FALL PREVENTION IN OLDER ADULTS WHO RESIDE IN NURSING HOMES

by

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Abstract

Falls among older adults who reside in the nursing home setting are a major problem in the United States (Center for Disease Control and Prevention [CDC], 2015). The site of this project was a nursing home located in a small town in New Hampshire. This home had a problem with the number of falls that occurred on a monthly basis. The rate of falls on average was two falls per month. This project sought to reduce the number of falls to zero over the course of three months. A fall revention program using evidence base interventions was developed to reach this objective.

The interventions included staff education, medication reviews, an exercise program and hourly rounding. However, the fall rate at the completion of this project increased to four falls per month. This increase can be attributed to the lack of staff *buy in* to the program and insufficient staffing numbers. Even though the results demonstrated an increase in the rate of falls it is important to note that there was only one fall related injury during this time. The remainder of falls did not result in injury.

Falls can have considerable consequences for the health status, autonomy and the quality of life of a nursing home resident involved in a fall (CDC, 2015).

Key words: older adults, fall prevention, hourly rounding

Fall Prevention in Older Adults Who Reside in Nursing Homes

Falls and fall-related injuries among nursing home residents are a common occurrence and are a major concern of residents, their families and the health care team (Quigley et al., 2010). Every year a typical nursing home with 100 beds will have 100 to 200 resident falls (Centers for Disease Control and Prevention (CDC), 2015). Some falls go unreported so this figure may even be higher. Approximately 35% of residents who sustain fall injuries in the nursing home setting are non-ambulatory. Nursing home residents fall at double the rate of those elderly people residing in the community. About 30% of people over the age of 65 fall each year. This number increases to about 40% for those aged 75 years and older (Schwenk et al., 2012). Nursing home residents often fall more than once, with an average of about 2.6 falls per person per year. Falls can result in reduced function, disability, isolation, depression, hopelessness, and a decline in the quality of life for the older adult (CDC, 2015). Additionally, due to the aging process older adults are at greater risk for falls due to underlying issues such as muscle weakness, gait and balance disturbances, diminished reflexes, poor vision, confusion, and certain types of medications along with a variety of illnesses and other medical conditions (Curry, 2014).

According to the CDC (2015), only about 5% of adults 65 years of age or older reside in nursing homes. However, nursing home residents account for 20% of fall related deaths. It is estimated that every 17 seconds an older adult will need emergency medical treatment for a fall-related injury. Even more alarming is the fact that within the next 30 minutes an older adult will die from injuries that occurred as the result of a fall. Annually, about 1800 nursing home residents die from fall related injuries (CDC, 2015).

Risk factors for falls are usually multifactorial and interrelated. Therefore, it is important that nursing homes have a comprehensive falls prevention program in place. Unfortunately, clear

guidance does not exist for specifying the right combination of interventions to adequately protect specific at-risk populations, such as nursing home residents. Fall prevention interventions are not standardized (Quigley et al., 2010). Therefore, there is no *one size fits all* or one definitive answer to falls prevention in older adults. It is imperative that each facility determine the best fall prevention program to use, based on the population they serve (Hill & Fauerbach, 2014).

A small 30 bed nursing home in New Hampshire was experiencing two resident falls per month or 24 falls annually. This is below the national average which shows that the rate of falls in a home with 100 beds is about 100 to 200 falls annually. In these homes residents have on average 2.6 falls per person per year. This facility focuses on the resident after a fall has occurred rather than fall prevention. This approach does not avoid the serious consequences associated with a fall (Berland, Gundersen & Berit-Bentsen, 2012). The purpose of this quality improvement (QI) project was to improve the rate of falls from two falls per month to zero over a three month period.

Older adults are at higher risk for falls due to underlying causes, such as muscle weakness, gait and balance disturbances, diminished reflexes, poor vision, confusion, certain types of medication, impaired mobility, as well as other illnesses and/or conditions (Grundstrom, Guse, & Layde, 2011). The structural changes that occur as a result of the aging process may lead to decreased physical condition which may increase the risk for various disease processes which can lead to falls (Grundstrom et al., 2011). Advancing age, having a previous fall, having a medical diagnosis of Parkinson's disease, stroke, dementia, cardiac disease and depression also increases fall risk (Baranzini et al., 2013). Iwanoto et al. (2009) found that there was a relationship between lack of muscle flexibility, poor walking ability, and balance problems

and the risk for falls (Iwanoto et al., 2009). Risk for falls may also include functional decline, and vision and hearing impairments. In addition, the use of adaptive equipment such as walkers and canes and the use of restraints also contribute to falls in the elderly (Leland, Gonzalo, Teno, & Mor, 2012).

Literature Review

Falls can have significant consequences for the elderly. The severity of fall related complications increases with age and may include lacerations, fractures (especially hip) and traumatic brain injuries. The fear of falling again may cause the older person to curtail their activities as a means of preventing falls. This can cause the older adult to lose their independence and is often serious enough to result in admission to the hospital or a nursing home or may even cause premature death (Deandrea et al., 2013).

It is important for all health care settings to have a comprehensive evidence based falls prevention program in place, that meets the needs of the residents. Regrettably, there is *no one size fits all* or one definitive answer to falls prevention in older adults. In order to reduce falls each facility must determine the best interventions to use with their population (Colon-Emeric et al., 2013).

Falls in older people have many causes. Therefore, effective assessment and measurement procedures remain a critical element of evidenced based practice as it relates to falls. Resident fall risk assessment and reassessment is considered to be standards of practice. However, there are no standards of practice for the choice, specificity, and combination of fall prevention strategies available. Assessment in the long term care setting is vital to the provision of care for older adults due to the progressive nature of many disabling conditions effecting this population (Hill & Fauerbach, 2014).

A comprehensive set of evidence-based interventions may help to reduce the number of falls in the nursing home setting. These interventions should be individualized to meet the specific needs of the resident. Staff instruction and periodic re-education is vital to ensure compliance with the program. There should be a coordinated effort involving all interdisciplinary team members to develop a falls prevention program to reduce the number of falls in older adults who live in nursing homes (Hill & Fauerbach, 2014).

Martinez-Lopez et al. (2014) conducted a study to determine the effects of a proprioceptive training program on older adults. They analyzed the association between flexibility, balance, lumbar strength, and fall risk. The results demonstrated that a 12 week proprioception training program significantly improved flexibility, balance and lumbar strength in the elderly. With improved balance there is a decreased risk of falls and fear of falling as well as an overall improvement in the quality of life for the older adult. The most effective intervention's address multiple factors and use a multidisciplinary approach to fall prevention (Martinez-Lopez et al., 2014).

Project Question

This project was developed to answer the question: In older adults who reside in the nursing home setting does a comprehensive falls prevention program, when compared with the standard method of falls prevention, reduce the number of falls over a three month period?

Method

This QI project involved an interdisciplinary approach to reducing falls in this privately owned 30 bed nursing home. The fact that there has not been a structured fall prevention program for about three years made this site an ideal location for this project. The components of this program included staff education, an exercise program, hourly rounding on all residents and

completing medication reviews on a monthly basis.

Staff Education

Nurses, nursing assistants, physical therapy, occupational therapy, activities and environmental services staff were invited to a meeting, where they were given a brief overview of the project and the objectives. The content also included predisposing and precipitating factors associated with risk for falls in the nursing home setting. Information was given to the staff about the interventions and the role they would have in implementing them. Staff re-education occurred monthly and on an as needed basis. The staff were encouraged to carry out environmental modifications such as removing clutter in patient rooms and clearing pathways **(**McCarthy, Adedokun & Moody-Fairchild, n.d.).

Exercise Program

An exercise program was implemented to increase the resident's strength, balance, mobility and functional independence with the use of assistive/adaptive devices as needed. The program also focused on improving overall endurance, strength, and flexibility (Skalko, Sauter, Burgess & Loy, 2013). The exercise program included range of motion, ambulation, bike riding, and lifting weights. In addition, some wheelchair bound resident's used standers. This device allows the resident to stand with the help of a supportive frame. Using a stander can have a positive effect on many body systems. These include improvement in bladder function, digestion, respiration and circulation by putting the organs involved in more natural positions (United Healthcare, 2015). The nursing assistant were responsible for implementing the exercise program on a daily basis. The activities staff also held group exercise sessions twice a week.

Hourly Rounding on all Clients

The staff was instructed to make hourly rounds, on all residents and to check on

four areas that will decrease the likelihood of a resident falling. The *4 P's* included pain, positioning, potty (elimination), and proximity of personal items (Halm, 2009). Residents were told that staff would be checking on them every hour. A log was provided to document that hourly rounding had been done. The staff were asked to date, time and sign in the log when they made rounds on the residents.

Scheduled Medication Reviews

The Centers for Disease Control and Prevention (2015) reports that certain medications can increase the risk of fall related injuries. Drugs that affect the central nervous system such as sedatives and anti-anxiety drugs are of particular concern. Fall risk significantly increases during the three days following any change in these types of medications (CDC, 2015). Medication reviews were conducted monthly to evaluate the need for reduction or elimination of medications that increase the risk for falls. The staff nurses were scheduled to complete medication reviews for all residents on a monthly basis at this facility.

Results

The analysis revealed that at the end of the three month period there was an increase to four falls per month. There were some concerns as to whether the interventions were being implemented which may have affected the results. The nursing assistants did not complete the documentation as required. It was difficult to determine if hourly rounding was being completed as instructed. This was due to the fact that there were multiple spaces on the log that were not signed by staff. There was also some question as to whether the exercise program was being completed as well. Staff were re-educated about the importance of documenting when they did hourly rounding and also when providing exercise to the residents.

The medication review was initially scheduled to be done by the staff nurses. Due to the shortage of registered nurses the reviews had to be reassigned to one of the nurse managers. A meeting with the nurse manager was arranged to review the resident's current medications. Medication reviews were scheduled monthly during this three month period. Other than reassigning the reviews there were no problems associated with the medication reviews.

There was another significant problem associated with implementation of this project. It was difficult to reach the director of nursing (DON). After leaving multiple messages a meeting was arranged to inform her of the problems that arose with the staff's lack of cooperation with applying the interventions. She stated that she would discuss this with the nurses and nursing assistants. However, there was no evidence that this occurred since there was no change in the behavior of the nurses or nursing assistants. There was at least three more meetings scheduled with the DON but she either cancelled them or never arrived at them. It was clear that the DON did not buy *in* to this project since she did not respond to attempts to rectify this situation.

Discussion

During this three month period it was noted that much of the time the staff worked shorthanded. Since there is a chronic shortage of staff at this facility, the staff seemed to resent the added burden of implementing the interventions. Another issue that was obvious was that older staff were resistant to the applying these changes. They expressed concern that this would affected their routine negatively by taking longer to complete each residents care. Even after multiple education sessions it was clear that the interventions were not being executed appropriately or consistently. This was evident in the words of one of the staff "We don't have time to do this and get our own work done." Staff non-compliance was a major problem related to the implementation of this project. Unfortunately, this was not a recognized issue prior to the

start of this project.

Conclusions

It is no surprise that nursing homes are high fall risk settings for elderly residents. Injuries related to falls have many negative effects on a resident's health. For example, a pelvic fracture is associated with higher mortality rates in the months after the injury. Furthermore, hip fractures increase the residents risk for developing pressure ulcers (CDC, 2015). Fall rates in nursing homes continues to be a major healthcare concern. This project revealed the need for further investigation into this problem. It also demonstrated a need to evaluate the role that adequate staffing plays in fall prevention. It is the opinion of this writer that this type of project in the future would be better carried out by someone who can be at the site on a full time basis to get a better picture of the how specific interventions can reduce falls among nursing home residents.

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APPENDIX A. STATEMENT OF ORIGINAL WORK

Academic Honesty Policy

Capella University's Academic Honesty Policy (3.01.01) holds learners accountable for the integrity of work they submit, which includes but is not limited to discussion postings, assignments, comprehensive exams, and the dissertation or capstone project.

Established in the Policy are the expectations for original work, rationale for the policy, definition of terms that pertain to academic honesty and original work, and disciplinary consequences of academic dishonesty. Also stated in the Policy is the expectation that learners will follow APA rules for citing another person's ideas or works.

The following standards for original work and definition of *plagiarism* are discussed in the Policy:

> Learners are expected to be the sole authors of their work and to acknowledge the authorship of others' work through proper citation and reference. Use of another person's ideas, including another learner's, without proper reference or citation constitutes plagiarism and academic dishonesty and is prohibited conduct. (p. 1)

> Plagiarism is one example of academic dishonesty. Plagiarism is presenting someone else's ideas or work as your own. Plagiarism also includes copying verbatim or rephrasing ideas without properly acknowledging the source by author, date, and publication medium. (p. 2)

Capella University's Research Misconduct Policy (3.03.06) holds learners accountable for research integrity. What constitutes research misconduct is discussed in the Policy:

> Research misconduct includes but is not limited to falsification, fabrication, plagiarism, misappropriation, or other practices that seriously deviate from those that are commonly

accepted within the academic community for proposing, conducting, or reviewing research, or in reporting research results. (p. 1)

Learners failing to abide by these policies are subject to consequences, including but not limited to dismissal or revocation of the degree.

Statement of Original Work and Signature

I have read, understood, and abided by Capella University's Academic Honesty Policy (3.01.01) and Research Misconduct Policy (3.03.06), including the Policy Statements, Rationale, and Definitions. I attest that this dissertation or capstone project is my own work. Where I have used the ideas or words of others, I have paraphrased, summarized, or used direct quotes following the guidelines set forth in the APA *Publication Manual*.

Learner name and date: Dorothy Normile 7/23/16

Mentor name and school: _____