this change may have contributed to the success during cycle one.

After a decrease in the percentage of documented fall assessments during PDSA cycle two, a top-down approach was used and a supervising nurse practitioner was asked to help advocate for the change, as well as review the protocol that everyone participate in the change by assessing every patient at every visit for falls. One potential reason for the decline in compliance during cycle two could have been the absence of the QI team in the clinic toward the end of PDSA cycle two due to the scheduled winter break at the university. Due to this, the CSTs did not receive weekly or bi-weekly reminders for about four weeks at the end of cycle two and prior to the start of cycle three. As discussed earlier, in the second step of Lewin's change model, movement, participants of the change move toward a new equilibrium by adapting to the change. Encouragement and persuasion are two key factors that are identified to keep participants engaged in the change. Utilizing an authoritative leader to show support for the change may play an important role in succeeding during this step (Kritsonis, 2005). Using this approach during PDSA cycles two and three showed an increase in compliance from 1.4% to 8.9% from cycle two to cycle three.

In PDSA cycle three, the intervention was presented to all CSTs clinic-wide during a mandated staff meeting. Again, a top-down approach was used during this cycle by having a supervising nurse practitioner who gave support for the intervention present during the discussion, as well as explained to the employees the possibility of chart auditing to determine who was appropriately assessing and documenting falls and fall risk. Following the meeting, questions were answered and a demonstration to the CSTs on how to appropriately document

their assessments in the EHR was done. The last clinic-wide meeting used strategies that were found to be successful during the first three PDSA cycles: an explanation of why the change was necessary, administrative support, demonstration of how to document appropriately, and frequent reminders about the protocol, which resulted in an improvement of clinic-wide fall risk documentation compliance from 1.2% at baseline to 29.2% after cycle three.

Barriers

One barrier that was encountered was the lack of time to add fall assessment and documentation to the rooming process. Common feedback from the CSTs included constraints of time to room a patient and ask additional questions about falls. The time it takes to room a patient is included in the patients 20 or 40-minute appointment window to see the provider. Therefore, CSTs were concerned that the providers would be losing time with the patient. Furthermore, two other QI projects were going on in the same clinic during this time with additional tasks for the CSTs to achieve during the rooming process.

Motivation to change was another barrier that was faced during this study. Changing someone's routine and behavior can be challenging. According to Deschamps, Rinfret, Lagace, and Prive (2016), during periods of change, the perception of justice by employees is necessary and impacts motivation, productivity, and performance, thus influencing the sustainability of a change. Having influential leaders present to help facilitate change can increase cooperation from followers. Focusing on justice-related aspects of change heightens employee motivation and contributes to organizational success (Deschamps, Rinfret, Lagace, & Prive, 2016).

Limitations

One limitation to this study was the inadequate amount of time available for the QI team to be available for encouragement, questions, and reminders at the clinic. I was present at the

clinic one or two days per week, and not every day. Additionally, after PDSA cycle two, the university was not in session for four weeks and the QI team was not at the clinic during this time to enforce the change.

There was a lag in the availability to access the fall documentation reports by at least four weeks. As a result, I was not able to analyze the data in "real time" with each PDSA cycle. This had an impact on the intervention efforts with PDSA cycles two and three because we were not able to analyze the documentation reports prior to starting the cycles. Specifically, we rolled out PDSA cycle three in January 2018 prior to analyzing the results after PDSA cycle two. We did not know beforehand that there was a decrease in compliance after cycle two. While there was success with PDSA cycle three, not being aware of the decrease of documentation compliance could have impacted results for cycle three.

Recommendations for Future Practice

Time constraints were consistently identified as barriers with each PDSA cycle. According to the literature, constraints to healthcare providers' time are a common barrier and should be taken into consideration when designing practice improvement strategies (Hanbury, Wallace, & Clark, 2011). Allowing the CSTs to have additional time to room patients separately from the 20 or 40-minute appointment times with providers may lesson the perceived constraints on time. Pre-visit planning is a method that may be useful in lessening the amount of information that the CSTs need to collect from patients during their appointment times. Screening questions, including falls, could be asked during the pre-visit planning. A part of pre-visit planning described by Sinsky, Sinsky, and Rajcevich (2015) includes pre-visit phone calls, which allows the clinical team to prepare for the patient's upcoming appointment. During these phone calls, a CST could gather information related to falls, as well as additional screening questions such as

last mammogram, last colonoscopy, and last PAP smear. In a study assessing the effectiveness of pre-visit planning in a rheumatology clinic, it was found that "pre-visit planning allows us to provide effective patient care, implement ongoing QI goals, and link process to measurable outcomes" (p. S210) as well as improve compliance with uveitis screening (Rabheh, Christman, Jones, Ardoin, & Bout-Tabaku, 2014).

Lack of motivation was another barrier that was encountered during this study. Having a CST champion readily available to assist and motivate staff may improve compliance with assessment and documentation of falls. Research has shown that having clinical champions present to help uphold the standards of care and to guide staff through the changes results in improved patient outcomes. For example, in a study that assessed the significance of clinical champions on the reduction of healthcare-associated infections, there was significant reduction in MRSA bacteremia (Edwards, 2008). Creehan (2015) concluded that clinical champions display leadership characteristics and are inspired to improve outcomes. These empowered champions have shown to improve patient care and clinical outcomes (Creehan, 2015).

Management buy-in and frequent team reminders were successful strategies that were found to be effective in improving motivation to change. Utilizing a top-down approach by integrating management into the process helped mandate the change. Additionally, having management show support for the change influenced staff buy-in.

Another barrier identified in the study was that the CSTs forget to ask the patients about falls during the rooming process. A way to overcome this barrier and improve compliance for this quality measure is to incorporate a stop system into the EHR. "Soft stops alert clinicians that an order deviates from a standard; hard stops alert clinicians and stop the order process unless an approved explanation is given to override the standard" (Silow-Carrol, Edwards, & Rodin, 2012,

p. 9).   In this study, which assessed the use of EHRs to promote meaningful use and to improve quality and safety of patient care, it was found that by incorporating "hard" or "soft" stops into the EHR there was improved compliance to protocols. Utilizing "hard" and "soft" stops ensures that the clinician is following protocol (Silow-Carrol, et al., 2012).

Conclusion

While this study did not meet the institution's goal of 85% compliance to assessing and documenting falls, it did improve clinic-wide compliance from 1.2% to 29.2%. Implementing the model for improvement PDSA cycle, as well as integrating Lewin's change theory, are effective ways to implement change within a focus team and clinic-wide. Using the PDSA cycle tool to guide rapid cycle quality improvement encourages trial and error of several hypotheses to identify the best approach to making a change to improve outcomes. Barriers that were identified by staff during this study included time constraints and simply forgetting to ask each patient about falls. Additionally, motivation to change was recognized as a barrier.   Strategies that were found to be helpful in this clinic to overcome these barriers included authoritative buy-in, bi-weekly reminders and frequent encouragement from the QI team. Going forward, allotting additional time separate from the patient's appointment time for the CSTs to gather screening information, such as falls, may be beneficial in decreasing time constraints, and incorporating a stop system into the EHR may ensure compliance to this protocol and quality measure. Additionally, identifying clinical champions within the clinic may influence employees' motivation to change

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