Summer 2017

Taking Steps to Prevent Falls

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Doctor of Occupational Therapy Program

TAKING STEPS TO PREVENT FALLS

Occupational Therapy Doctoral Capstone Project

Submitted
In Partial Fulfillment
of the
Requirements of the degree
Doctor of Occupational Therapy

Summer 2017

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Introduction:

Fall prevention is imperative in skilled nursing and long-term care facilities. According to the CDC, "about 1,800 older adults living in nursing homes die each year from fall-related injuries and those who survive frequently sustain injuries that result in permanent disability and reduced quality of life". "Falls can also result in severe pain, high medical costs, fear of falling, less participation in activities, and reduced quality of life "(CDC 2015). Appropriate and effective fall prevention programs need to be established and implemented to reduce falls in nursing homes, which will in turn improve the quality of care.

Background/rationale:

"Falls are a serious public health concern among older adults in the United States" (Leland, Elliott, O'Malley, & Murphy, 2012, p.149). Burland, Martens, Brownell, Doupe, and Fuchs, 2013, quoted that, "more than half of all nursing home residents fall each year" (p.829). Falls can affect older adults health and occupational well being (Peterson, Finlayson, Elliott, Painter, & Clemson 2012). The patients families can also be affected for instance, they may not trust the caregivers or they may feel that their loved ones are being neglected. Also the facility can be affected because the number of falls per year can lead to re-hospitalizations and can reduce the quality of care. "There are thirty-eight state fall prevention coalitions that exist, and several new state coalitions are in the process of forming" (Peterson et al., 2012, p. 128&129). It is important that there is a great increase in fall prevention programs and that they are as effective as possible.

A fall prevention program can address the occupational needs of residents in long-term/skilled nursing facilities. The occupational needs include decreased independence in

ADL's, strength, balance, cognition, gross motor coordination, vision, functional mobility, transfers, bed mobility, and safety. A decline in those occupational problems can lead to future falls. Trained caregivers will be able to use learned skills and techniques to help each resident according to his/her occupational need. Addressing the occupational needs of the residents can help increase their functionality and quality of life.

The fall prevention program that will be chosen will include assessments that will accurately identify and evaluate the risk of falling. Each resident will automatically be assessed for fall risks upon admission. "If fall risk assessments are not performed then there can be an increase in patient injury, immobility, decreased activity of daily living participation, decreased quality of life, and possibly death" (CDC 2015). Fall screens can be administered during the admission process and periodically; for instance, monthly bimonthly etc. by any of the caregiving staff.

Project Statement/Problem statement:

Taking Steps to Prevent Falls is a capstone project which is aimed to introduce a fall prevention program to help reduce falls in residents in a specific long-term/skilled nursing facility, which can improve the quality of care. With this fall prevention program, caregiving staff will engage in trainings and educational seminars that focus on fall prevention techniques. There will be hands on activities, discussions, and usage of technology to help the caregivers attain the skills needed to help reduce falls in the long-term/skilled nursing facility. The goal is to make sure caregivers have been properly trained in reducing fall risks. After the caregivers have completed trainings and have

become competent in fall prevention techniques then the implementation of a fall prevention program will take place. The desired outcome is a reduced number of falls in the long-term/skilled nursing facility by at least 15%, which will in turn improve the quality of care.

Research questions:

1. Do the number of falls in my facility suggest the need for a fall prevention program?
2. What components of a fall prevention program align with the needs of my facility?
3. What are the major factors that will facilitate successful implementation of a fall prevention program?

Design and Methods:

This is a descriptive research study used to determine the need for a fall prevention program at a specific long-term/skilled nursing facility. Quantitative data was collected to determine the need. The quantitative data included the number of monthly falls from 2014-2016 at a specific long-term/skilled nursing facility. These numbers were then compared to the national percentages of falls in long-term/skilled nursing facilities.

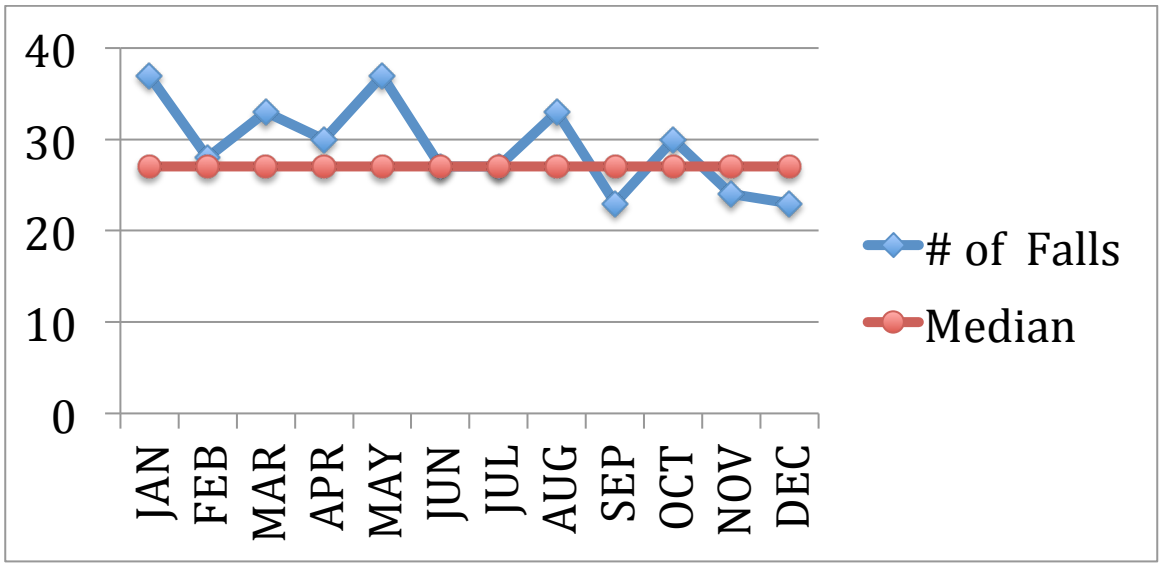
Data Collection/Data Analysis:

The difference in percentages can prove the need for a fall prevention program at this long-term/skilled nursing facility. The collected data for the number of monthly falls from 2014-2016 was computed in to 3 different run charts. This data was compared to the

median number of falls. The 2016 data of the number of falls was compared to the average national fall rate of 15% (National Council on Aging 2015).

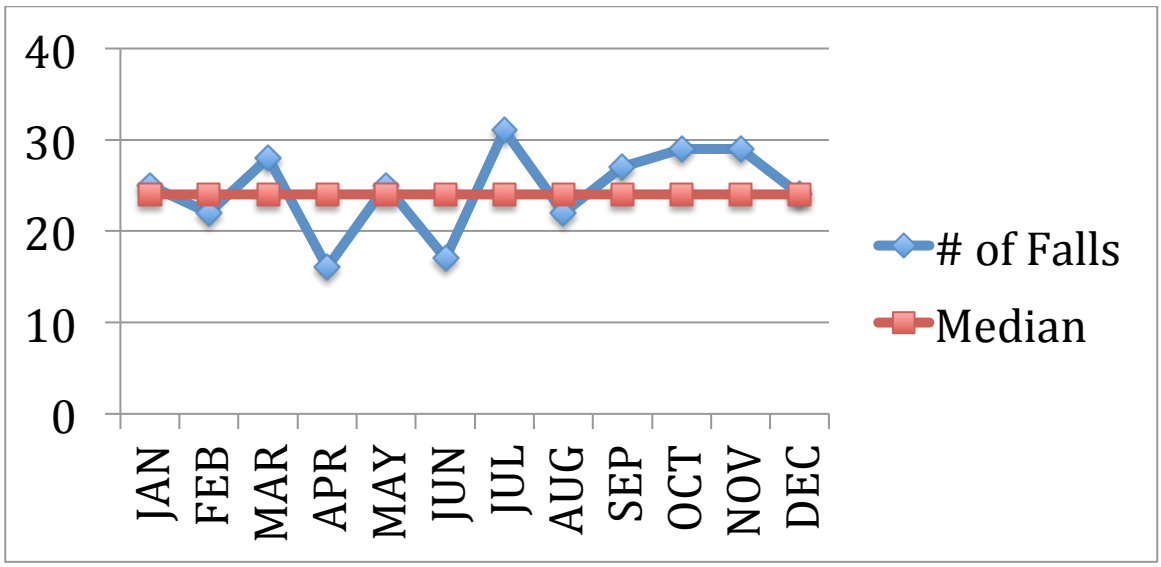
As seen in the 2014 data run chart below, there is a trend from Jan-May signaling a change of increased falls. It also indicates 4 runs, which suggests the fluctuation in the number of falls. The data shows there was a decline in falls from Nov to Dec.

Fall Run Chart for 2014:



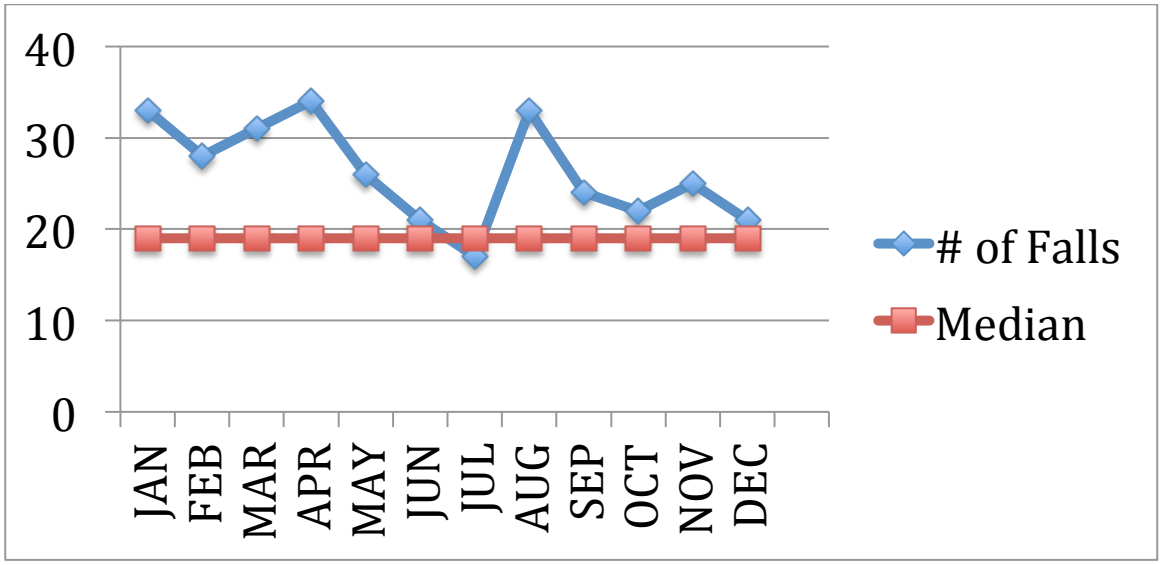
The 2015 data in the run chart below shows 9 runs indicating fluctuations in the number of falls. The data also shows a slight plateau in falls from September to December.

Fall Run Chart for 2015:



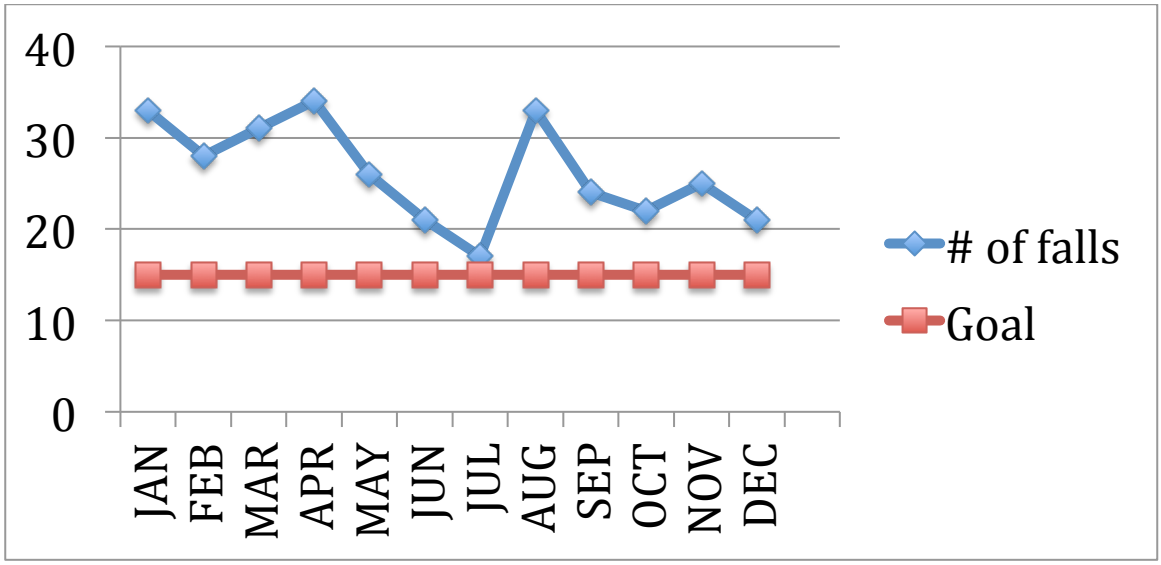
The 2016 data in the run chart showed a shift from Jan-Jun indicating an increase in falls and 3 runs signaling change in data and something that occurred that kept the number of falls from declining. There was also a trend from Aug-Dec indicating a decline in falls.

Fall Run Chart for 2016:



Below is a 2016 run chart that compares the number of falls to the national average in the number or falls. This run chart shows how this facility's fall percentage is above the national average. It shows that there is work to be done in reducing the number of falls to improve the quality of care.

Fall Run Chart for 2016 and the national average/goal:



Need assessment:

Working in a long-term and skilled nursing facility, this therapist, encountered patients who have fallen every week. Usually an occupational therapist or physical therapist performs a fall screen on the patient to determine if multiple fall risks exist. The fall risk screen focuses on deficits of cognition, vision, gait, continence, and balance. It also evaluates change in patient medication, recent falls, the patients ability to readily reposition him/herself, and if there are any predisposing diagnoses like Parkinson's, CVA, Vertigo, hypotension, amputation, seizures, dementia. The fall screen final score then determines if the fall risk is low, moderate, or high. A moderate or high fall risk

indicates the patient should be evaluated for therapy.

Currently there is no established fall prevention program at the facility. However, there at one time, was a fall protocol called “Falling Stars”. This protocol consisted of labeling patient a “falling star” if they experienced frequent falls. If considered a “falling star” alarms were applied to them while they were seated in wheel chairs or in the bed to alert caregivers of patients who were trying to stand up while unsupervised. Their beds were also lowered to approximately 1 ft. from the ground, and mats were placed on each side of their beds to prevent injurious falls. The state surveyors mandated the removal of the alarms and mats due to the alarms scaring the patients and the mats posing as a fall risk. Once the protocol was removed, no other protocol was implemented.

Based on the data of falls at the facility there is a need for a fall prevention program in order to reduce the number of monthly falls and to improve the quality of care. A fall prevention program that can decrease the monthly fall rates to the national average percentage or lower is desired. Evidenced-based fall programs were researched to determine the components of a successful fall prevention program.

Evidenced-based Fall Prevention Programs:

In the study "Effect of a Statewide Fall Prevention Program on Incidence of Femoral Fractures in Residents of Long-Term Care Facilities" researchers investigated “the effect modified evidence-based fall prevention program had on the incidence of femoral fractures in nursing homes for 1 funded year and the year after” (Rapp, Lamb, Erhardt-Beer, Lindemann, Rissmann, Klenk, & Becker, 2010, p.70). “The study population consisted of 9,077 (intervention group), 23,250 (control group A), and 20,333

(control group B) residents living in 176 (intervention group), 744(control group A), and 439 (control group B) nursing homes during the period of intervention" (Rapp et al., 2010, p. 72). The fall prevention program that was used "was originally tested between 1998 and 1999 in a cluster-randomized fall prevention trial in six nursing homes in Baden-Wu¨rttemberg, Germany" (Rapp et al., 2010, p. 72). "The multifactorial fall prevention program reduced the number of falls by 44% and the number of fallers by 30%" (Rapp et al., 2010, p. 72). The fall prevention program consisted of staff training, environmental assessments, an exercise group, and education on fall prevention tips. The researchers used a modified version of the fall prevention program which included staff training, environmental assessments and adaptation, medication review and management, and progressive strength and balance training. Recommendations for hip protectors and administration of fall risk assessments were also components of the program. Fall incidents were to be recorded 3 months prior to start of the fall prevention programs. Also one or two nurses from each nursing home had to complete a 1-day training for proper implementation of the fall prevention program. Rapp et al 2010 stated, "the fall prevention program was not associated with a significant effect on the incidence of femoral fractures in either analysis" (p.73). Rapp et al 2010 stated "the most likely reason why this intervention did not reduce femoral fractures is inadequate uptake, inadequate adherence to the program, or both" (p. 73). The lack of intense staff training, lack of fall prevention behavior changes, lack of residents participation in exercise groups, and the lack of funding for hip protectors could have all contributed to the unsuccessfulness of the fall prevention program (Rapp et al., 2010).

In the study "The Evaluation of a Fall Management Program in a Nursing Home Population" researchers investigated the effect of a statewide dissemination of a modified evidence-based fall prevention program on incidence of femoral fractures in authorities in Manitoba, Canada from June 1, 2003 to March 31, 2008 (Burland et al., 2013, p. 829). The study population consisted of 1,046 residents from 12 different nursing homes. Burland et al., 2013, stated that "the rates of falls, injurious falls, and hospitalized falls were compared with program nursing homes from pre- to post-period and with nonprogram nursing homes, to determine if the program was associated with improved outcomes"(p. 830). "Individual- level nursing home data were analyzed using a quasiexperimental, pre-post, comparison group design" (Burland et al., 2013, p.830). The fall management program was "designed to increase resident mobility while minimizing injurious falls, through the implementation of multiple strategies including education for staff, residents, and families; risk reduction strategies; regular fall risk assessments and environmental audits; and a post-fall protocol" (Burland et al., 2013, p. 829). "It was collaborative and multidisciplinary, involving a care team of nurses, aides, dieticians, recreation coordinators, occupational therapists, and other nursing home staff (e.g., maintenance) who worked together to provide the safest and highest quality of life for residents" (Burland et al., 2013, p. 829). Staff, residents, family, community members, and friends were educated and trained in fall prevention techniques. Prior to implementation of the fall management program, the staff completed several education and training sessions. The first staff training/educational introductory session was an hour long. A self-paced learning package was available for staff members who weren't able to attend the introductory session. "The learning package contained information about falls,

consequences, risk factors, promoting functionality, fall management strategies, and a quiz "(Buralnd et al., 2013, p.829). Following the initial session was 1/2 day educational/training sessions. Staff members who were unable to attend these sessions reviewed shift modules consisting of information packages that were expected to be read and then reviewed with the nurse assigned to their shift. "Topics included the history of and reasons for falls and some fall management strategies: regular toileting, promoting functionality, restraint minimization, and the logo used to identify residents at high risk of falling "(Burland et al., 2013, p. 829). "The program interventions include (a) fall risk assessments, (b) individual and environmental audits, (c) injury prevention strategies (e.g., restraint minimization, prompted voiding, exercise and activities, proper nutrition, medication review, and assistive devices), and (d) a post-fall protocol" (Burland et al., 2013, p. 830). "There was an upward trend in falls, but it was not statistically significant; however, the program appears to have had a protective effect despite this upward trend in falls, overall injuries remained stable and hospitalized falls decreased significantly (Burland et al., 2013, p. 834).

In the study "Prevention of Falls in Nursing Homes: Subgroup Analyses of a Randomized Fall Prevention Trial" Rapp, Lamb, Büchele, Lall, Lindemann, and Becker 2008 stated "the objective of this study was to use the data from a large and successful fall prevention trial in nursing homes to perform predefined subgroup analyses" (p. 1092). There were a total of 6 nursing homes in Ulm, Germany that were included in this study. Three nursing homes were randomized to the control group and the other three were randomized to the intervention group. The study population consisted of 725 (365 in the intervention group and 360 in the control group) nursing home residents. The

median age was 86 and 80% of the participants were women. In the intervention group a fall prevention program was implemented for 12 months and consisted of staff training, education for residents, environmental assessments, and exercise (Rapp et al., 2008). "Staff training included information on modifiable risk factors and other preventive measures, and the homes received monthly feedback about fallers and fall rates" (Rapp et al., 2008, p.1093). The environmental assessment included an assessment of lighting, bed height, and floor surface and the results were discussed with the nursing home staff and administrators (Rapp et al., 2008). "The research team offered all residents to participate in a individual based consultation to discuss information on exercises, recommendations of wearing hip protectors and providing written information on fall prevention" (Rapp et al., 2008, p. 1093). Two times a week the residents were able to engage in exercise programs, as a group, that focused on balance and progressive resistance training. "Subgroup analyses revealed a statistically significant interaction for cognition, bladder continence and fall history, indicating that residents with impaired cognition or urinary incontinence or a positive history of falls had a greater benefit from the program than residents in the opposing subgroups" (Rapp et al., 2008, p. 1093).

Discussion:

Each evidenced-based study provided valuable insight and information that could be used for the long-term/skilled nursing facility. Rapp et al's 2010 study showed how certain limitations can determine the effectiveness of a fall prevention program such as; lack of adherence to program, lack of trained staff, and lack of patient participation. Rapp et al's 2008 study also showed the importance of concentrating on injurious falls. Burland

et al's 2013 study showed the importance of focusing on the rate of falls, injurious falls, and re-hospitalizations due to falls. This study also showed how important it is to incorporate patient and family training in a fall prevention program. Rapp et al 2008 used a client-centered approach with their individual consultations with their residents. This is important because fall risks and physical/cognitive deficits will differ and each resident needs a plan of care that with meet their individual needs. Providing the residents with fall prevention handouts is also a good component for a fall prevention program. One major component of a fall prevention program that was not included in these programs was initial and ongoing fall risk assessments. Upon admission most nursing homes assess the risk of falls in residents. However, fall risk assessments may not always be re-administered. Due to a possible change in health status or medications, a residents fall risk may increase; therefore ongoing assessments should be included.

Proposed Fall Prevention Program and Modifications:

The target group for the fall prevention program includes all geriatric caregivers, consisting of nursing aides, nurses, at least one occupational therapist and certified occupational therapy assistant, and at least one physical therapist and physical therapy assistant who all work in a long-term/skilled nursing facility and will make up the fall prevention team. Trainings and educations seminars will be provided to the targeted group so that they can gain the skills and knowledge needed to reduce the amount of falls at the long-term care nursing facility. This program is intended for all residents because each resident has risk of falling.

The training and educational sessions will be broken up into different lessons consisting of fall risk assessment, fall education, fall risks, and fall prevention. It may

take up to 4 months for all caregivers to complete all of the lessons. The first lesson will consist of educating caregivers on the need to perform fall risk assessment at admission and quarterly to determine in the fall risk has increased. Nurses, occupational therapists, or physical therapists can perform fall risk assessments. In the second lesson a description of how to classify a fall will be provided. This session will also focus on the fall rates in the facility and re-hospitalizations due to falls. Next education will then be provided to caregivers about why a patient may fall or what could cause a fall.

The third lesson will focus on three potential classes of fall risk factors in their residents: 1) biological, 2) behavioral, and 3) environmental (Evans et al 2015). A biological cause of a fall may be related to decreased strength, endurance, pain, decreased range of motion in bilateral upper and or lower extremities, low vision, illnesses (i.e. of stroke, vertigo, or multiple sclerosis), or injuries (i.e. broken hip, leg, arm). Behavioral fall risks include patients who may experience medication side effects of drowsiness, hyperactivity, or confusion. Also residents who are impulsive or noncompliant with safety precautions can be considered a fall risk. Caregivers will also be educated on how to identify and recognize environmental fall risks. Environmental fall risks may include slippery surfaces, uneven surfaces, clutter, poor lighting, and limited access to adaptive equipment such as shower chairs, grab bars, bed rails, elevated toilet seats, or bedside commodes.

There will also be a lesson that focuses solely on fall prevention. Fall prevention strategies that will be taught to ensure that residents (if they have a fall risk or aren't independent in safe transfers and functional mobility) are aware (if cognitively intact) that they must have a caregiver present during transfers. Also caregivers will be educated

on ensuring that all residents have their call bells near them and that the call bells are functioning properly every time they exit a residents room. Another fall prevention strategy is having eyes on residents who are not cognitively intact or frequently checking on residents who are not cognitively intact to see if they need help or are safe. Also all caregivers will be trained properly on body mechanics and safe transfers to and from surfaces. This is very important because if a caregiver does not transfer a resident safely and properly a fall may occur.

Making sure caregivers are available and are able to provide assistance to residents when it is needed is imperative. For example, if caregivers take too long to take residents to the bathroom or to put them back in bed then the resident may do those transfers alone and risk having a fall. This leads to toileting and nap scheduling. If there is such a schedule in place it may help reduce the risk of falls because caregivers are routinely helping the resident.

Another fall prevention technique is to make sure residents who have a high fall risk have low beds that could be lowered close to the floor when they are asleep in hopes of preventing them from falling out of the bed. Having at least one bed rail up can also help prevent falls. Another strategy is making sure patients have the adaptive equipment or adaptive devices that they need accessible; for instance, grab bars, shower chairs, grab bars, bed rails, elevated toilet seats, roller walkers, canes, wheel chairs, or bed-side commodes.

There are several types of technology that I will used during different training and educations sessions such as; PowerPoint, videos, and websites. PowerPoint presentations help display major points of topics and are a convenient outline of what will be taught

and discussed. Videos can provide information like tutorials or documentaries that can aid in teaching information and skills. Websites can provide a vast array of information that could be supplemented throughout the learning event. The caregivers, at their own convenience, can access all three of these technologies and as many times as they need. These technologies also help the caregivers to engage in self-directed learning as they have can access them whenever or wherever they want.

Residents and their families will also be part of the targeted audience. Having individual consultations may be difficult to carryout due to lack of staff and business of caregiver schedules; however, a seminar can be offered so that patients/residents and their families can attend and be educated on ways they can prevent falls. Also a weekly exercise program can be offered to patients/residents in a group according to interest.

Evaluative data will be attained by having the caregivers participate in competencies to determine if they have mastered the needed fall prevention skills at the midpoint and endpoint of the trainings. Also a written examination will be administered to make sure the caregivers have learned the fall prevention strategies.

Plan for Implementation and Evaluation:

The Plan-Do- Study-Act cycle is the model that was used to make a plan for implementing a fall prevention program. The Institute for Healthcare Improvement 2017 states that the PDSA cycle "is shorthand for testing a change by developing a plan to test the change (Plan), carrying out the test (Do), observing and learning from the consequences (Study), and determining what modifications should be made to the test (Act)". This model will help achieve the long-term goal of implementing a fall prevention program that is appropriate for a specific facility.

The overall aim of this fall prevention program is to reduce the number of falls by at least 5% in order to improve quality of care at a specific long-term/skilled nursing facility. Titler 2010 quoted that "adoption of evidenced-based practices, are influenced by the nature of the innovation (e.g., the type and strength of evidence; the clinical topic) and the manner in which it is communicated (disseminated) to members (e.g., physicians, nurses) of a social system (organization, nursing profession)" (p. 37&38). The plan is to discuss the need of fall prevention program at the facility based on the amount of monthly falls. Strong support from the heads of nursing is needed in order to implement a fall prevention program. Strong support will be gained by provided data from run chart to illustrate the need for a fall prevention program based on the comparison of the facility's fall percentages and the national average fall percentage. Once there is permission to carryout the fall prevention program then it will be introduced to the caregivers, consisting of nurses and geriatric nursing aides, during an in-service. During the in-service there will be a discussion about what the fall prevention program entails and why it is needed. A schedule for trainings and lessons will be made with the input from nursing staff. Schedules and sign-up sheets will be posted on the bulletin boards throughout the facility. Schedules and sign-up sheets will also be available for patient and family educational/training sessions. A conference room, vacant patient room, therapy gym, or classroom will have to be booked for the trainings. After all caregivers are properly trained the fall prevention program will be implemented.

It is imperative that communication between the entire fall prevention team is being maintained during the implementation process via face-to-face meetings, emails, or phone calls. Communication will be required to determine if modifications need to be

made, further training needs to be provided, and also to make sure each caregiver is applying the learned fall prevention skills and techniques into their daily practice. As the program is being implemented it is important to have an ongoing evaluation on the caregivers roles. Sporadic direct observation or supervision by a nurse can determine whether the caregivers are translating their learned skills in to practice. Also there needs to be a fall management system for documenting fall occurrences. This facility uses a specific database that charts monthly falls and compares the fall rates with state and national fall rates. However, in order to pay close attention to whether the program is successful or not there needs to be close monitoring of falls each week. The number of falls or lack there of can provided insight to whether the program needs modification.

The barriers that can be anticipated when implementing the fall prevention program are attendance of caregivers and flexibility with the schedule. There are caregivers that work different shifts on different days so there needs to be time to educate and train all of them. Another barrier may be difficulty booking conference rooms or classrooms due to different seminars and activities that are already scheduled at the facility. Caregiver, patient, and family compliance with the fall prevention program are also potential barriers.

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