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School of Occupational Therapy

An Occupational Perspective for Addressing Fall Prevention to Enhance Successful Transitions from a Skilled Nursing Facility to Home

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Abstract

Background: The Fall Observation Report at Spring Hill Village (SHV) in 2018 showed that there were 222 falls reported. After discussing with all therapy staff, they stated there are no fall prevention or simple home modification and adaptation handouts that are readily available to give residents to increase overall safety. The 'My Safe and Sound Plan' (MSSP) serves as a comprehensive guide for older adults to understand personal and environmental factors that may need to be modified or adapted within their lives to successfully and safely age in place.

Purpose: To educate staff therapists on multifactorial fall prevention protocols to reduce older adults risk for falls when discharging home from a skilled nursing facility. Staff therapists were educated on ways to incorporate the MSSP into practice during a group or individual intervention session.

Design: An educational in-service was given to staff therapists at Springhill Village (SHV) to develop a deeper understanding of multifactorial fall prevention and the MSSP. A six question 5-point Likert scale pre/post survey questionnaire was used to collect data to determine educational growth from the educational in-service.

Findings: Staff therapists showed an increased understanding on multifactorial fall prevention and developed a deeper understanding of the MSSP as a result of the educational in-service presentation.

Conclusion: The MSSP provides an effective format to help residents understand the occupational nature for addressing fall prevention. Occupational therapists have the skills needed to provide education on multifactorial fall prevention programs and the MSSP to decrease short-term residents risk for falls once discharged from a skilled nursing facility.

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Falls are becoming a serious public health concern for older adults within skilled nursing facilities and the home (Florence, Bergen, Atherly, Burns, Stevens, & Drake, 2018; Vlaeyen et al., 2016). Fall-induced injuries are the most common cause of decreased functional activity, disability, cumulative trauma, and even death in the older adult population (Pynoos, Steinman, Nguyen, & Bressette, 2012). Falls are highly prevalent in older adults, which increases their vulnerability to trauma (Peterson & Clemson, 2008). ISHN (2017) provides evidence showing over seventy five percent of residents within a SNF fall on an annual basis. The Fall Observation Report at Spring Hill Village (SHV) in 2018 showed that there were 222 falls reported. Out of those 222, the report showed 110 residents fell somewhere in the bedroom, while 40 fell out of bed. The report also showed many older adults falling in the bathroom, falling during a transfer, sliding out of their wheelchair due to poor positioning, or falling in the dining room or hallway.

According to the Centers for Disease Control and Prevention (CDC), one out of four individuals over the age of sixty-five fall each year and it is estimated that only half of those individuals report the incident to their primary care physician (Center of Disease & Prevention, 2018b). Unfortunately, the rate of annual falls is on the rise due to aging Baby Boomers (Florence et al., 2018) and it is anticipated that seven falls will occur every hour in 2030, many which result in death (CDC, 2018b). As a normal consequence of aging, individuals become more susceptible to risk factors related to falls (Bergen, Stevens, & Burns, 2016). Known risk factors for falls include lower body weakness, impaired balance, vision deficits, impaired cognition, polypharmacy (taking multiple medications), not actively exercising, and living within an unsafe home environment (Ballinger & Brooks, 2014; Kamei et al., 2015; Phalen, Aerts, Dowler, Eckstrom, & Casey, 2016; Bergen et al., 2016). According to the CDC (2018c), almost all falls in a SNF are a result of an environmental hazard, such as diminished lighting, slippery

flooring, and incorrect bed heights. Out of all 222 falls over the course of 2018 at SHV, only 3 resulted in an injury of a hip fracture, head injury, or red welt on their back. Fall injuries have shown to lead to loss of function, disability, and fear of falling, which further leads to depression and social isolation (Visschedijk et al., 2015; Bergen et al., 2016).

Falls inflict a substantial economic and social burden on the individual, their families, health care professionals, and the economy (Sherrington et al., 2017). Older adults are falling, and it is resulting in substantial medical costs (Center of Disease & Prevention, 2018a). Falls in the older adults are among the top twenty most expensive medical conditions (Florence et al., 2018). Costs associated with falls within the United States in 2015 was over 50 billion dollars with Medicare paying approximately $28.9 billion, Medicaid $8.7 billion, and private insurances $12 billion (Florence et al., 2018; CDC, 2018a). Nonfatal falls within the home and skilled nursing facilities may result in broken bones and the need of emergency surgeries, which then lead to increased cost for hospitalizations and rehabilitation (CDC, 2018a).

Not only is it important to understand the costs associated with falls, but also the indignity and devalued identify around a fall (Ballinger & Brooks, 2014). Many older adults are not reporting a fall due to believing their independence will be taken away from them. Falls not only have physical effects on the older adults, but also psychological effects. The fear of falling affects more than 50% of older adults and may have a negative impact on mental and physical status (CDC, 2018a; Visschedijk, Caljouw, Bakkers, van Balen, & Achterberg, 2015). Fear can be disabling and lead to feelings of isolation and depression (Vlaeyen et al., 2016). Fear of falling has led many older adults to avoid participating in certain daily activities, which can lead to overall weakness, and in turn, increase their risk for falls (Visschedijk et al., 2015; Bergen et al., 2016). The older adult population, who are aging in place or in a skilled nursing facility often

lack understanding of the impact a fall can have on their life if they are not taking preventative measures (Visschedijk et al., 2015).

Intrinsic Factors

Intrinsic factors are attributed to polypharmacy, having decreased balance, impaired vision, and having difficulties with higher level cognition. Kamei et al., (2015) provides evidence showing a higher risk for older adults who are consuming four or more medications (polypharmacy) and/or benzodiazepines. Polypharmacy can have negative effects on the body, such as impaired visual acuity, postural hypotension, balance deficits, and feeling dizzy; all of which increase one's risk for falls (Kamei et al., 2015; Phalen et al., 2016). Side effects to medication are not the only reason older adults are falling. Evidence shows older adults need to have regular chart reviews by physicians to flag high-risk medications, assess acute or chronic medical conditions, neurological problems, cardiac status, vision deficits, and joint dysfunction (Peterson & Clemson, 2008; Phalen et al., 2016).

As one begins to age, so does their body; specifically, their bones, muscles, eyes, and mind. A study performed by Bergen, Stevens, & Burns (2016) showed that reduced upper and lower extremity muscle mass and strength have effects on the older adult populations functional mobility and balance by restricting their ability to perform daily activities and increasing their risk for falls. Phalen et al., (2016) provides evidence showing individuals with decreased cognition, such as memory loss, bipolar disorder, depression, or dysthymia are at a higher risk for falls. Older adults who have recently been diagnosed with cataracts, diabetic retinopathy, glaucoma, or overall poor vision are also at a higher risk for falls (Phalen et al., 2016).

Extrinsic Factors

The home and immediate environment are common locations for falls in older adults. Falls are most common in the bathroom, kitchen, bedroom, and stairwell (Pynoos et al., 2012). A study by Peterson & Clemson (2008) found the most common hazards for falls within the home and skilled nursing facilities are related to having obstacles in a pathway, slippery surfaces, and poor lighting. Toilet and shower transfers are the most common causes of falls in the bathroom, due to inability to stand from lower surface, slipping on wet floor, or sliding/tripping on throw rugs (Pynoos et al., 2012). A study by Kamei et al., (2015) identified poor lighting in hallways/bathroom, clutter on the floor, throw rugs, wearing improper footwear, lack of education in proper use of durable medical equipment, and having cords across the floor as environmental hazards that had caused older adults to fall. Pynoos et al., (2012) states that uneven surfaces, loose, deep, or worn carpets, poorly arranged furniture, poorly designed bathrooms, staircases without railing, and pets were major tripping hazards within the home. If these environmental hazards are not addressed with the elderly population, the likelihood of falls will continue to increase.

Occupational Therapy

The profession of occupational therapy uses occupations to improve ones' independence within their daily roles, routines, and habits of everyday life (AOTA, 2014). Occupational therapists use their knowledge to not only understand the person, but also the complications within their environment to support optimal functioning (AOTA, 2014). Occupational therapists focus on the preservation of occupational identity after the onset of a disability, disease, or disorder by having a deep understanding of compensatory strategies, energy conservation techniques, and modifications throughout daily life. (AOTA, 2014). Occupational therapists are trained to assess and provide interventions which aim to decrease falls in multiple areas of

practice, especially within the home (Roberts & Robinson, 2014). Through understanding an individual's roles and routines, occupational therapists are able to recognize falls risks throughout daily activities within one's living environment and provide appropriate safety education (Ballinger & Brooks, 2014). It is important to dive deeper into these risk factors to have a better understanding of preventative measures that can be taken to facilitate fall prevention and education for the population to then be able to continue to age in place by promoting overall well-being and safety throughout their daily life.

Theoretical Framework

The 'Person-Environment-Occupation' (PEO) model serves as a framework to guide clinical reasoning of occupational therapists in the analysis and understanding of their client's occupational performance which is shaped by the interaction between the person, environment, and occupation. The PEO model promotes a means to deliver occupational therapy services regarding fall prevention by understanding the process and the content within the model (Ballinger & Brooks, 2014). Every older adult has the right to age in place safely, by maintaining their health, wellness, and participation in daily activities, regardless of their ongoing health issues. The PEO model focuses on all aspects of the individual, including the person, environment, and occupations on a function-dysfunction continuum (Law et al., 1996). The person is related to the individual's attributes, such as their life roles, motivation, age, gender, socioeconomic status, and functional status (Law et al., 1996). The environment has an external focus on the context for occupational function-dysfunction (Law et al., 1996). This aspect provides a unique perspective on the individual's environmental circumstances, such as materialistic disadvantages, and inability to safely live within their home due to decreased cognition, vision, and poor balance (Peterson & Clemson, 2008). These individuals need to be

educated on fall risk preventions/interventions that can be implemented within their home, through the use of a home assessment, to minimize the environmental barriers of aging in place (Peterson & Clemson, 2008). Occupations are defined as meaningful tasks and activities one engages in throughout their lifespan (Law et al., 1996). By providing basic fall prevention education, demonstration/education on durable medical equipment, and implementing home modifications, older adults could be maximizing their independence with daily occupations (Pynoos et al., 2012). These interventions aim to improve occupations of self-care activities, meal preparation, home maintenance, household chores, caring for pets, or engaging in hobbies (American Occupational Therapy Association, 2014). This model facilitates how an occupational therapist can implement home safety, within their home, to allow clients to age in place while decreasing their risk for falls (Ballinger & Brooks, 2014).

The PEO model has been used to guide the screening and evaluation process for various practice settings within the realm of occupational therapy. The process behind the PEO model is finding an equal fit between the person, environment, and occupations. This process will continue to change and be modified throughout one's' lifespan (Strong et al., 1999). Throughout the screening and evaluation process, an occupational therapist will identify strengths and weaknesses throughout occupational performance by assessing performance components, understanding environmental conditions, and specific occupations, activities, or tasks the individual engages in on a daily basis (Strong et al., 1999). By bringing these three components together, one can see a transactional framework develop to implement an intervention plan to enhance the function-dysfunction continuum through occupational performance (Strong et al., 1999).

Occupational Therapy and Fall Prevention

By looking through the lens of the PEO model, an occupational therapist can address fall prevention by focusing on education, identifying potential environmental hazards, adapting the home environment through the use of home modifications, offering social support, and promoting exercise and physical activity in a meaningful way. Occupational therapists have an important role in multifactorial approaches by incorporating these key aspects into the older adults treasured daily activities and occupations, thus encouraging meaningful life roles (Ballinger & Brooks, 2014). Occupational therapists not only play a key role in fall prevention, but also in continuing to examine strategies to improve the older adults overall self-confidence by planning how and when they will implement these procedures within their daily life (Ballinger & Brooks, 2014).

Person Factors. Occupational therapists have an important role in address fall prevention through the use of establishing safety in ones roles, routines, and habits of everyday life. As occupational therapists, fall education needs to be provided in a client-centered manner, be occupation driven, focused on finding motivational links, and aiming to reduce concerns about falls, and improving the older adults overall self-efficacy (Peterson & Clemson, 2008). Occupational therapists need to continue to provide social support to the elderly population by providing a positive light for improving falls self-efficacy, which is essentially the degree of confidence one has in completing daily activities without falling (Ballinger & Brooks, 2014).

Environmental Hazards. Occupational therapists are trained to understand the positive and negative aspects of one's environment to support optimal living. Occupational therapists use a compensatory strategy aimed at reducing barriers in the environment, while improving occupational performance for older adults with functional limitations (Stark et al., 2017). The prevalence of home modifications within the home and skilled nursing facility remains low, and

occupational therapists have an important role in meeting this need (Stark et al., 2015; Colón-Emeric et al., 2017). Occupational therapists should excel in this area because their core foundation focuses on identifying underlying client factors, assessing their environment, and making recommendations and/or adaptations that are individualized to the elderly population (Stark et al., 2015). Within a skilled nursing facility, occupational therapists can assess and suggest removing environmental barriers, such as removing clutter in the hallways, increasing the light at the top and bottom of stairwells, and decreasing occurrences of stepping on wet or uneven surfaces (Peterson & Clemson, 2008; Colón-Emeric et al., 2017). Home adaptations and environmental adaptations can be targeted to suggesting non-slick shoes, removing throw rugs, and being properly educated on transfer techniques on raised toilet seats and tub transfer benches to ensure safety within the home and skilled nursing facility (Kamei et al., 2015; Colón-Emeric et al., 2017).

Occupations. Occupational therapists play an important role in focusing improving safety through the use of desired occupations. To improve strength and activity tolerance, older adults need to feel a sense of control, empowerment, and choice when picking the exercises they participate in (Peterson & Clemson, 2008). By allowing opportunity and control, older adults are more likely to adhere to the exercise program by allowing it to become part of their routine (Ballinger & Brooks, 2008). Within a skilled nursing facility, implementing a toileting schedule decreased falls by helping the resident prior to them helping themselves (Colon-Emeric et al., 2017). With that being said, occupational therapists need to find activities or an exercise an regime that motivates and interests the older adult, therefore improving adherence and compliance, which in turn, will then lead to a reduction in falls within the home and skilled nursing facility.

Occupational Therapy in a SNF

In the overall healing process, older adults usually go from hospital settings to a skilled nursing facility, then to home health care services. The latest trend is for SNFs to have shorter length of stays due to insurance companies dictating when skilled therapy services are no longer needed for managed insurances. SNFs are able to provide 24/7 nursing care for distribution of medications and have certified nursing aids (CNAs) who are able to provide around the clock assistance with daily self-care tasks (AOTA, 2018a). The person, in a skilled nursing facility, focuses on establishing roles and routines that are meaningful to the older adult (AOTA, 2018a; AOTA, 2018b). The discharge environment however by listening to the residents "word of mouth" and taking their recommendations (AOTA, 2018a). SNF therapists are able to make recommendations for fall prevention, home safety, and home modifications, but happens vaguely. The occupations in a SNF focus on ADLs, IADLs, the use of adaptive equipment and durable medical equipment uses (AOTA, 2018a).

Transitioning to Home Health Occupational Therapy

Older adults qualify for home health services under their Medicare A benefits after an extended stay at a skilled nursing facility. The biggest transition is that home health care provides intermittent care between nursing care and therapists (AOTA, 2018b). Within a home health setting, occupational therapists are able to assist in the supervision and training of the nursing aide to ensure the "just right challenge" for the older adult to maximize the older adults independence on a continuum of care (AOTA, 2018b). The person, in the home health setting focuses on establishing roles and routines that are meaningful to the older adult (AOTA, 2018a; AOTA, 2018b). Home health has an added role in this area of practice by providing assistance on compensatory reminders for adhering to medication management (AOTA, 2018b). The

environment however is different by home health actually actually being able to see the older adult current function in their home living environment (AOTA, 2018b). Home health care services are able to make recommendations for fall prevention, home safety, and home modifications. Home health is able to have a special role in seeing the entire process, due to physically being the residents home environment (AOTA, 2018a; AOTA, 2018b). The occupations in home health care settings focus on ADLs, IADLs, the use of adaptive equipment, home safety recommendations, home exercise programs, and educating on durable medical equipment uses (AOTA, 2018a; AOTA, 2018b).

Multifactorial Interventions for Falls

Multifactorial interventions incorporate interprofessional approaches that are aimed at identifying multiple risk factors to reduce falls (Isaranuwatchai, Perdrizet, Markle-Reid, & Hoch, 2017). Multifactorial fall prevention approaches focus on "visual and cognitive assessments, self-care training, balance training, environmental modifications, exercise, and safety education with daily routines and activities" (Roberts & Robinson, 2015, p. 255). Studies have shown that multifactorial interventions for falls are cost-effective and could lead to substantial reductions in healthcare spending (Isaranuwatchai et al., 2017; Florence et al., 2018). Within a skilled nursing facility, good communication, having readily accessible equipment, and supportive staff improved adherence and residents response to multifactorial interventions (Vlaeyen et al., 2016; Colon-Emeric et al., 2017).

Fall Education/Social Support. Relationships with family, friends, and health care professionals affect the overall adherence and retention to fall prevention education (Kwan & Straus, 2014). A study by Kamei et al., (2015) suggest that having an interdisciplinary approach has been shown to improve fall prevention by including a physician, nutritionist, nurse, occupational therapist, physical therapist, and staff educator has a greater reduction for falls

within the home. Fall prevention education needs to be simple, easy to understand, and provide fall prevention education in a positive and empowering way by understanding the older adults' goals and perspectives (Roberts & Robinson, 2015; Sherrington et al., 2017). By having a collaborative approach, decreasing staffing issues, carryover between shifts, and good communication showed a decrease in falls within a skilled nursing facility (Vlaeyen et al., 2016).

Environmental Adaptations & Modifications. Environmental modification interventions have demonstrated the ability to reduce falls and improve function in older adults (Stark et al., 2015). Environmental modifications include the use of adaptive equipment, such as grab bars or railing on stairs, raised toilet seats, to changes within one's' physical environment by offering advice for alternative ways of carrying out activities of daily living (Ballinger & Brooks, 2008; Colon-Emeric et al., 2017). These modifications help compensate for balance, visual, and cognitive impairments, allowing the older adult to age in place safely (Stark et al., 2015; Ballinger & Brooks, 2008). A study by Kamei et al., (2015) showed the most common recommended home modifications were raising the toilet seat, using a rollator walker instead of "wall walking" and installing grab bars or rails in the bathroom. This study showed older adults who implemented at least one of the recommended home modifications had a substantial decrease in the rate of falls over a year (Kamei et al., 2015).

Exercise. Multifactorial fall prevention programs utilize exercise programs to improve strength, balance, and coordination in the elderly population (Peterson & Clemson, 2008). A study by Kwan & Straus (2014) showed exercise programs that focused on Tai-Chi, strength/resistance training, walking groups, ankle cuff weights, or any type of physical activity had positive improvements for decreasing falls within the home. Evidence shows engaging in exercise interventions for 3 hours a week, with a focus on Tai-Chi, balance training, transfers,

strengthening, and walking that falls in the home have reduced by the rate of 39% (Sherrington et al., 2017).

Accessing Resources

Within a skilled nursing facility, residents are closely connected with their social workers, who ensure a safe and proper discharge location. Social workers are able to set up referrals to community based settings, such as Area 7 Agency on Aging. Within the Terre Haute area, Area 7 Agency on Aging is a local community resource for older adults to have access to public transportation via bus services, nutritional programs (meals on wheels), and access to health and wellness programs (Aging & Disabled Services Division, 2019). When focusing on the person, environment, and occupation, one can see many opportunities within this area of practice. For the person, occupational therapists can help older adults establish roles and new routines for developing and understanding the bus system. The environment focuses on implementing change to ensure safety by providing assistance via Adult Day Services when needed. The occupations have a focus on decreasing workload of meal preparation through the use of meals on wheels, which ensures a well-balanced diet. Area 7 Agency on Aging has a focus on improving quality of life, reducing disabilities, and improving mental health by enhancing the capabilities the older adult can perform and engage in, which is the foundation of occupational therapy (ADSD, 2019).

Interdisciplinary Approach

An article by Eckstrom et al., (2016) states an interdisciplinary approach has the greatest results with fall prevention within a skilled nursing facility. Fall prevention can be addressed in many different ways. Physical therapists generally focus on decreasing gait difficulties, improving balance, and decreasing postural hypotension (Eckstrom et al., 2016). Occupational

therapists focus on upper extremity strengthening, safety with functional activities, minimizing home risks, and decreasing fall hazards (Eckstrom et al., 2016). By looking through the lenses of the PEO, occupational therapists in a skilled nursing facility have an important role in addressing intrinsic and extrinsic factors that correspond to addressing fall prevention and home safety (AOTA, 2018a). For short term residents, occupational therapists should be providing education on potential home modification recommendations and safety equipment to promote safe functioning and reducing barriers upon discharge (AOTA, 2018a). For long-term residents, occupational therapists should have a collaborative approach with other SNF staff for modifying the environment and adapting self-care tasks to improve safety within their rooms (AOTA, 2018a).

Screening & Evaluation

Needs Assessment

Falls Within a Skilled Nursing Facility. Springhill Village is a 99 bed, skilled nursing facility (SNF) located in Terre Haute, Indiana. After discussing with the nursing unit managers and rehab manager, a need developed to address falls within their SNF. Industrial Safety & Hygiene News (ISHN) (2017) reports the average falls per 100 bed SNF is between 100-200 falls per year. Results of a Fall Observation Report showed that Springhill Village had 222 falls during the year of 2018. The facility had 109 different individuals fall over the course of the year, while the highest number of falls per person was falling 11 times.

Discharging Home From a Skilled Nursing Facility. After informal observations with physical therapists, occupational therapists, and speech language pathologists, a need developed from the lack of addressing fall prevention and home safety throughout the discharge process. During discharges, the physical therapists addressed caregiver education, in regard to safety

during transfers and provided residents with a home exercise program to continue lower extremity exercises until home health services began. One of the physical therapists stated, "I usually let home health address safety, in relation to fall prevention and home adaptations." At the facility during discharges, occupational therapists addressed safety concerns with toilet and tub transfers, and re-emphasized the importance of DME, while the speech therapist addressed general safety within the home, in relation to being able to call 911, medication management, and educating caregivers on cognitive barriers. After discussing with all therapy staff, they stated there are no fall prevention or simple home modification and adaptation handouts that are readily available to give residents to increase overall safety.

Instrumentation

After diving into the evidence-based research, statistics, observations, and having discussions with staff members, there was a need to understand the collective role of the facility in addressing falls prevention and facilitating successful transition for residents who will return home following their rehab stay. The PEO model was used as a guide throughout the formation of the survey with emphasis on the person, environment, and occupations affected from falls. An open-ended anonymous six question survey was given to the physical therapists, occupational therapists, speech language pathologists, the rehab service manager, nursing unit managers, the director of nursing, the assistant director of nursing, the executive director, social services, and multiple CNAs. Evidence from Eckstrom et al., (2016) emphasized the importance of educating the interdisciplinary team on fall prevention to enhance the collaborative approach. A collaborative approach between health care professionals affects the overall adherence and retention to fall prevention education and safety for older adults (Kwan & Straus, 2014). Enhanced communication and education provides cohesion and safety for residents when a solid

understanding and foundation of roles are identified between staff members (Colón-Emeric et al., 2017).

The six questions on the survey focused on staff member perceptions of: how falls could be prevented, what the facility is already doing to address falls, the role of the occupational therapist in addressing falls, potential challenges for residents after discharge, how the facility currently prepares residents for the transition to home, and what the facility could do to improve the transition to home (See Appendix A). By gathering a deeper understanding into these deficits within the facility, we better enhance fall prevention education by asking questions that target a deeper, personal response. Evidence shows as older adults are aging, they are taking multiple medications, having decreased balance, cognitive deficits, vision difficulties, and living within unsafe environments (Ballinger & Brooks, 2014; Kamei et al., 2015; Phalen et al., 2016). As older adults continue to age, so does the risk for falls; which is why it important to ensure the facility they are living within is taking precautionary measures to address and prevent falls (CDC, 2018c). If staff are not educated or know precautionary interventions for fall education, the elderly will continue to be the ones impacted (Visschedijk et al., 2015).

Eighteen anonymous open-ended surveys were collected. Information provided from surveys were transcribed and categorized into common overarching themes with an emphasis on the person, environment, and occupation to support the occupation-based model of the PEO model by finding the function-dysfunction continuum.

Results of the Needs Assessment

Respondents of the needs assessment included eighteen full-time health care professionals at SHV: Executive Director, Director of Nursing, Assistant Director of Nursing, Director of Therapy, MDS Coordinator, Activities Director, Social Worker, Occupational Therapists (2),

Physical Therapists (2), Speech Language Pathologists, Registered Nurses (2), Licensed Practical Nursings, and Certified Nursing Assistants (3). All of the participants were female. The age of the participants varied from 25 - 60 years old. .

Springhill Village is aware of the falls that take place and are passionate about ensuring their residents safety and addressing areas of improvement. The staff at Springhill Village believe falls could be prevented by having a quicker response to call lights, implementing the correct environment for the resident, closely monitoring the patient with a fall history, and properly educating the staff on the preventative measures needing to be implemented. The environment of the facility needs to ensure the patient is wearing proper non-skid socks/safe footwear, setting the bed at the correct level, removing clutter from doorways, and ensuring the floor is dry. For nurses to closely monitor a resident would require more supervision from the staff, not allowing the resident to be alone in their room, and also monitoring their medication changes. For education of staff members, many participants stated educating staff on safety awareness training, balance and strengthening programs, and properly training CNAs on proper positioning in bed and wheelchairs is needed. A common suggestion from participants was implementing a restorative program.

The staff at Springhill Village are implementing room/environment modifications, referring residents to skilled therapy services, teaching staff to check on residents more often, and completing (interdisciplinary team) IDT assessments to investigate the falls by conducting a root cause analysis to address falls. Many room and environment modifications mentioned, included: centering resident in bed, ensure wheelchair is locked prior to transfer, offer toileting every 1-2 hours, place mats around bed, lower the bed position, wear non-slip footwear, remove clutter, and notify staff if the floor is wet. When a resident has fallen, the nursing staff is able to

write a referral to therapy, so they can focus on strengthening for transfers, implement fall prevention by finding the root cause, and improve upper body strengthening.

The participants believe the role of an occupational therapist is to address the underlying cause of the fall, focus on upper-body strengthening, proper wheelchair positioning, suggest environmental modification, educate staff and resident on safe transfer techniques, and to educate the patient, staff, and/or caregiver on proper safety with activities of daily living skills. Participants stated, occupational therapists have a key role in addressing and decreasing the risk for falls. Occupational therapists provide education on the use of call lights, safety during self-management tasks, standing balance training, proper usage of adaptive equipment, and assistive devices to maximize their independence and safety when performing desired occupations.

The staff at Springhill Village believe environmental changes to transition are the biggest challenges for older adults once they return home from a skilled nursing facility. These environmental changes consist of constantly having 24/7 care to being alone, having to do tasks on their own, remembering safety recommendations given, implementing home safety recommendations, having continued social support, and being non-compliant with education given. Some of the participants suggestions emphasized on home safety by removing throw rugs, removing clutter from aisle ways, and completing their activities of daily living safely with appropriate durable medical equipment needs. By implementing a safe living environment, the older adult not only lives safer but will begin to feel safer. The hardest challenge is patient non-compliance, in regard to fall prevention education.

The participants believe Springhill Village does prepare residents for discharge by recommending home health therapy services, providing residential education before discharge, offering home evaluations/recommendations, and by having a care plan meetings to ensure all

family members are on board with discharge location, safety, and older adults abilities. By recommending home health therapy services, a social worker is able to set up the referral to allow the older adult to have a medical professional in their home within 48 hours once discharged from the skilled nursing facility. Another aspect the staff members feel they prepare residents well for, before discharge, is during functional transfers and mobility, such as car transfers, stair training, dynamic balance activities, safety training, and toilet/tub transfers. The discharge planner also has a short handout named 'Fall Prevention Self-Management Plan' that is given and 'usually' discussed to residents prior to discharging. Springhill Village staff members believe that the offering of home visits, home evaluations and recommendations are truly the most important stated items that help ease the older adults transitioning home after discharge.

Lastly, the staff members at Springhill Village believe they could emphasize the importance of home assessments/visits and offer them more frequently. Staff members suggested planning them with residents after two weeks of being admitted, so recommendations could be in place prior to returning home. Many participants stated, "We offer home evaluations, but very few older adults accept and allow us to complete them." The participants also suggested having a form for all disciplines of care to complete for caregiver/family member to understand patients current abilities, instead of nursing having to relay the message. Springhill Village participants felt that the CNA staff needed education on the importance of allowing the residents the time and independence to complete their activities of daily living on their own without assistance. One participant suggested placing a communication board in all the rooms, so other staff members have an idea of the residents independence levels on specific activities of daily living and functional transfers.

With the results of the needs assessment, the continued plan is to implement and educate the therapy and nursing staff on preventative measures to take, which in turn will decrease falls within the facility and after discharging home. Staff will also be educated on the My "Safe and Sound" Plan (MSSP) for staying falls-free. The MSSP addresses eight ways to improve older adults balance and lessen their risk for falls (Howard, 2018). The eight topics focus on changing your mind, managing your medicines, heart, and vision, understanding proper footwear/footcare, importance of Vitamin D and Calcium, exercises for fall prevention, and provides a home safety check (Howard, 2018). Evidence continues to suggest the more times older adults are educated about fall prevention, from many different healthcare professionals and settings, the higher the likelihood is that the older adult will begin to listen and understand (Kamei et al., 2015; Kwan & Straus, 2014).

Implementation

Prior to the educational in-service, the pre-survey was distributed to all eleven staff therapists with use of a Likert-scale format for the pre- & post-survey. Appendix B includes specific questions included on the pre-survey questionnaire. The educational in-service was given to enhance staff understanding on the purpose of the doctoral capstone project, recognize consequences of falls among older adults, understand the theoretical framework used to guide this project, identify recent trends related to falls at SHV, identify relevant outcomes based on the needs assessment, be introduced to the 'My Safe and Sound Plan' (MSSP) and understand ways to incorporate the MSSP into practice. The in-service emphasized evidence-based research, practice, and knowledge related to fall prevention education and multifactorial fall prevention programs. The information was presented during a thirty-minute lunch-break and was provided via lecture format with a PowerPoint presentation for a visual-aide.

The purpose of my doctoral capstone experience was to focus on administration and program development in the area of fall prevention. Staff was informed that this capstone experience was an additional aspect of my education, following completion of two 12-week fieldwork rotations. Evidence was synthesized throughout the presentation to emphasize the importance of addressing falls and multifactorial fall prevention with the older adult population. The theoretical framework used to guide this project was the PEO model, which focused on finding an optimal fit to allow older adults to age in place safely while continuing to participate in activities of daily living that they find meaningful. Staff therapists were educated on the fall observation report and the results of the needs assessment.

Education continued to focus on the MSSP by explaining the eight areas it encompasses and the disciplines that can address the information. The MSSP offers a fall risk screening, goes in depth on ways for older adults to change their mind, manage their medicines, heart, vision, foot care, and understanding the importance of Vitamin D/Calcium. The MSSP also has specific exercises to reduce the risk of fall prevention and provides a home safety check. Occupational therapists and physical therapists could address the MSSP. Occupational therapists have a key role in promoting a safe home environment by educating older adults on ways to live a falls-free life. Staff was educated on using an interdisciplinary approach to improve overall adherence and have the maximum results for longevity of the fall prevention program by all disciplines encouraging carry over. In addition to education on the MSSP, the staff was educated on goal setting options to incorporate fall prevention into practice. Examples were provided for sample intervention sessions showing how occupational therapists could incorporate the MSSP into practice. Staff therapists were also given sample documentation on how to write daily notes when incorporating the MSSP into resident care.

Following completion of the in-service, the eleven staff therapists completed the post-survey, which included the same questions as the pre-survey. The post-survey also had additional questions to facilitate feedback for the presenter in regard to presentation and presentation style Appendix C provides specific questions included on the post-survey questionnaire.

Leadership Skills

Leadership was exemplified by gaining independence, building rapport with staff and residents, taking initiative, and always offering a helping hand within the environment of a skilled nursing facility. While planning for the implementation process, being a good communicator with many different disciplines was needed to provide collaboration, awareness, and honesty, in order to gather relevant information for effective implementation. A collaborative approach was used by completing the educational in-service for the interdisciplinary therapy team over general fall prevention measures and the MSSP. Leadership was demonstrated through conscientious efforts to be open and honest with the staff about fall prevention, being accountable, and leading by example throughout the implementation process. Having an open-door policy promoted an open-access friendly atmosphere for anyone to ask questions, signified a commitment to relationship building, and commitment to serving the therapy staff to improve their comfort level, participation, and knowledge within the realm of fall prevention in a skilled nursing facility. The educational in-service provided an emphasis on how the MSSP allows the therapy staff the ability to be creative and self-directed with the sections/area they want to address, in order to provide an interdisciplinary approach.

Collaboration Between Staff Therapists

Staff development was provided using an interdisciplinary collaborative approach, promoting efficacy, communication, interpersonal skills, and enhancing a deeper understanding

of knowledge for evidence-based fall prevention protocols. During the beginning stages of the implementation process, a need was shown to train the staff therapists by measuring and assessing their knowledge in the realm of fall prevention. Throughout the process, staff development was enhanced through direct communication and building interpersonal skills. The therapy staff at SHV have been practicing for many years and have a passion for continual learning by being eager to learn about the newest evidence-based research.

The in-service facilitated a deeper understanding of evidence-based research in relation to falls, fall education, multifactorial fall prevention programs and the MSSP for fall prevention. The development of the staff was enhanced through interdisciplinary conversations about what the residents would benefit from. For example, if a resident was admitted for having a fall, one of the therapy disciplines could suggest to incorporate the MSSP into practice.. Staff cohesiveness would also be promoted through the use of providing examples on how to incorporate the MSSP within intervention plans, goal setting, and how to document fall prevention programs accurately.

Discontinuation and Outcome Phase

Project Outcomes

Results of the Survey. The data from the pre- and post-surveys were imported into an excel spreadsheet. The scores were calculated and averaged according to pre and post question categories. Figure 1 shows the growth of knowledge and education provided during the in-service presentation. These results show the staff therapists gained exceptional confidence and knowledge within the realm of fall prevention education, multifactorial fall prevention programs, evidence-based research, and how to incorporate fall prevention interventions into practice. The last question on the post-survey asked how the participants would rate this educational in-

service. The participants responded unanimously with the maximum score of excellent. Figure 2 shows the average of scores for the Part B section within the post-survey. All staff strongly agree that the objectives were clearly defined, the objectives were met, the content was organized, the MSSP/PowerPoint was helpful, and the information that was presented would move the client forward. Figure 3 shows the average of scores for the Part C section within the post-survey. These results showed the staff therapists strongly agree the presenter was organized, well-prepared, knowledgeable about the topic area, and her presentation style was adequate.

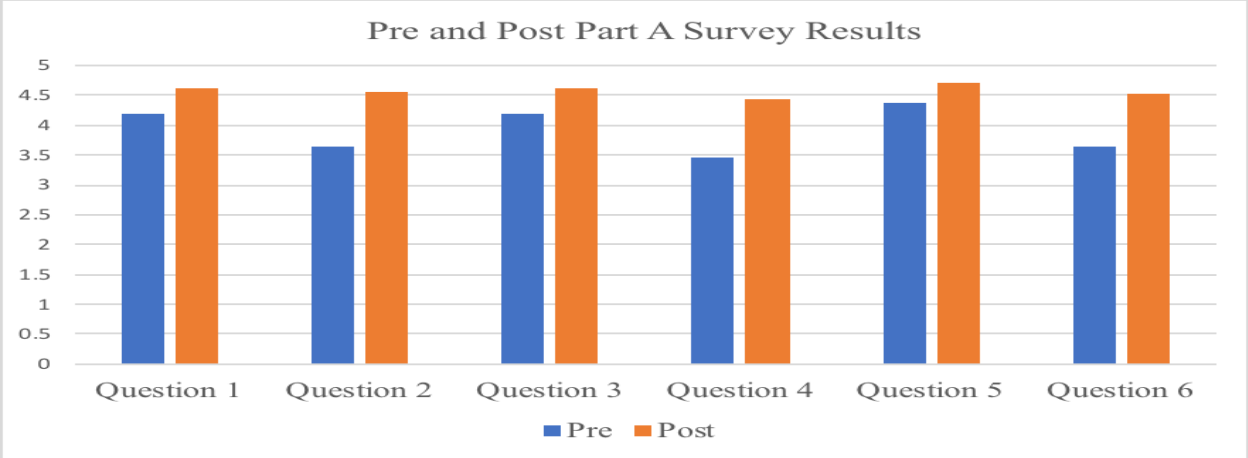

Figure 1. From a Likert-rating scale for the pre- and post-survey questionnaire, these results show the growth of knowledge and education provided during the in-service presentation.

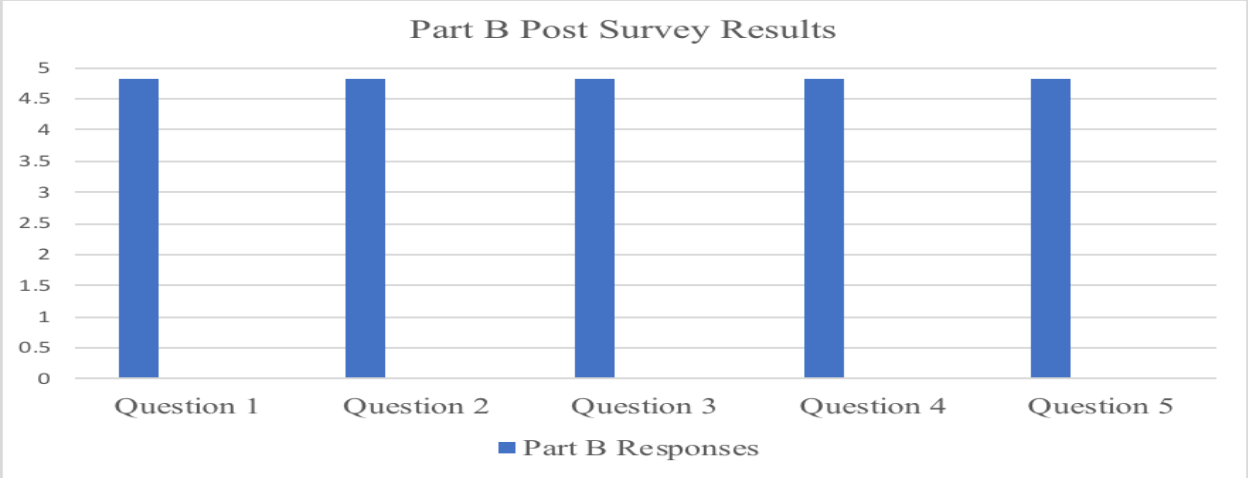

Figure 2. From a Likert-rating scale for the Part B section of the post-survey, these results show the average of scores for the in-service presentation meeting the staff therapists' expectations.

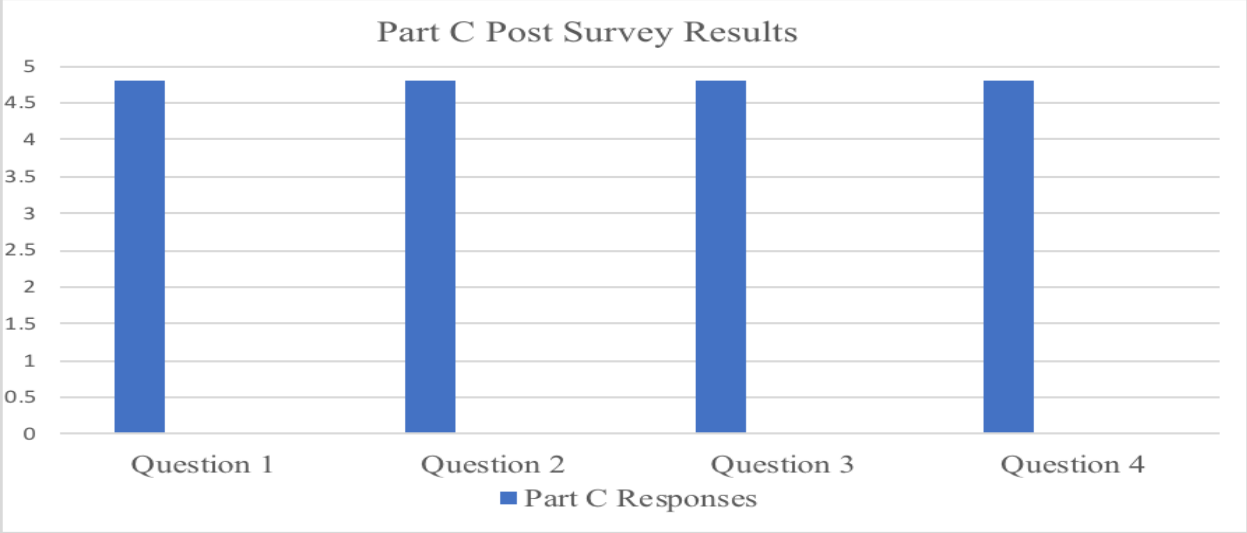

Figure 3. From a Likert-rating scale for the Part C section of the post-survey, these results show the average of scores for the presenter being prepared and knowledgeable of the content area.

Ongoing Process for Quality Improvement

The ongoing process for quality improvement was ensured by using the most relevant and current evidence-based research. The development, organization, and implementation of the program was overseen and reviewed by experienced Sandra D. Hendrich, PT, DPT and Beth

Ann Walker, PhD, MS, OTR. The MSSP was developed by Brenda Howard, DHSc, OTR. The MSSP was piloted at many different skilled nursing facilities to show strong validity and reliability. Quality improvement has been made throughout the process by changing and modifying items as they have been brought up. To continue ensuring quality improvement, education will be provided to each therapist discussing the MSSP within a group setting by leading a group of four residents who will be returning home. This will allow the staff therapists to get comfortable with the MSSP in a group setting, but also having support from me during the beginning stages.

To ensure sustainability, I provided staff therapists with examples of daily notes, progress notes, and goals when using the MSSP. Example goals were given to staff therapists, and the staff education focused on a collaborative, interdisciplinary approach to using the MSSP with residents. I also provided staff therapists with appropriate scenarios for when to incorporate the MSSP into practice during intervention or group therapy. In October of 2019, a new Patient Driven Perspective Model will be launched by Medicare. The new PDPM will allow multiple group therapy sessions to focus on the MSSP, while also being interdisciplinary. Groups could divide the eight different topics within the MSSP among occupational therapy, physical therapy, and speech therapy. Evidence continues to support the notion that increased education on fall prevention by different health care professionals increases adherence for older adults (Ballinger & Brooks, 2008).

Societal Need

The societal need is that older adults deserve the right to be educated on the extrinsic and intrinsic risk factors related to falls and fall prevention. Falls are happening and they are continuing to happen each and every day. As the older adult continues to age, the rate of falls

continues to increase (CDC, 2018b). Due to the aging process, the older adult begins to develop a higher susceptibility of risk factors related to falls (Bergen et al., 2016). These risk factors include developing lower body weakness, impaired balance, vision deficits, impaired cognition, polypharmacy, not actively exercising, and living within an unsafe environment (Ballinger & Brooks, 2014; Bergen et al., 2016; Kamei et al., 2015; Phalen et al., 2016). Older adults are in denial about their overall health. It takes repetitive education to allow them to understand the precautions that need to be implemented in order to age in place safely, while being fall-free.

Evidence continues to show that staff therapists within skilled nursing facilities are not addressing these preventable risk factors related to falls within the older adult population (AOTA, 2018a). Staff therapists within skilled nursing facilities are relying on other practice settings, such as home health care, to address these risk factors. There is a societal need to increase the awareness of the skilled nursing facility therapists on the importance of multifactorial fall prevention programs within the older adult population, especially for those who are returning home after a short-term stay due to a new diagnosis or exacerbation of a illness. Occupational therapists have an important role in addressing multifactorial fall prevention interventions by incorporating these key aspects into the older adults treasured daily activities and occupations, which in turn will lead to encouragement in meaningful life roles (Ballinger & Brooks, 2014). Occupational therapists not only play a key role in fall prevention, but also the continuation of examining strategies needed to improve older adults overall self-confidence by planning how and when they will implement these procedures within their daily life (Ballinger & Brooks, 2014).

Overall Learning

The Doctoral Capstone Experience (DCE) allowed me to gain an abundance of knowledge and information to better serve others, once I become a practicing occupational therapist. Throughout my time at SHV, interactions have taken place with many different healthcare professionals, the interdisciplinary therapy team, and the key personnel who work closely beside the Director of Therapy in a SNF. Throughout my experience, I tried to incorporate many different learning styles by utilizing written, oral, nonverbal, and tangible learning experiences to emphasize the importance on being holistic when practicing occupational therapy.

Written communication and interactions took place by providing staff therapists with a hard copy of the educational PowerPoint in-service presentation and a hard copy of the MSSP. The PowerPoint and MSSP were simple, clear to understand, gave information that could be understood and interpreted by individuals of all ages, socioeconomic status, and ethnicities. While implementing the MSSP with residents at SHV, they were provided physical copies of the MSSP for continued review along with written communication to take home. The MSSP was also used as a reference guide for the residents' significant others and/or family members. This includes a home exercise program, new ideas to implement into one's lifestyle, and a home safety check for each room of the house. The MSSP had open-ended questions that allowed the residents to write down his or her own thoughts and ideas that they would begin implementing within their life. Other health care professionals, such as nursing staff and social work staff, were also exposed to the hard copy of the MSSP distributed to residents prior to discharge.

Oral communication and interactions took place during the PowerPoint educational in-service that educated staff therapists on current evidence-based literature, multifactorial fall prevention protocols, and how to implement the MSSP into practice. Throughout the PowerPoint presentation, actual cases within the facility were examples were used to improve staff therapists' carry over when implementing the MSSP in goal setting, interventions, and providing example documentation to enhance communication and overall learning. At the end of the presentation, time was allotted for questions and feedback was given by staff therapists on improvements of in-service presentation. Implementation of the MSSP with residents took place within a group and individual-based setting depending on the needs of the resident. Extra time was taken to educate all staff therapists in a group setting to enhance their knowledge, confidence, and demonstration of how to lead a group session focused on the MSSP. Many staff therapists enjoyed this type of education, because within the group setting positive reinforcements were given when sharing their own stories. When providing verbal education on the MSSP, family members and significant others of current residents joined the session to learn about the MSSP. Nurses and social workers also benefited from listening during the group therapy session, as they stated they have a better understanding on what the MSSP entailed.

As a facilitator of the MSSP, nonverbal communication had to be effective throughout implementation and presented in a happy and upbeat manner. Proper eye contact, positive body language, sitting with correct posture, and paying attention to our facial expressions while leading intervention sessions on the MSSP was important for facilitating a positive environment. All types of communication were utilized at SHV when implementing the MSSP with residents and staff therapists.

Leadership and Advocacy

Throughout my time with this DCE experience, I gained a wealth of knowledge in relation to administrative duties within a skilled nursing facility and received a better to understanding of the process of program development. This DCE experience allowed me to step out of my comfort zone, become more assertive, become a leader, advocate for residents and the therapy staff, and also advocate for my profession.

Leadership skills were shown by relaying information to the staff therapists that the Director of Therapy would have been doing, in relation to scheduling changes, resident changes, and interdisciplinary team (IDT) recommendations. Leadership was continually shown by discussing resident care and discharge planning with the nursing unit managers and social work team. While focused on the administrative duties, I was able to gain a better understanding of the day to day administration of a skilled nursing facility. I was able to assess what things they were doing to prevent falls, what things they were not doing to prevent falls, and then take that information to implement a program that increased the overall safety of the residents once they discharge home from a skilled nursing facility This, in turn, falls back on good administrative skills by ensuring all residents are safe to return back to their home environment. As occupational therapists ensuring residents have been properly educated on ways to reduce falls within their physical and immediate environments. As well as allowing residents to gain knowledge about changes within their bodies over time, along with exercises to continue gaining strength, balance, flexibility, and endurance needed to decrease older adults risk for falls within their home.

Advocacy skills were demonstrated for the resident, the staff therapists, and for my profession while at this DCE. Advocacy was promoted for the resident by integrating the MSSP into practice, by taking the time to educate them on the hazards within their home, and also

allowing residents to understand the changes within their bodies as they have aged that contribute to an increased risk for falls. Advocacy was also shown by ensuring residents were receiving appropriate and proper care that was needed and deserved among this population. The Director of Therapy advocates for the residents by ensuring all IDT members are held accountable for their role in the resident's care. This DCE allowed me to advocate for staff therapists by leading groups for them to observe on the MSSP, which will help them feel comfortable implementing and continuing the program once I am no longer there. This experience also allowed me to advocate for my profession. An occupational therapist in a skilled nursing facility or any other setting needs to address fall prevention. When I began, fall prevention was an area the therapists at SHV did not address in depth as much as they should in a skilled nursing facility, especially for individuals who have short-term stays and are returning home independently. After implementing the MSSP, I believe residents were thoroughly educated on how to safely return home, in order to substantially decrease their risk of falling.

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Appendix A

Survey for Staff Working Within Springhill Village

1.) How could falls be prevented at Springhill Village?

2.) What is Springhill Village doing to address falls?

3.) What is the role of an occupational therapist in addressing falls?

4.) For those residents who are returning to their home environment at discharge, what do you think are their biggest challenges?

5.) How does Springhill Village prepare residents for transition to home after discharge?

6.) What else could Springhill Village do to help provide a safe transition to home?

Appendix B

Pre- Session Survey: please complete this portion prior to the start of the session

1. Please rate your confidence level with addressing fall prevention.

   No confidence 0 1 2 3 4 5 Exceptional confidence

2. Please rate your current confidence level with multifactorial fall prevention programs.

   No confidence 0 1 2 3 4 5 Exceptional confidence

3. Rate your current knowledge for addressing fall prevention.

   No confidence 0 1 2 3 4 5 Exceptional confidence

4. Rate your current knowledge of evidence-based research, in relation to fall prevention.

   No confidence 0 1 2 3 4 5 Exceptional confidence

5. Rate how likely you are to incorporate fall prevention programs into interventions.

   Not likely 0 1 2 3 4 5 Very likely

Appendix C

Post-Session Survey: please complete this portion after the presentation is completed. Please turn into presenter before leaving. Thank you!

Part A:

1. Please rate your confidence level with addressing fall prevention.

   No confidence 0 1 2 3 4 5 Exceptional confidence

2. Please rate your current confidence level with multifactorial fall prevention programs.

   No confidence 0 1 2 3 4 5 Exceptional confidence

3. Rate your current knowledge for addressing fall prevention.

   No confidence 0 1 2 3 4 5 Exceptional confidence

4. Rate your current knowledge of evidence-based research, in relation to fall prevention.

   No confidence 0 1 2 3 4 5 Exceptional confidence

5. Rate how likely you are to incorporate fall prevention programs into interventions.

   No confidence 0 1 2 3 4 5 Exceptional confidence

6. Overall, how would you rate this educational in-service?

   [ ] Excellent [ ] Good [ ] Fair [ ] Poor

1= Strongly Disagree
2= Disagree
3= Neither agree or disagree
4= Agree
5= Strongly Agree
N/A= not applicable

PART B:

1. Objectives were clearly defined.
   1 2 3 4 5 N/A
2. Learning objectives were met.
   1 2 3 4 5 N/A
3. Content organized and easy to follow.
   1 2 3 4 5 N/A
4. Safe and Sound Workbook and PowerPoint was helpful.
   1 2 3 4 5 N/A
5. The information presented will be useful for providing patient care moving forward.
   1 2 3 4 5 N/A
6. The amount of information presented was adequate for the time allowed.
   1 2 3 4 5 N/A

PART C:

1. Presenter was organized.
   1 2 3 4 5 N/A
2. Presenter was well prepared.
   1 2 3 4 5 N/A
3. Presenter was knowledgeable about topics discussed.
   1 2 3 4 5 N/A
4. The style of presentation was adequate.
   1 2 3 4 5 N/A