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Decreasing Falls in the Elderly Population Living in Long Term Care Facilities

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FOCUS

An increased prevalence of falls is the primary problem faced at a long term care facility in Minnesota. Some of the areas that the facility's nurse case manager identified as needing improvement at the nursing home included: reducing falls, improving sleep, and increasing staff safety. Reducing falls was chosen because this long term care facility previously had the highest rates of resident falls in the state of Minnesota. It is recognized that falls can be extremely detrimental to the well-being of elderly individuals and can often cause injuries such as fractures and head trauma. Not only do falls increase physical complications, they can also cause elderly residents to develop low self esteem, exhibit increased caution when performing daily activities, and can also restrict their daily activities to keep themselves safe. This can lead to a decline in physical functioning and even depression in the elderly population (de Araújo, 2016, p. 2). This, along with the fact that the rates of fall related injuries have been rising in the United States, motivated us to pursue an intervention that could help this long term care facility prevent falls (Galet, 2018).

Currently, falls are the number one cause of fatal injuries within the elderly population, and nursing home residents are at double the risk to have a fall than those who live in the community (Botwinick, 2016). Because of these statistics, it is important for nursing home staff, specifically, to be implementing procedures for the prevention of falls among all residents. Many factors cause nursing home residents to be at an especially high risk for falls such as a higher level of dependence among care center populations, the fear of falling, and environmental hazards (Martins, 2018). Because of the research suggesting the danger and increased risk of falls among nursing home residents, hourly rounding was chosen as an intervention to help prevent falls for all residents residing in this long term care facility.

ANALYSIS

Falls are not only a concern in specific long-term care facility sites, but in nursing homes nationwide. On average, individuals that reside in long term care facilities fall three times more than the average adult their age that resides in the community (Oliver, 2007) and are ten times more likely to sustain a significant injury from falling (Cooper, 2017). According to BMC Family Medicine, 50% of older adults living in a long term care facility will fall each year, compared to 30% of older adults living in the community (Cameron, 2018). Many factors have an impact on an individual's risk of falling. According to the *Centers for Disease Control and Prevention*, having previous fall history in fact doubles an individual's chances of falling again (CDC, 2015). Factors that increase an individual's fall risk can either be intrinsic or environmental/extrinsic. Examples of intrinsic factors include age, gender, having a history of falls, musculoskeletal or neurological conditions, depression, and balance instability (Noureldin et al., 2017). Examples of environmental or extrinsic factors include safety issues, high risk medications, and impaired ability to complete ADLs (Noureldin et al., 2017). These factors are common for many older adults and, therefore, impact their overall risk. A cross-sectional study completed in Canada collected data related to resident health history and care using the CBD or Care by Design study. This study introduced a new model of healthcare to 395 residents residing in long term care facilities. This study collected relevant data prior to and following the implementation of the new model. The results showed that 56.7% of the residents in the long-term care setting fell at least once in the months prior to the study and 56.2% fell within the period the study took place (Cameron, 2018). This observational study found a strong relationship between frailty and falls in the long term care setting. While the study's population was not random, the results show an accurate picture of the real clinical practice (Cameron,

2018). These sources and studies combined emphasize the major concern of falls and the risk they impose on residents' health in the long term care setting.

Additionally, falls lead to many injuries which negatively impacts residents' health along with costing the healthcare system millions of dollars. More than 50 billion dollars was spent to cover the cost of fall related injuries in 2015. Furthermore, Medicare and Medicaid were responsible for covering 75% of that cost (Florence, 2018). According to documents provided by the facility, Medicare and Medicaid covers care for many individuals that reside in long term care settings. Therefore, falls and frequency of falls affects costs of long-term care and insurance for their residents. All these variables put into perspective the severity of the issue for residents' health and the cost of treatment following a fall.

Resident falls are a primary concern for many long term care facilities across the nation. Specifically, at this long term care facility, during one quarter, there were 115 resident falls identified facility wide. Further, 75 of those 115 falls occurred by residents that are identified as high risk. Thus, the data indicates that 65% of the falls in the facility during this time period were repeat residents. These high risk residents have a history of falls or other factors that the staff have identified as high risk individuals. Additionally, the facility uses a fall risk assessment that is completed upon admission and as a resident's care changes. Despite preventative measures such as identifying fall risk, repeat falls are common among the long-term resident population. According to the *Cambridge Journal*, around 40% of long-term care residents fall more than once annually (Oliver, 2007). To identify additional fall trends for high risk residents, more specific facility fall data was collected using the facility fall reporting system. Each fall report details a comprehensive summary of the event and new interventions that were implemented following the fall. Various details of the event include: where the fall took place, was the fall

witnessed, was the resident continent or not, were there any injuries, and any relevant details or statements related to the event. To categorize the data, each event was analyzed and common root causes related to the event were identified. By analyzing these events, trends specifically for high fall risk individuals were identified. The data indicated that the majority of facility falls during that quarter occurred when the resident attempted to self-transfer. Specifically, around 70% of the 75 falls by high risk residents were self-transfers. Additionally, the overwhelming majority of the falls occurred in resident rooms, where residents are out of the staff's visual field. Thus, indicating an increase in supervision could prevent future falls and decrease their frequency. Intentional rounding by RNs, LPNs, and CNAs could have a positive influence on decreasing the number and frequency of falls at the long term care facility.

DEVELOPMENT

Falls occur frequently in the nursing home setting. There are several possible solutions that could decrease the number of falls that occur. Considering the negative consequences of serious injury and fatality, it is essential to brainstorm and implement possible solutions. A post fall huddle is one solution that was researched. Post fall huddles were used as an educational tool to reduce errors and, therefore, reduce the number of falls that occured. In addition, post fall huddles can provide an opportunity for self reflection. This may increase team effectiveness by expressing patterns, areas of improvement, and personal pieces of advice. There are three prominent questions that must be addressed during the post-fall huddle. This includes identifying what happened, why it happened, and how to prevent future incidents. This serves as a valuable leadership opportunity, as well, by contributing to a common outcome. This study promoted the idea that reliable and effective organizations engage in some sort of retrospective practice in

order to improve outcomes. During this time the individuals can analyze the potential changes they may need to reduce the error which is the increase in falls (Reiter-Palmon, Kennel, Allen, Jones, & Skinner, 2015). The problem with this solution is that it is reactive. It does not guarantee that the number of falls will decrease. Negative components associated with this solution involve the limited time allowed to actively participate in a post-fall huddle. The staff in a nursing home facility are constantly adjusting their time management skills in order to complete the designated tasks in a timely manner. Therefore, it may not be possible to engage in a reflection when the nurses have other impending tasks awaiting completion. A post-fall huddle could also inflict blame which could cause intergroup conflict. It must be stressed that the purpose of the discussion is to facilitate improvement.

There are numerous studies that attempt to correlate the response to call lights and the number of fall occurrences. One evidence based research study correlated that nurses responded to call lights faster with residents who have fallen in the past compared to non-fallers but only for 24 hours after the fall occurred. This short period of time is a preventive measure to reduce the number of falls. The use of call lights are a vital communication technique between the resident and the nursing staff. Some assume that nurses perceive call lights as an annoyance and interruption to other nursing tasks. This disparity has led residents to become inpatient and more prone to attempting activities that conflict with their safety (Tzeng, H.M., & Yin, C.Y., 2010). A solution to this issue is to tape over the “HOLD” button located on the call light machine at the nurses station. This inhibits the function of quieting the beeping sound associated with call lights. This signals nursing personnel to answer the call light in order to stop the noisy interruption to their charting instead of merely pausing the response. This solution is not beneficial to the facility considering that the call light data sheets indicated relatively fast call light responses. The

registered nurses at the facility agreed that lowering the response time would not be the most effective means of decreasing the fall prevalence.

A third solution to decrease the number of falls happening at the long term care site, based on research, is to implement exercise and strength programs. Research suggests that older adults are at higher fall risks due to poor postural balance and inappropriate fall related behaviors. Unfortunately, many older adults do not comply with the programs provided and therefore effectiveness is not guaranteed (Punlomso, Srimuang, & Tudpor, 2020). A similar study explained how physical activity not only affects physical health but also mental health and well being. Safety is the most significant factor to consider while the residents are performing these exercises. A trained professional must be with the resident at all times to facilitate proper mechanics. This may be costly to hire another staff member especially if the facility is strict on budget adjustments. This method is also time consuming for the residents and not cost effective when looking at the cost benefit analysis. Motivation was a key issue during this study. The researchers recommended the nursing staff to be assertive yet respectful. Other barriers included the location of the fitness center/area, fear of injury, and lack of knowledge about the specific exercises (Palmer, 2020). Therefore, the group has decided the most practical and cost effective solution to implement is intentional rounding.

Evidence based research has suggested that intentional rounding can be beneficial at reducing the number of falls in care facilities. Intentional rounding is doing regular and standardised checks on residents at set intervals to manage their fundamental care needs. That way a variety of interventions can be packaged into one. For example, many models use the process of the “four P’s”: pain, positioning, potty (elimination), and proximity of personal items. This process gives a set four topics staff can check on when making their rounds with each

individual resident (Peate, 2020). Assessing these four things, patient satisfaction can increase, pressure sores can decrease, and it can also lead to a decrease in falls. Falls are the number one cause for injuries and death among older adults. Falls can lead to serious financial consequences, physical injuries, psychological trauma, and increased costs by lengthening their stay in a nursing home or a hospital (Jenko, Panjwani, & Buck, 2019). Therefore, decreasing falls should be a priority in long term care sites.

Most of the falls happening at the long term care site are due to self-transferring. According to *Activities, Adaptation & Aging,* most falls (67.8%) occur in resident personal areas. The most common locations of these falls were in the resident's room and the most common resident activities at the time of a fall was ambulating (49.1%) and transferring (36.8%) (Struble-Fitzsimmons, Oswald, & DiPersia, 2019). This data aligns with what the group found in the long term care site. In addition, a study compared two wards, one that initiated intentional rounding and another that did not. In this study, there was a 50% reduction in falls on the ward that initiated intentional rounding. On the ward that did not initiate intentional round there was actually an increase in falls (Morgan, et al., 2019).

There are several factors to consider before choosing an intervention to implement at a long term care facility. Some of the factors that impacted the decision to choose hourly rounding included cost effectiveness, intervention effectiveness, perceived staff workload, and dignity issues. Nursing homes may not have the funds for costly projects because they have budget constraints that limit them. The group chose hourly rounding because it is cost effective and does not require much use of the budget other than paid time to train nursing assistants about the effectiveness and importance of it. Other fall prevention plans can include costly alarms or signage. Another factor that played a role in the decision was the effectiveness of the

intervention in comparison to other interventions. There is a vast amount of research about hourly rounding effectiveness in reducing falls in nursing homes. The overwhelming amount of research that suggested hourly rounding is effective as a fall prevention strategy lead us to choose it as the intervention to implement at the long term care site. Additionally, a contributing factor that was considered before choosing hourly rounding was staff workload. If the staff believe the intervention is too time consuming or unimportant, it would lead to noncompliance by the staff and there would be no benefit for the residents and no reduction in falls. Staff have had previous experience with hourly rounding and were satisfied with it. Because of this previous experience, it was found to be an appropriate intervention. Due to the staff's familiarity with the intervention of frequent rounding, the staff were more likely to follow through with the intervention, leading it to be successful. Finally, the last factor considered was the dignity of residents. High fall risk signage outside of the resident's rooms was considered. This signage would include either a different color call light or a distinct indicator of a residents high fall risk status. This idea was met with resistance from the long term care center because it poses a dignity issue. Indicating to other residents or visitors who is a high fall risk lacks privacy that the resident rightly deserves. The group did not want to make the high risk patients feel like they were a burden or that they had any shame in being a high falls risk patient. Hourly rounding is one way to maintain dignity while also ensuring that the resident remains safe.

The intervention chosen incorporates frequent rounding on high fall risk individuals in the entire facility. High fall risk individuals would be identified by using the Hendrich fall risk assessment (Campanini, 2018). There will be a chart that is assigned to each high fall risk resident with specific times listed. The nursing assistants will be consulted about where this sheet should be kept to make charting easy and to increase staff compliance with documentation.

Nursing assistants will need to check in on the resident at the assigned time and use the checklist to inquire about resident needs. The checklist will include possible needs that the resident may require at any time including going to the bathroom, having their call light near the resident, position changes, pain interventions, personal item needs, or anything else they may require. Before implementation there will be a staff education session in the morning huddle that includes an information pamphlet for any questions throughout the day. The day shift workers will be responsible for educating the evening shift, and the evening shift will be responsible for educating the night shift. The plan is to implement the intervention over the course of a month to analyze how fall rates decrease. In the future, it is a hope that frequent rounding can be expanded to include all residents in the facility, especially within the short stay unit. This would help to reduce falls facility wide for a longer period of time.

Objectives:

- An informational pamphlet will be distributed during the morning huddle to the day shift staff members.
- Nursing students will respectfully answer all questions that the nursing staff have.
- The long term care facility will decrease the prevalence of fall rates by 10% during a one month timeframe.
- The nursing staff at the long term care facility will demonstrate compliance of the intervention by completing at least 75% of the resident's checklist.
- The nursing students will gain feedback by asking the staff to complete a post-study survey.

EVALUATION

It was important to gain staff trust when implementing the plan in order to increase staff compliance with frequent rounding and decreasing falls. The trust of nurses was gained by inquiring about areas that need improvement within their facility. The problem chosen was falls because it was the most pertinent area of concern for the nurses in the care center as this facility had previously had the highest fall rates in Minnesota. Nurses and nursing assistants then gave input for possible interventions to correct the high fall rates. By asking both the nurses and nursing assistants, support for this intervention was gained facility wide. While considering a few interventions, one of the nurses explained that a nursing assistant had been in favor of the frequent rounding plan because it had been part of their policy many years ago. Once a proper intervention was selected and was supported by both the literature and the staff, the facility was consulted on the fine details of how this intervention would start. The nurses explained that they do not want this frequent rounding to be put on their Point of Care online documentation system because it would be at risk for audit by the Department of Health. For this reason paper documentation was selected and would be kept at the nurse's desk per the nursing assistant's preferences. Proper education would be done to maintain the staff's commitment to frequent rounding. There would be potential backlash with the time commitment that the frequent rounding would require, but education would be provided to the nursing assistants about how frequent rounding actually decreases call light usage in nursing homes (Williamson, 2018, p. 4). In order to sustain the frequent rounding schedule the facility would post the monthly fall rates and fall reduction percentages near the nurse's desk so that all staff are able to see the progress being made. This would help to maintain the motivation of all staff to continue the practice of frequent rounding. Evaluation will be done each month to assess staff compliance and

effectiveness of the intervention. This evaluation would include a facility audit on all rounding worksheets to ensure proper documentation is being completed. The facility will also observe staff during rounding times to ensure that documentation of completion is accurate. Without the commitment of the nurses and nursing assistants, frequent rounding will not be successful. For this reason, it is important to include staff in the planning process and keep everyone educated on the outcomes of the intervention.

Unfortunately, due to unforeseen circumstances the facility was unable to implement the planned intervention.For this reason, the comparison between the planned intervention and the actual implementation was not able to be evaluated. It is the hope of the facility and the students that this plan could be implemented at a future date to assist in the reduction of falls within the facility.

Due to the inability to implement the plan, an extensive literature review was used to determine how hourly rounding would affect resident fall rates. Three peer-reviewed, experimental studies implemented hourly rounding schedules at care facilities. Morgan et al. (2017) implemented “Customized Intentional Rounding” on a neuroscience ward. This project was designed by staff and included team training, staff-led systems redesign, and frequent check-ups on progress (p. 115). Falls decreased 50% on the experimental ward compared to the incidence of falls in 50 other wards of the facility (Morgan et al., 2017, p. 115). The fact that the program was staff-created increased the likelihood of compliance. Asking the nursing staff at the long term care facility which intervention and form of rounding is most practical will prompt the staff to feel they contributed to the decision.

Mitchell (2017) found similar results in a long-term care facility. His study noted a 55% decrease in falls for a three-month trial period (p. 48). The nursing team at the facility developed

a system of hourly rounding that used acronyms to dedicate what the resident was doing at the time. This intervention is similar to the designated areas on this intervention regarding pain, position, and additional needs. The facility in Mitchell's (2017) study used:

> "C for call bell and identified personal possessions being within reach;
>
> P for pain
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> R for repositioning addressed comfort measures;
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> A for alarms addressed safety measures in place; and
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> T for toileting addressed assistance with bowel/bladder elimination" (p. 44).

These codes were added to the legend of the checklist. Staff compliance for the three months was 90%, and they participated in in-service education and ongoing evaluation of the new policy (Mitchell, 2017, p. 44). Additionally, the study revealed positive outcomes with patient satisfaction and decreased call bell usage (Mitchell, 2017, p. 43). An interpretation of this result is that the residents anticipated the hourly check-up, so they would not ring their call light as much. This result would save the nursing assistants additional time because one of the complaints of the long term care center staff was residents' frequent call light use.

Lastly, Sanyi (2018) discovered a 71% decrease in patient fall rates after initiating hourly rounding for 6 weeks on a 34-bed unit (p. 35). However, the intervention only targeted four high-fall risk residents. Likewise, the intervention at the long term care facility would only include the residents deemed high-fall risk by the Hendrich Fall Risk Assessment. The template in this study also included assessing pain, position, toileting needs, proximity of call light, and additional activities performed (Sanyi, 2018, p. 26-27). Though this study determined the greatest decrease in falls, the sample size is small.

Based on the average success rate of these studies, the expected results would be a 58.6% decrease in falls during the experimental month. Since September 2019, the care center has experienced an average of 19.16 falls per month. After the intervention, there should be roughly 7.94 falls in that month. The initial goal was a 10% decrease in falls. According to the literature, the expectation is a greater decrease.

This study does come with some limitations. Since the intervention could not be implemented, there is no certainty of results since each facility is different. There could be issues with staff compliance since the staff complains of low staffing ratios. They may be resistant to adding another task to their daily work. Facility roles also pose an obstacle. Due to state limitations, hourly rounding cannot be a part of the facility charting system: Point of Care. Having the charting in the facility system would eliminate the issue of where to place the hourly rounding document, since every staff member has access to Point of Care. Another obstacle is resident dignity. The nursing management staff was hesitant to place a fall risk identifier in the patient's room or on their door.

Nurse compliance could be improved by providing education on the importance of fall reduction and the prevalence of falls in the facility before starting the intervention. It is important to note that hourly rounding was shown to decrease call light usage, which is a major concern of the nursing staff. Additionally, the time consumed post-resident fall is much more substantial than the time it takes to check on a resident every hour. After a fall, the staff must take vital signs, conduct neurological checks, and fill out an incident report. Further implementation would include all residents on the unit. The hourly rounding trial should also span greater than one month to acquire more accurate data.

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