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## **Effectiveness of Team Member Education on Fall Prevention Techniques, Management of Dementia-Related Behaviors, and Safe Transfer Completion**

Maureen C. Doran

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Effectiveness of Team Member Education on Fall Prevention Techniques, Management of  
Dementia-Related Behaviors, and Safe Transfer Completion

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St. Catherine University

Capstone Project completed in partial fulfillment of the Doctor of Occupational Therapy Degree

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## Abstract

**Introduction:** There is a significant need to address fall prevention in memory care/assisted living homes due to the high prevalence of falls that occur in these settings. Managing dementia-related behaviors and completing safe transfers support fall prevention in dementia populations. Fall prevention was expressed as a major need by BeeHive Homes of Mount Horeb, a memory care specific assisted living home that served as the community partner for this quality improvement project. **Purpose:** The quality improvement project provided education and training to team members working at BeeHive Homes of Mount Horeb on safe transfer completion, management of dementia-related behaviors, and fall prevention techniques.

**Approach:** New training, handout packets, and videos were created throughout this experience as well as hands-on training provided to team members. A survey was created to evaluate the effectiveness of the education and training provided to team members. **Results:** All survey results were positive. As well as creating a survey, fall incident reports were obtained and results yielded a decrease in falls through the progression of the quality improvement project.

**Recommendations:** Increasing the organization of team member training, maintaining an adequate supply of gait belts, having strong team member to resident staffing ratios, and making required environmental changes will all continue to support fall prevention at BeeHive Homes of Mount Horeb.

## Introduction

Did you know that more than 55 million individuals are living with dementia, and therefore, subsequently have a significantly higher fall risk than those without a dementia diagnosis? (Drexel News, 2023; World Health Organization, 2023). Many individuals may know someone who has dementia and has had a fall; however, they are likely not aware of the negative impact falls can have on a person's life. There are several factors that influence the risk and rates of falls in the older adult population (Centers for Disease Control and Prevention [CDC], 2021). Individuals with a dementia diagnosis have additional fall factors such as visual impairments, cognitive impairments, urinary incontinence, and neuropsychiatric symptoms (Damián et al., 2013; DeVol, 2013; Jensen & Padilla, 2011; Lim, 2017; Zimmerman et al., 2017). Management of dementia-related behaviors and completing safe transfers with residents play into the overarching goal of fall prevention.

Furthermore, there are several negative impacts following a fall such as reduced independence and decreased overall quality of life. In fact, research states that individuals living with dementia in assisted living facilities (ALF) experience higher fall rates (CDC, 2021; Lim, 2017; Zimmerman et al., 2017). Additionally, dementia-related behaviors (restlessness, wandering, increased agitation, forgetfulness, and impaired sense of safety) often cause a further increase in fall occurrence in this population (Fernando et al., 2012; Lim, 2017). It is essential to determine best practices for assisting with fall reduction and to develop various forms of educational materials to decrease the number of falls in the population of adults living with dementia in ALF communities.

### **Background Information.**

BeeHive Homes of Mount Horeb, Wisconsin serves individuals living with dementia in an ALF type setting. Hung at the entrance of this home is their mission statement reading, "the mission of BeeHive Homes is to respectfully provide assistance with daily living activities to those elderly who choose to maintain their independence, dignity, and activity level in a caring

home-like environment” (U. Miller, personal communication, June 14th, 2022). Along with this mission, there are core values that the home strives to maintain, “respect (treat each resident with the highest respect at all times, BeeHive Homes is their home), happiness (we are in the business of creating smiles), service (when you serve with love, you will love to serve), time (your greatest gift is often your time), and gratitude (count your many blessings)” (U. Miller, personal communication, June 14th, 2022). BeeHive Homes of Mount Horeb is not referred to as a facility but rather as a home for up to 16 residents, each resident cared for in a person-centered manner. The BeeHive team members range from high school students coming in new to caregiving, to certified nursing assistants (CNA) with several years of previous caregiving experience in multiple settings.

In facilities such as BeeHive Homes, specifically memory care settings, adequate education and support provided to team members positively impacts both resident and team member safety and quality of life (Institute for Patient and Family-Centered Care, n.d; Surr et al., 2017). Research shows that team members are often more motivated to learn and complete training and education when they know it will assist them with providing each resident with quality care (Williams et al., 2022). In-person education and training regarding managing dementia-related behaviors, strategies and techniques to reduce falls, and completion of safe resident transfers will benefit both team members and residents living at BeeHive Homes. It is likely that with the consistent use of various models to guide fall prevention education to healthcare staff, there will be a reduction in fall rates in the settings that falls are most prevalent in (Shaw et al., 2020).

Following a scoping review completed in the summer of 2022, it was noted that there are several factors leading to falls in populations living in ALFs (Appendix A). In the year 2016, approximately 45.5% of older adults living with dementia experienced at least one fall, compared to the reduced fall rate of 30.9% in individuals not living with dementia (Drexel News, 2023). Due to the high prevalence of falls in populations living with dementia in ALFs, this



became a large overarching focus on this quality improvement project (National Center for Assisted Living, 2014). While the importance of addressing falls is clear in the evidence, a current gap includes finding the best mechanisms for providing and implementing education in multiple modes to support follow-through and implementation of fall prevention strategies into daily work tasks and roles for care providers.

### **Aims**

BeeHive Homes is a memory care specific ALF that strives to provide the best, person and quality-centered care to each resident. There is a strong need to address fall prevention, safe transfers, and management of dementia-related behaviors with team members working in this home. With increased team member education on these topics, individuals living with dementia in ALF settings have the potential to experience increased safety, quality of life, and independence with completion of their daily occupations. This quality improvement project aimed to address the effectiveness of team member education on completion of safe transfers, management of dementia-related behaviors, and utilization of techniques to prevent falls for residents living at BeeHive Homes. In-person education and training regarding managing dementia-related behaviors, strategies to reduce falls, and completing resident transfers safely has the potential to benefit both the BeeHive team and residents living at BeeHive. Each of these topic areas were mentioned as an area of need following the completion of a needs assessment and thorough communication with the owners of BeeHive Homes of Mount Horeb (Appendix B). Due to falls being multifactorial, educating team members in areas such as management of behaviors and safe transfers may have a positive impact in areas such as fall prevention within the organization.

### **Approach**

Following a needs assessment (Appendix B), it was evident that the creation of educational and training materials available for team members both currently working and new hires at BeeHive could provide increased team member knowledge, safety, and confidence in

their designated job role. Due to the high fall prevalence rates in this type of setting and at this particular site, all education and training materials created were either directly or indirectly connected with fall prevention.

### **Participants**

Participants of this project included team members working at BeeHive Homes of Mount Horeb. BeeHive Homes is small, thus there were approximately 10 individuals who routinely participated in conversations and hands-on training and education with the author. Due to the high turnover rates of team members at BeeHive, some team members did not receive the full education and training. A few team members, about five, worked at BeeHive throughout the entirety of the project and participated in all education and training opportunities.

### **Educational Material Development and Implementation**

Multiple types of educational materials were created to increase current and incoming team members' knowledge in the areas of fall prevention, management of dementia-related behaviors, and completion of safe transfers. During this quality improvement project, various educational methods were implemented such as hands-on training and education, printed educational handouts (Appendix C), videos on transfers and use of mechanical lifts (Appendix D), and adaptations to the current transfer training information (Appendix E). Finally, current binders at the site containing training materials related to falls were re-organized, consolidated, and updated to contain the most up-to-date information for team members.

### ***Educational Handout and Resource Compilation***

Following informal interviews with team members and communication with the site mentor, a list of beneficial topics for handouts and other resources was created to enhance team members knowledge in various areas. These handouts were created to provide team members with further information on dementia, types of dementia, management of dementia-related behaviors, Parkinson's Disease, proper body ergonomics, importance of using a gait belt, fall facts/factors, and techniques to prevent falls (Appendix C). Each handout topic related

either directly or indirectly to fall prevention, shown in a flowsheet-type format (Appendix F). In addition to the creation of several handouts, Teepa Snow videos on topics relevant to the quality improvement project were obtained and organized within a document with a QR code present to bring team members directly to the videos (Appendix G) (Positive Approach to Care, n.d.).

### ***Transfer Training Videos***

Following observations and conversations with team members and the site mentor, a list of common transfers was created. It was determined from conversations with the site mentor and team members that filming demonstrations of proper and safe completion of common transfers would be beneficial for both current and incoming team members at BeeHive Homes. The eight videos created for this site contained information on proper gait belt placement and removal, demonstration of safe use of lift equipment (EZ Stand and Hoyer Lift), and engagement of transfers (both 1-2 person assist) with proper body ergonomics (Appendix E). Each video represents a common transfer that team members typically engage in during a shift at BeeHive. These videos are accessible for team members to refer back to if any questions arise and will be implemented into the training process of new team members. QR codes to the videos were placed in the transfer training manual for team members to refer back to whenever needed as well.

### ***Revision of Existing Transfer Training Materials***

The previous transfer training document that BeeHive Homes of Mount Horeb used when training new team members contained information such as brief body mechanics, gait belt use, and utilization of mechanical lifts. This training was evaluated by the author and site mentor to determine what additions or edits could be made to enhance the current training. The training was then adapted to increase details on gait belt usage and importance, the importance of proper body positioning with transfers, and instructions on safely using both an EZ stand and Hoyer Lift. Images were added into the training to further demonstrate specific lifts and materials used at BeeHive. The added visuals break up the reading materials and provide support to

further enhance the knowledge of the reader and trainer of the information. The importance of asking for assistance and working closely alongside coworkers was also emphasized in the updated training materials as working together as a team is what the BeeHive Homes of Mount Horeb is all about. At the end of the training documents, a return demonstration list was created. The purpose of the return demonstration is to have a mechanism for “signing off” on the skills necessary to perform each type of transfer to ensure a solid understanding prior to working and assisting residents for all new team members. As well as enhancing the transfer training, a resident fall protocol flowsheet was created to provide team members with a visual of how to safely assist a resident up from a fall (Appendix H). Following the creations of each draft of the deliverables, several rounds of feedback were obtained from a faculty advisor as well as primary site mentor and site team leads. Throughout the revision process, the author engaged in routine brainstorming activities to assist with elaborating on current content being addressed in the deliverables. Based on the recommendations, feedback, and the brainstorming process, the author made required edits to further strengthen the content, format, and organization of each training and educational material.

### **Evaluation Process**

Creating deliverables that are accessible to a general audience is important in order to provide information to an audience with varying levels of education, such as team members working at BeeHive Homes of Mount Horeb. While the educational materials contained medical field-level vocabulary, they were simplified to ensure understanding by a wider audience through the use of an online readability checker. The *Readability Statistics* website utilizes a program to analyze the words, sentence structure, and characters in each word to determine what reading level the material is at (StoryToolz, 2016). *Readability Statistics* was used to evaluate the handout deliverables, transfer training, as well as the transfer videos (StoryToolz, 2016).

Following the use of the above readability checker, it became evident that some changes to the first drafts of educational materials were needed to increase both accessibility and readability. The vocabulary used in the first draft of the deliverables contained multiple terms specific to the medical and occupational therapy fields. These first drafts had a reading level of 16+ (college graduate). Thorough edits were made to the wording used throughout these deliverables to ensure the educational materials were understandable by a wider, more general audience. Research states that in order for educational materials to be easily understood and read by a diverse audience, the reading level should be at or below 6th grade (Safeer & Kenaan, 2005). Following multiple wording changes and other edits, the reading level went from a college graduate level (16+ level) to between 6th-9th grade level. The medical terminology used in the handouts and training impacted the ability to ensure all words were at a 6th grade level or below. All medical terms were broken down and further described for greater understanding. Accessibility standards such as including alternative texts for images, bolding rather than underlining or italicizing, and use of contrasting colors (avoiding use of green and red) were all taken into consideration throughout the creation of the deliverables as well (UNICEF, 2021).

The effectiveness of the hands-on education and training (provided throughout time onsite at BeeHive) as well as the educational materials were evaluated through a printed survey (Appendix I) given to the BeeHive Homes team. IRB approval was requested and received for completion of this quality improvement project through Saint Catherine University. The survey was printed and available for team members to complete on site. As part of the survey, open-ended feedback responses were included to allow participants to voice aspects of the education and training that was most beneficial and further information they would have liked to have seen. Due to the intense nature of the team members' job, the author took over some team member duties on the floor to allow team members time to complete the anonymous surveys. Content analysis of open-ended response data and descriptive statistics for scaled rating items

was utilized to summarize the results from the surveys. Analysis of survey results were presented to the owners of BeeHive Homes. Finally, a review of fall rates at BeeHive Homes of Mount Horeb prior to the start of this quality improvement project, throughout the duration of the quality improvement project, and at the end of the project were reviewed to determine potential impact the training had on fall rates at the site.

### **Results**

A total of nine team members completed the post education and training survey. All survey questions were answered by each participant. There were two additional team members that looked through the educational materials and were provided with hands-on training; however, for a variety of reasons, they did not complete the survey.

The results from the survey for questions which used a categorical scaled rating are shown in Table 1. These items related to the participants perceived preparedness to prevent falls, manage dementia-related behaviors, and complete safe transfers as well as the level of perceived benefit they received from the training materials. All responses were in either the strongly agree or agree categories. No participants answered somewhat agree, somewhat disagree, disagree, or strongly disagree.

**Table 1.**

*Survey Responses from Ordinal Scale Questions.*

Questions	SA	A	SWA	SWD	D	SD
Following this education and training, I feel prepared to prevent falls for residents at BeeHive Homes (circle answer).	88.9% (n=8)	11.1% (n=1)	0% (n=0)	0% (n=0)	0% (n=0)	0% (n=0)
Following this education and training, I feel prepared to manage dementia-related behaviors at BeeHive Homes (circle answer).	88.9% (n=8)	11.1% (n=1)	0% (n=0)	0% (n=0)	0% (n=0)	0% (n=0)
Following this education and training, I feel prepared to complete safe transfers at BeeHive Homes (circle answer).	88.9% (n=8)	11.1% (n=1)	0% (n=0)	0% (n=0)	0% (n=0)	0% (n=0)
Education and training provided was beneficial to my job position and performance (circle answer).	88.9% (n=8)	11.1% (n=1)	0% (n=0)	0% (n=0)	0% (n=0)	0% (n=0)

*Note* - Strongly agree (SA), agree (A), somewhat agree (SWA), somewhat disagree (SWD), disagree (D), strongly disagree (SD). Total responses for all items were  $n=9$ .

Three open-ended response questions were included in the survey. These open-ended questions provided participants with the opportunity to mention specifics that benefited them most and areas in which they thought more information would have proven beneficial. Many similarities were seen through responses to each of the open-ended questions.

Common themes that arose in response to the question "one thing that I learned from the education and training that I will use in my work at BeeHive Homes is..." included 1) gait belt usage ( $n=3$ ), 2) using the EZ stand/Hoyer lift ( $n=3$ ), and 3) general best practices for transfers and well-being ( $n=3$ ). For example, one respondent stated, "I learned that the gait belt can go above the chest on certain residents". Another respondent indicated, "I learned a different way to use the Hoyer which I think is much safer". Finally, a third respondent noted "Avoid twisting at the waist when transferring residents".

The next open-ended response question was “something I wish the education and training had further information on is...”. For this answer, all but one response consisted of participants stating that no further information was needed, that the content was well done, and or that the materials had everything they needed. The outlier response indicated the participant needed further information on how to use the gait belt. It is unclear whether the participant read the question wrong, wrote an answer to a different question here, missed the material on gait belts in the training packages, or truly needed more support in using gait belts. The final survey question, “any other comments?” allowed participants to write any thoughts they had regarding the education and training. For this question, responses consisted of participants saying “no”, “great job/great work”, or no response provided.

In addition to gathering data from the post education and training surveys, fall incident reports were pulled from February to the end of July to analyze the changes in fall rates before and during the quality improvement project. In the months of February, March, and April, there were 21 total falls. The quality improvement project began at BeeHive Homes of Mount Horeb on May 1st and went through the first week of August. In the months of May through the end of July, there were a total of 14 falls, seven less than the previous three-month period.

Some actions taken at the site during the quality improvement period in addition to the education and training materials included: 1) environmental adaptations to prevent slipping out of wheelchairs, 2) re-education to team members on importance of prompt responses to alarms, and 3) education on the importance of using a gait belt to increase the safety and stability of residents was provided to team members. Additionally, both teeth loop gait belts and buckle gait belts are now available at BeeHive Homes of Mount Horeb. Residents who experience more dementia-related behaviors making application of gait belts challenging were fitted for buckle gait belts with consistent placement of the belts in their rooms. Additional actions included education on having increased attention and eyes on residents experiencing high levels of behaviors and increasing resident’s engagement in activities and exercises throughout the day.



## Implications

The training and education provided through this quality improvement project created many positive outcomes for the BeeHive Homes of Mount Horeb. Participants either stated strongly agree or agree that following the education and training, they felt prepared to prevent falls, manage dementia related behaviors, and complete safe transfers within their specified job title. In addition, they stated either strongly agree or agree that the training and education was beneficial to their role. These results along with the decreased fall rates in the three months during the quality improvement project as compared to the three months prior indicate the multiple benefits gained to the site from the education and actions implemented in these areas from the author.

Since the quality improvement project, the items created by the author have been implemented into new team member training at the BeeHive Homes of Mount Horeb. The education and training materials have also been shared for use at other BeeHive locations. Team members have been utilizing gait belts more frequently, as well as keeping these belts in a more consistent location within rooms to encourage use. Following conversation with the site mentor, the benefits of the buckle gait belts (increased ease of donning/doffing) were discussed, and several were purchased for use in the home. These new gait belts are being implemented daily and used at BeeHive as well.

Following the completion of this quality improvement project, there are several implications and recommendations that are specific to the BeeHive Homes of Mount Horeb. First, having a strong orientation and training protocol to follow will likely increase team member comfort with job roles, likely decrease team member burnout and turnover rates, ensure all team members are receiving the same level of training upon starting to work at BeeHive, and has the potential to decrease in fall rates as seen in the quality improvement period. Secondly, having adequate team member to resident staffing ratios has the potential to reduce fall prevalence overall, especially having three team members on PM shifts to ensure one person is in the main

area watching over residents who are more likely to wander, get up on their own, and show more dementia-related behaviors. Third, reviewing different training topics during each monthly meeting can help ensure team members have the continuing education needed to perform duties within their job role safely. During these meetings, team members can ask questions on training areas in which further clarification may be needed. Fourth, continued use of certain environmental changes such as non-stick materials being placed on wheelchairs to prevent slipping are important to consider as these can often be quick and easy changes to implement, while also highly effective in fall prevention efforts (Leland et al., 2010; Mayo Clinic, 2022). Finally, having an adequate gait belt supply, and consistent location of these belts will ensure all residents and team members have access to a gait belt when needed. Engaging team members in conversation regarding the most convenient and best places to consistently keep the gait belts is likely to increase the rate at which they are used with residents. There are many things that impact fall prevalence, and the goal is that with some small changes, fall rates will decrease!

### **Relevance and Application to the Occupational Therapy Profession**

Within the occupational therapy (OT) profession, it is essential to raise awareness of the role of OT and the most common interventions OTs can provide (environmental modifications, caregiver education) in memory care/assisted living settings. This has the potential to better the lives of those living with dementia in an assisted living home. Educating the general public on dementia and fall prevention is essential to increasing the safety and quality of life of many individuals. OTs can and should provide this education as it has the potential to improve their client's well-being, independence, and overall life satisfaction (Reitz et al., 2020). There is a negative stigma surrounding dementia, and this can be mitigated with increased education and awareness of the disease by others (Alzheimer Society, n.d.). Finally, in order to best reduce falls, manage dementia-related behaviors, and complete safe transfers, communication with the

interprofessional team is critical to ensure all team members are on the same page and aware of the plan for fall prevention.

### **Limitations**

Limitations of this quality improvement project include 1) the information provided to team members was all new information, 2) the population of team members working at BeeHive is diverse in background experiences and knowledge, 3) the site has a high turnover rate, and 4) positive responses were received on all survey questions which could be due to the relationship of the content to the team members job positions.

### **Conclusion**

Addressing areas such as managing dementia-related behaviors, completion of safe transfers, and fall prevention can enhance the lives of many individuals. With additional education and training provided to team members working in memory care specific assisted living homes, comes increased team member confidence in handling situations relating to the above-mentioned topics. Share your knowledge and help raise awareness. Together, fall prevalence rates can be reduced in the dementia population.

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## Appendix A: Scoping Review Poster



# Staff Education Regarding Fall Prevention in Assisted Living Homes

Maureen Doran, OTD Student

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### OBJECTIVES

- Understand the evidence of falls in assisted living facilities.
- Identify key factors leading to falls in the older adult population.

### BACKGROUND

- A fall is an unexpected event when an individual comes to a stop on the ground, floor, or lower level; falls can also indicate that an individual is frail or ill.<sup>8</sup>
- A fall that results in the individual acquiring some type of injuries such as a wound or fracture is considered a fall with injury.<sup>4</sup>
- According to several sources, adults who are over the age of 65 are at an increased risk for falling; that risk percentage increases with age. Falls also negatively impact an individual's quality of life.<sup>2-6,8,11-12</sup>
- It is important to note that falls are often multifactorial, and typically do not occur just because of one factor or cause.<sup>7</sup>
- The most common cause of fractures in the older adult population is falling; more than 95% of hip fractures are caused by falls.<sup>11</sup>

### METHODS

#### Research Question

- What is the nature of the evidence on factors leading to falls in Assisted Living Facilities?

#### Approach

- Used the Arksey and O'Malley approach.<sup>1</sup>

#### Search Terms

- Assisted living, falls, fall prevention, dementia, memory care, fall reduction, and fall factors

#### Databases Used and Inclusion/Exclusion Criteria

- Google (.gov/.org)
- EBSCO MegaFILE (Full text, 2010-present/2020-present)
- JSTOR (Journals, 2017-present, subject: health sciences)
- CINAHL Complete (Full text, 2010-present/2020-present)
- PubMed (Free full text, within last year)
- MEDLINE (Full text)

#### Second Scoping Review

- A second scoping review using the same method was completed to answer the question "what is the nature of the evidence on providing education to staff working in healthcare?"

### FINDINGS

DIAGNOSTIC FALL FACTORS	INTRINSIC FALL FACTORS	EXTRINSIC FALL FACTORS
MEDICATIONS	CHANGES IN MEDICATION	UNCLEARED WALKWAYS
MEDICAL PROBLEMS	MUSCLE AND BONE CHANGES	INADEQUATE LIGHTING
ENVIRONMENT	VISION CHANGES	INADEQUATE FOOTWEAR
COGNITIVE DEFICITS	CHANGES IN BALANCE	SLICK FLOOR SURFACES
GAIT ABNORMALITIES	CARDIOVASCULAR CHANGES	IMPROPER USE OF ASSISTIVE DEVICES
NEUROPSYCHIATRIC SYMPTOMS	MEDICAL CONDITIONS	LACK IN SUPPORT SYSTEM
FUNCTIONAL IMPAIRMENTS		

- Diagnostic fall factors above specifically focused on the factors that cause falls to occur in individuals living with dementia and Alzheimer's.<sup>5-10</sup>
- Intrinsic fall factors are also sometimes referred to as internal factors.<sup>3-6,8,10-12</sup>
- Extrinsic fall factors are also sometimes referred to as external or environmental factors.<sup>3,5-6,11-12</sup>

### DISCUSSION

- Many journal articles were appraised for this scoping review that included general information on falls prevalence and causes of falls both in community-dwelling adults and those living in assisted living facilities. Falls are prevalent in assisted living facilities worldwide. Google scholar was another effective search strategy used along with the multiple databases. Gray literature regarding fall factors was extensive.
- For the second scoping review regarding my approach of education, several credible resources were found to explain the many ways in which staff working in healthcare learn most effectively.

### RECOMMENDATIONS & IMPLICATIONS

#### The findings from these scoping reviews suggest:

- More research should be conducted on fall prevention in assisted living that specifically serves older adults living with memory care conditions.
- Many factors that cause falls can be mitigated with increased awareness.
- Certain medications and medical conditions can increase an individual's risk of falling.
- Awareness of fall factors is critical in order to manage falls and aid in fall prevention.
- All staff members play an essential role in the prevention of falls, with adequate education on role expectations, each staff member will understand thoroughly how they can help reduce falls.

### CONCLUSION

- Falls impact the lives of several individuals, especially those over the age of 65.
- Understanding the several factors that most often lead to falls can help aid in fall reduction.
- Each staff member plays a role in fall prevention; interdisciplinary work is essential in order to reduce fall rates.

### REFERENCES

- References are available upon request.

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## Appendix B: Needs Assessment

### Part 1: Description of the Organization or Community

#### *Description of Organization/Community*

BeeHive Homes in Mount Horeb is an assisted living specializing in caring for individuals living with memory conditions. In the United States, there are over 200 BeeHive Homes.<sup>1</sup> The first home was founded and built in 1987 in Idaho.<sup>1</sup> There are five BeeHive homes in MN and three in WI.<sup>2</sup> Construction for the BeeHive Homes in Mount Horeb started in the late fall of 2017 and opened officially on October 2<sup>nd</sup>, 2018 (their first resident moved in on this date). The house was just occupied by her and a team member until more residents started moving in (U. Miller, personal communication, June 6<sup>th</sup>, 2022).” The BeeHive in Mount Horeb was previously owned by Uriah Miller, and currently co-owned by Amber and Adam Gates. This home accepts private pay for services. Currently, there is no board of directors for this specific BeeHive (U. Miller, personal communications, June 14<sup>th</sup>, 2022; A. Gates, personal communication, April 11<sup>th</sup>, 2023).

Mission and core values are in a document created by Uriah Miller (previous owner), printed, framed, and hung up in the entrance of BeeHive (U. Miller, personal communication, June 14<sup>th</sup>, 2022). The mission of this home is, “the mission of BeeHive Homes is to respectfully provide assistance with daily living activities to those elderly who choose to maintain their independence, dignity, and activity level in a caring home-like environment.” The core values previously written by Uriah Miller are, “respect (treat each resident with the highest respect at all times, BeeHive Homes is their home), happiness (we are in the business of creating smiles), service (when you serve with love, you will love to serve), time (your greatest gift is often your time), and gratitude (count your many blessings).” The population that this site serves is older adults with memory care conditions. Not only are the residents living in the home stakeholders, but the employees, resident’s families, as well as community members. The primary stakeholders are the older adults/residents with memory care conditions living at BeeHive and

employees. The secondary stakeholders are caregivers/family and community (U. Miller, personal communication, June 14<sup>th</sup>, 2022; A. Gates, personal communication, April 11<sup>th</sup>, 2023).

There is not a strategic plan listed on the Mount Horeb BeeHive Home's website; however, there are goals of both previous owner Uriah and current owners, Amber and Adam Gates. Per the previous owner of BeeHive Homes, Uriah Miller, his goals were to stabilize the first home (because the Mount Horeb BeeHive was still a new business), have the right people working in the home, and have a strong training program in place for new team members. He worked hard to get various processes more clearly defined so that in the future, he will be able to open the 2<sup>nd</sup> and 3<sup>rd</sup> (now currently a goal of Adam and Amber Gates – current owners). Currently Adam and Amber state much of their goal is to focus on stabilizing the current first home and refining policies and training that are in place. Overall, Adam and Amber want to take good care of residents and their families, and also serve the community (U. Miller, personal communication, June 6<sup>th</sup>, 2022; A. Gates, personal communication, April 11<sup>th</sup>, 2023).

According to previous owner, Uriah Miller, there are some specific program goals that are listed on a document given to resident's families/POA to sign and acknowledge prior to moving in. These goals are, "the residents of BeeHive Homes will experience a comfortable home-like atmosphere", "the residents of BeeHive Homes will maintain a level of independent functioning consistent with their abilities", and "the residents of BeeHive Homes will be assisted in maintaining a meaningful level of community participation."

### ***Priority/Need/Issue***

Primary Goal: Develop strengthened transfer training to include additional detail regarding lift safety and proper body ergonomics, educate team members on role in fall prevention and management of dementia-related behaviors, and educate the BeeHive team on how to advocate for independence and high quality of life of each resident.

Strategy: A binder will be created containing handouts/flowsheets about information such as OT role, types of dementia, management of dementia-related behaviors, fall

prevention, safe body ergonomics with transfers, and correct use of lift equipment for transfers. Binder is planned to be an aspect of training for new team members and for the current team to refer back to if questions arise. All handouts and flowsheets will be accessible and easy to read/understand. An online version of the binder will be available for team members and families if they are interested. I am planning to create videos that the team can watch to show proper body mechanics and the use of lifts for complex transfers. These videos would be available to team members to watch whenever a refresher is needed. I plan to present at monthly BeeHive team meetings and be available to team members throughout time at BeeHive for any questions relating to falls, management of behaviors, and transfers, as well as anything else within my OT scope of practice.

Other goals identified following conversation with Amber Gates are high team member turnover and eventually enacting home 2 in Mount Horeb. Some turnover may be due to a lack in detailed training or increased burnout due to the challenging population, which I can address when completing my Capstone Experience. When home 2 is built, my education will be used in more than one building, assisting more individuals.

### References

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## Part 2: Preliminary Information and Resources for Learning about a Priority/Need/Issue

### *Internal Information and Resources*

<b>Name of Information or Resource</b>	<b>Description of Information or Resource</b>	<b>Brief Summary of Key Learning</b>
BeeHive Website <a href="#">Link to Resource</a>	Website with information regarding all BeeHive Homes in the country.	This website provides information regarding pricing for residents, activities offered, dining options, and types of care offered/available in the home. There are links to specific BeeHive pages throughout the country, for example, I can search for the Mount Horeb Location and see specifics of that location.
BeeHive Homes of Mount Horeb specific information.	Resources provided to family members of residents living at BeeHive in Mount Horeb.	Per conversation with Amber, will have access to all BeeHive documents upon arrival for Capstone Experience. She is unsure what documents are available online at the moment as she is a new owner. As she finds BeeHive documents/policies specific to the site (such as transfer training, documentation policies, ect.), she will keep me posted. I have a rough idea as I used to be employed here, however with the change in owner, there have been some moving pieces.

### *External Information and Resources*

<b>Name of Information or Resource</b>	<b>Description of Information or Resource</b>	<b>Brief Summary of Key Learning</b>
STEADI: Empowering Healthcare Providers to Reduce Fall Risk <a href="#">Link to Resource</a>	Professional presentation offered through governmental website (CDC). Can obtain CEU credits for watching presentations!	Fall prevention initiative with specific assessments listed and described that can help assess an individual's risk for falls. Causes of falls provided throughout the presentation as well.
Coping with Dementia Behavior Changes <a href="#">Link to Resource</a>	Webpage within a reputable organization.	This resource mentions common behavioral changes that can occur in people living with dementia (aggression, decrease in self-confidence, following/wandering, disruption of sleep, repetition of questions/activities to name a few) and ways in which these behaviors can be managed in the best way possible for caregiver and individual (increase patience, implementing routine, engaging individuals in meaningful activities, ect.). This source mentions underlying

		reasons as to why some behaviors manifest as well as additional links at the end to further enhance one's knowledge in the area of dementia-related behaviors.
Effective Communication Strategies <a href="#">Link to Resource</a>	Online training module offered through the Alzheimer's Association (handout from presentation available).	There are stages of dementia in which individuals go through, and this resource specifically lays out best ways to communicate with individuals in each stage. Someone who is in the early stage (milder) may still be able to convey needs to caregivers and engage in conversation. An individual who is in the middle stage (more moderate) may communicate more with simple words and sentences and rely on gestures/facial expressions. In the late stage (most severe), body language and the senses are the best ways to communicate. More detailed strategies provided with how to communicate with individuals depending on their stage provided.

*Gaps in Learning:*

- Level of education regarding dementia/fall prevention techniques team member working at BeeHive have prior to beginning job
- Team member demographic data and previous experiences
- Resident demographic data and previous level of functioning
- Length of orientation time new team members receive prior to being on their own
- Policies currently in place at Mount Horeb BeeHive/trainings provided to team members
- Learning styles/preferences of team members currently working at BeeHive
- Education levels of the team working at BeeHive

**Part 3: Informational Interviews**

*Summary of Interview Guide*

1. Have team members expressed challenges managing dementia-related behaviors, completing transfers safely, and preventing falls? If so, can you describe the situation? Who was involved? How was the situation handled/resolved? Did any team members receive additional training if necessary?
2. How do you feel the BeeHive team is currently trained in fall prevention?

3. What are your thoughts regarding improving fall prevention safety?
4. When do falls most often occur?
5. What is the policy for reporting and documenting falls?
6. How do you feel the current transfer training is and what aspects, if any, additional detail could be included?
7. What are some of the most common dementia-related behaviors shown by residents at BeeHive?
8. Are there certain times of day in which behaviors are seen more frequently?
9. How are learning moments handled at the BeeHive, for example if you see team members interacting with a resident in a way that is not best practice, what actions are taken? Has the team been receptive to feedback?
10. Have you found there is a particular way in which the BeeHive team learns best?
11. Any questions, comments or concerns for me?

***Name, Title/Role, and Summary of Interview One***

- Amber Gates, Primary site mentor at BeeHive Homes of Mount Horeb as well as owner and team support

***Name, Title/Role, and Summary of Interview Two***

- Adam Gates, administrator, LPN and owner of BeeHive Homes in Mount Horeb

***Name, Title/Role, and Summary of Interview Three***

- Sarah D, Manager of BeeHive Homes in Mount Horeb

Due to similarities in answers, I will lump responses for the interview questions. Adam, Amber, and Sarah preferred to complete the interview as a group rather than individually. All individuals provided feedback to each question. Total time to complete the interview was about 25-30 minutes.

There have been a few situations recently in which team members have been challenged. There was a recent situation in which team members safely lowered a resident to the ground and called EMS to assist the resident up and back to bed safely. Amber states this safe lowering to ground would not have been possible if the resident had not been wearing a gait belt. Adam, Sarah, and Amber all in agreement that team members and residents may need further education on why gait belts are used and want ideas on how to teach residents that the use of a transfer belt is for their safety. At times, team members have expressed frustration dealing with resident's behaviors – need for further education on redirection techniques to assist with management of these dementia-related behaviors.

Some team members are more comfortable and confident with preventing falls (individuals working in the environment for longer periods). There are certainly areas to which further education can be provided for all team members with mitigating falls by education on redirection techniques for managing behaviors and other things. Per Sarah, the transfer training has not changed since I started working at BeeHive. An agreement between all individuals that added detail to transfer training protocols would be beneficial, additional information added on more complex transfers and safe body positioning. Huge emphasis on use of transfer belt, in which Amber, Adam, and Sarah all state knowing would help to decrease falls as well.

Increasing awareness of the importance of utilizing gait belts with all residents, educating residents on importance as some residents are stating there is no need to use one. Educating team members further on redirection strategies to manage behaviors stated by interviewees may be helpful. Adam states that evenings and overnight due to residents being tired from the day. Falls can occur at any time of the day, and it is random each day when a fall does occur. Amber and Sarah in agreement with Adam and also state falls can occur on inconsistent basis and sometimes hard to prevent. Team members are required to log falls online in an incident reporting document. From there, Adam and Sarah are notified and review the report. Immediate follow-up with the residents and the BeeHive team involved was provided



to talk over the situation and provide feedback if needed. Physicians and residents' families are also called to be updated with the fall report. Further education on using gait belts for all transfers and when residents are ambulatory was mentioned by all interviewees as being important. Transfer training has not been updated in a while, so it would not hurt to look through and add details.

Some common dementia-related behaviors experienced by residents at BeeHive are restlessness, high levels of anxiety, some aggression/yelling. Amber states several residents will attempt standing on their own due to forgetting they are unable. Adam and Sarah state that often a resident will push their pendant and then when team members arrive in the room, the resident has forgotten WHY they had pushed for assistance. Some wandering of a few residents noted, particularly one resident who has been wandering into other individuals' rooms and taking items. When residents are overstimulated, all interviewees mention an increase in frustration and yelling behaviors in residents. Behaviors are seen randomly throughout the day, hard to predict when the behaviors will be seen. Some increase in behaviors around 2pm (this is at shift change). Sarah believes team member changes may be stressful and anxiety provoking for some residents. Adam and Amber state they have not seen an increase of falls occurring pre/post meals since they have taken over ownership of BeeHive.

If further team member education is needed, immediate action is taken. BeeHive team members are taken to a quiet/private environment to talk over situations and provide feedback. Sometimes a meeting between Adam/Amber/Sarah had before feedback is provided to team members. When asked how team members learn best, all 3 individuals immediately responded with "hands on learning". When asked if there were any remaining questions for me, all individuals questioned when I start on site, May 1<sup>st</sup> start date provided. Plan to set up a more specific schedule with Sarah as to when I will be physically at BeeHive within the first week of the Capstone Experience.

*\*\*\*Interviews were conducted via Google Meet on 4/18, took 25-30 mins for all 3 interviews to be conducted. Permission to use full names obtained. Notes were taken throughout interviews – group interview\*\*\**

#### **Part 4: Public Records and Organizational/Community Resources**

##### ***Name, Description, and Summary of Record or Resource One***

- Internal – Communication with Amber Gates (Co-owner of BeeHive)
  - Through email and virtual meeting conversations with Amber Gates, my primary site mentor, at BeeHive Homes in Mount Horeb, I have gathered an abundance of information. It was mentioned to me that team member turnover and retainment is an ongoing issue. I am assuming with this in mind, it is difficult to provide incoming team members with extensive education regarding fall prevention, management of behaviors, and proper transfers. Amber states some major needs for this site are education provided to the team regarding their role in fall prevention, management of dementia-related behaviors, and improvement upon current transfer training. Amber has a background in education and states her willingness to mentor me with that aspect along with others throughout this process. I plan to communicate with Amber via email to ask if there are documents available stating the number of falls occurring, location of falls, and time of falls to further allow me to gather data on this topic area.

##### ***Name, Description, and Summary of Record or Resource Two***

- External – STEADI: Empowering Healthcare Providers to Reduce Fall Risk
  - This presentation educated about the burden of falls in the U.S, explained what the STEADI initiative is, showed how to use fall screening tools, what to look for when identifying risk factors of falls, strategies to help reduce falls, and how to discuss within a team on how each profession can work together to reduce falls. I learned from this activity that an individual's risk of falls can be assessed by

using the timed up and Go (TUG) test, 30-second chair stand test, and the 4-stage balance test. Medications, chronic conditions, and visual impairments and their impact on falls were also discussed in this presentation. Within this module of learning, there are handouts that describe the STEADI initiative, which I find beneficial. This information was found within the government CDC website.

Through the CDC website, there is an abundance of public information available. The CDC states prevalence of dementia and the impact the disease has on fall rates. Along with facts relating to my capstone project, there are links located within the CDC websites that provide further detailed information and credible research to help identify significance of my capstone project.

<https://www.cdc.gov/falls/index.html> (this link takes specifically to CDC webpage: older adults fall prevention; within this link you can find the specific STEADI initiative for healthcare workers)

\*\*Healthy People 2030 also provides beneficial information on fall prevention programs as well (public information). <https://health.gov/healthypeople/objectives-and-data/browse-objectives/older-adults> (this link provides further evidence-based resources relating to older adults, dementia, and fall prevention). The National Council on Aging also has some great resources within its website (all publicly available information as well <https://ncoa.org/older-adults/health/prevention/falls-prevention>.)

## **Part 5: Organization or Community Assets**

### ***Name, Description, and Summary of Asset***

Sarah D

- Sarah originally started working at BeeHive in Mount Horeb in 2018 as a personal care assistant working NOC shift. She brings a kind, calm demeanor to the home and always puts residents' care and safety first. After spending several years working the NOC shift, she has now transitioned into the House Manager (House Team Lead). Some main duties that Sarah completes as part of her role as manager are to pick up open shifts to ensure the floor is not short, scheduling, interviews, and training in new team members to name a few. Sarah is at BeeHive Monday-Friday, and occasional weekends if there are open shifts. She will be an important asset to my project as has worked at BeeHive throughout the change in ownership. Additionally, she has increased knowledge of the site as a whole. As part of my project will be making edits to the current transfer training, Sarah will be great to collaborate with as she is the person providing this training to incoming team members.

### ***Name, Description, and Summary of Asset***

Adam Gates

- Adam is the spouse of Amber Gates (primary site mentor) and services as house administrator, co-owner, and is an LPN. From what I have heard, Adam brings a smile into work each day and has brought great outside perspective into the home as a new owner. Along with bringing in a positive attitude, I have been told his sense of humor brings smiles to the faces of several residents. Adam is at BeeHive Monday-Friday each week. With Adam's previous healthcare experience as an LPN, it will be great to obtain his perspective of my capstone topics from a different healthcare profession's lens. Through conversations I have had with Adam thus far, I am comfortable going to him with any questions or concerns I may have.

**Part 6: Proposed Methods to Collect Other Information During the Doctoral Capstone Experiences and Project**

*Internal Information and Resources*

<b>Name of Information or Resource</b>	<b>Description of Information or Resource</b>	<b>Brief Summary of Focus of Learning</b>
Amber Gates	Virtual meetings with Amber to communicate with one another.	Per discussions with Amber, needs of the Mount Horeb BeeHive are improving upon current transfer training, educating team members on management of dementia-related behaviors, and providing education to the team on managing falls.
Team members working at BeeHive	Interviews/ surveys with team members.	I anticipate that engaging team members in interviews/conversations will enable me to further address identified areas of need at BeeHive. Will obtain internal information from this resource once I am on site.
BeeHive Team Member Meetings	Administrators, managers, and BeeHive team members all together to engage in conversation regarding set agenda.	I anticipate being involved in monthly team member meetings throughout my Capstone Experience to allow anyone at the meeting to ask me questions related to my capstone topics or ask any questions relating to OT scope/role. Participating in monthly meetings will allow me to gain insight as to team communication and culture too.
BeeHive Transfer Training Document	Current training documents used to train incoming BeeHive team on safe transfers and use of mechanical lifts.	I anticipate building off of current transfer training documents and lift training that is being used at BeeHive. I plan to add details where needed in the training documents to ensure incoming BeeHive team members have a strong education in this area.

*External Information and Resources*

<b>Name of Information or Resource</b>	<b>Description of Information or Resource</b>	<b>Brief Summary of Focus of Learning</b>
Patient Transfers and Body Mechanics <a href="#">Link to Resource</a>	PDF created by Cross Country University	Mentions important aspects that need to be talked about to ensure team members are comfortable with completing transfers with patients. PDF mentions safe ergonomics for both the patient and the BeeHive team, use of transfer belt, and other beneficial tips for common transfers (STS, SPT, ect.).
Designing Surveys <a href="#">Link to Resource</a>	CDC - Governmental Website	Lays out the multiple ways surveys can be distributed/completed and the pros and cons of each type. Links to how to analyze results, design the surveys, and administer surveys within this webpage – will be quite beneficial.
Design for Readability <a href="#">Link to Resource</a>	Harvard University Webpage	Explains techniques on how to format and what to do/not do to allow presentations/handouts/training modules accessible and easily readable for all.

**Part 7: SWOT Analysis: Strengths, Weaknesses, Opportunities, and Threats**

<b>Internal</b>		<b>External</b>	
<b>Strengths</b>	<b>Weaknesses</b>	<b>Opportunities</b>	<b>Threats</b>
Previous experience working as PCA at site.	Team member confidence with fall prevention.	State funding for assisted livings is possible to obtain.	Several other assisted living homes in Mount Horeb.
Focus on ensuring BeeHive has a home feel rather than facility/medical.	Several interruptions in the office with team member questions/residents entering.	The community has a strong network of activities and volunteers.	Not much diversity in demographics between residents living at BeeHive.
Office available for use at BeeHive.	High team turnover/low team retainment.	Diverse demographic of team members working at BeeHive.	Worker shortage, leading to increased burnout amongst healthcare team members.
Monthly full-team meetings.	No board of directors for the Mount Horeb BeeHive.	Due to an aging population, there is a high need for available rooms in assisted living/memory care facilities.	As BeeHive is located in a small town, this makes the applicant pool smaller than most places – it is difficult

Internal		External	
Strengths	Weaknesses	Opportunities	Threats
			to recruit team members.
Frequent activities offered for residents/BeeHive team.	Change in ownership causes some change in policies and team members/residents may have a difficult time with transition.	Grants available through WI government for facility expenses.	Not all people needing memory care assisted living can afford to pay out of pocket for services (BeeHive in Mount Horeb only accepts private pay).
BeeHive Homes is easy to find as it is on a main road in town, signs clearly marked.			
Plans to expand services to the second building in Mount Horeb.			
Extensive volunteer and community involvement.			

### Part 8: Preliminary Evidence Review on Populations, Interventions, and Programs of the Organization/Community

1	Overview of Article
<b>Type of article</b>	<b>Overall Type:</b> Review of Research Study <b>Specific Type:</b> Systematic Review
<b>APA Reference</b>	Gitlin, L. N., Kales, H. C., & Lyketsos, C. G. (2012). Managing behavioral symptoms in dementia using nonpharmacologic approaches: An overview. <i>The Journal of the American Medical Association</i> , 308(19), 2020–2029. <a href="https://doi.org/10.1001/jama.2012.36918">https://doi.org/10.1001/jama.2012.36918</a>
<b>Abstract</b>	“Behavioral symptoms such as repetitive statements and questions, wandering, and sleep disturbances are a core clinical feature of Alzheimer disease and related dementias, affecting patients and their families. These behaviors have devastating effects. If untreated, they can contribute to more rapid disease progression, earlier nursing home placement, worse quality of life, accelerated functional decline, greater caregiver distress, and higher health care utilization and costs. Patients with dementia are typically not screened for behavioral symptoms in primary care and even when clinically reported, tend to receive ineffective, inappropriate, and fragmented care. Yet, clinicians are often called upon to address behaviors that place the patient or others at risk or which families encounter as problematic. It is important to include on-going systematic screening for behavioral symptoms to facilitate prevention and early treatment as part of standard comprehensive dementia care. When identified, behaviors should be characterized and underlying causes sought in order to derive a treatment plan. Because

	<p>available pharmacologic treatments used to treat behaviors have modest efficacy at best, are associated with notable risks, and do not address behaviors most distressing for families, nonpharmacologic options are recommended as first-line treatments or if necessary, in parallel with pharmacologic or other treatment options. Nonpharmacologic treatments may include a general approach (caregiver education and training in problem solving, communication and task simplification skills, patient exercise, and/or activity programs), or a targeted approach in which precipitating conditions of a specific behavior are identified and modified (eg, implementing nighttime routines to address sleep disturbances). Using the case of Mr A, we characterize common behavioral symptoms of dementia and describe an assessment strategy for selecting evidence-based nonpharmacologic treatments. We highlight the clinician's important role in facilitating collaboration with specialists and other health care professionals to implement nonpharmacological treatment plans. Substantial evidence shows that nonpharmacologic approaches can yield high levels of patient and caregiver satisfaction, quality of life improvements, and reductions in behavioral symptoms. Although access to nonpharmacologic approaches is currently limited, they should be part of standard dementia care.” (p. 1)</p>
<p><b>Author</b></p>	<p><b>Credentials:</b> PhD</p> <p><b>Position and Institution:</b> Professor, Department of Community and Public Health, School of Nursing, Joint appointments in Department of Psychiatry and Division of Geriatrics and Gerontology, School of Medicine, Director, Center for Innovative Care in Aging, Johns Hopkins University.</p> <p><b>Publication History in Peer-Reviewed Journals:</b> Extensive</p>
<p><b>Publication</b></p>	<p><b>Type of publication:</b> Peer-reviewed Journal</p> <p><b>Publisher:</b> National Institute of Health</p>
<p><b>Date and Citation History</b></p>	<p><b>Date of publication:</b> November 21, 2012</p> <p><b>Cited By:</b> 411</p>
<p><b>Stated Purpose or Research Question</b></p>	<p>“We present a framework for integrating evidence-based nonpharmacologic treatments in dementia care involving 6 interrelated steps: routine screening for prevention or early detection of behaviors, describing presenting behaviors, identifying underlying causes, developing nonpharmacologic treatment plans, evaluating if nonpharmacologic recommendations are effective, and conducting on-going monitoring of behaviors and nonpharmacologic strategy use (Figure 1). This framework offers primary care doctors a way to effectively integrate nonpharmacologic approaches into their daily practice” (p. 3).</p>
<p><b>Author’s Conclusion</b></p>	<p>“There is strong evidence for both generalized and targeted nonpharmacologic treatments. Essential to a nonpharmacological approach is educating caregivers in ways to effectively prevent and manage behavioral symptoms. As nonpharmacologic approaches yield high levels of patient and caregiver satisfaction, quality of life improvements and reduced behavioral symptoms with minimal risk and adverse reactions, they should be part of standard dementia care ”(p. 12).</p>



<b>Overall Relevance to your Doctoral Capstone Project</b>	<b>Overall Relevance of Article:</b> Good <b>Rationale:</b> As a part of my Capstone project, I will be educating staff on ways to manage dementia-related behaviors. This article does a great job describing those behaviors in a case study and then describing techniques to manage the behaviors without use of medications.
<b>Overall Quality of Article</b>	<b>Overall Quality of Article:</b> Good <b>Rationale:</b> Credible author as well as publisher and journal. References listed at end of article are beneficial for further research relating to my capstone topic.
<b>Your Focused Question and Clinical Bottom Line</b>	<b>Question:</b> What are some behaviors commonly shown by individuals living with Alzheimer's/dementia and can these be managed non pharmacologically? <b>Clinical Bottom Line:</b> There are several ways in which caregivers can help to manage (without the use of medications) the following dementia-related behaviors: disturbances with sleep, wandering, resistance to assistance with cares, increased agitation, frustration, and forgetfulness.
<b>Your Lay Summary</b>	This article talked about how people can help someone who has problems with memory without medicine (pills). There are some things that people do when they have memory problems. These are called behaviors and include people forgetting things, becoming mad or frustrated, not sleeping well, and more. It is not always easy to know how to help someone. This article gives ways to help another person as best possible. Giving someone medicine is not the only way to help them with their memory problems. With more information given to people, more individuals who have memory problems will be helped every day.
<b>Your Professional Summary</b>	This peer-reviewed, systematic review article aims to address interventions and techniques to manage dementia-related behaviors non-pharmaceutically. A case study describing an individual experiencing various symptoms related to dementia was utilized for this study. A challenging aspect that was brought up in the challenges section of this article is the fact that certain behaviors such as wandering or agitation are more easily treated without use of medications, but other behaviors such as hallucinations are more easily treated with medications. Not all behaviors can be treated and managed with non-pharmaceutical intervention alone, however with proper education and training, staff and caregivers of individuals living with dementia/Alzheimer's will have a more developed toolbox of ways in which they can manage behaviors. Education of caregivers is an effective way to ensure individuals dementia-related behaviors are managed in the best manner possible. Throughout the article, the role of the individual, their caregivers, and medical professionals was explained with the management of various behaviors.
2	<b>Overview of Article</b>
<b>Type of article</b>	<b>Overall Type:</b> Review of Research Study <b>Specific Type:</b> Systematic review of reviews

<b>APA Reference</b>	Booth, V., Logan, P., Harwood, R., & Hood, V. (2015). Falls prevention interventions in older adults with cognitive impairment: A systematic review of reviews. <i>International Journal of Therapy &amp; Rehabilitation</i> , 22(6), 289–296. <a href="https://doi.org/10.12968/ijtr.2015.22.6.289">https://doi.org/10.12968/ijtr.2015.22.6.289</a>
<b>Abstract</b>	<p>“<b>Aim:</b> This critical review explores the review material on falls prevention interventions in older adults with a cognitive impairment such as dementia. <b>Method:</b> A critical, systematic, review of review method was used. Five large electronic databases, MEDLINE, EMBASE, AMED, CINAHL, and the Cochrane electronic library, were searched. The search terms ‘falls’, ‘rehabilitation’, ‘falls prevention’, ‘interventions’, ‘cognitive impairment’, ‘dementia’, and ‘Alzheimer’s disease’, were used. All available reviews were marked against predetermined inclusion and exclusion criteria. <b>Results:</b> There were seven reviews which met the inclusion criteria. Only one of the included reviews had a homogenous population of adults with a cognitive impairment. Exercise was the most commonly reported intervention, included in 91 studies and all seven reviews. Multifactorial and multicomponent falls prevention programmes were also frequently reported. Reports of efficacy were inconsistent for all interventions. <b>Conclusion:</b> Evidence for falls prevention interventions for adults with cognitive impairment is varied and inconclusive. When compared to literature for falls interventions in healthy older adults, both primary and synthesis studies in older adults with cognitive impairment are lacking in quality, number and homogeneity of sample population and interventions. Promising results are emerging but clinical recommendations cannot be made at this time.” (p. 2)</p>
<b>Author</b>	<p><b>Credentials:</b> NA (Miss Vicky Booth)  <b>Position and Institution:</b> Division of Rehabilitation and Aging at the University of Nottingham (School of Medicine)  <b>Publication History in Peer-Reviewed Journals:</b> Moderate</p>
<b>Publication</b>	<p><b>Type of publication:</b> Scholarly Peer-reviewed Journal  <b>Publisher:</b> Unable to obtain information</p>
<b>Date and Citation History</b>	<p><b>Date of publication:</b> June 4, 2015  <b>Cited By:</b> 44</p>
<b>Stated Purpose or Research Question</b>	<p>“Therefore, the research question for this review was developed and asks ‘what are the findings of the reviews on falls prevention interventions for older adults with a cognitive impairment?’” (p. 3)</p>
<b>Author’s Conclusion</b>	<p>“Promising results are emerging but are hampered by heterogeneous sample populations and settings. At this time clinical recommendations cannot be made, but this is a developing evidence base and clear reporting of quantitative findings of falls and cognitive ability of the sample will encourage clearer synthesis.” (p. 16)</p>
<b>Overall Relevance to your Doctoral</b>	<p><b>Overall Relevance of Article:</b> Good  <b>Rationale:</b> As part of my capstone project, I will be educating staff working at BeeHive on techniques to utilize to help prevent falls for</p>

<b>Capstone Project</b>	individuals living with dementia. This article has fantastic figures/charts and other details on ways to reduce falls in this specific population.
<b>Overall Quality of Article</b>	<b>Overall Quality of Article:</b> Moderate <b>Rationale:</b> Although authors credentials are not listed and I was unable to obtain publisher information, article relates to capstone project while referencing other credible resources.
<b>Your Focused Question and Clinical Bottom Line</b>	<b>Question:</b> What are some fall prevention interventions that can be utilized with individuals living with a cognitive impairment? <b>Clinical Bottom Line:</b> Some interventions proven to reduce falls with above population are use of medication, health and home assessments, use of assistive technology (hearing aids/glasses), flooring, and education to name a few.
<b>Your Lay Summary</b>	This article talks about how often people who have memory problems fall. There are ways to help lower the number of falls. At the beginning of this paper, the writers help explain what some memory problems are and why they can sometimes make people fall more often. The people who wrote this article read other articles on falls and people living with memory problems. From reading other articles, there were some similar things found. Several things can be done to help lower the number of falls that can happen to people who have a memory problem. There are many things we can do to help.
<b>Your Professional Summary</b>	A critical review of reviews was completed to further address possible fall prevention interventions that can be utilized with older adults who are currently living with dementia or other cognitive impairments. Seven different reviews were analyzed for the purpose of this article. Some reviews had larger sample sizes than others, as well as various findings in each review. Overall, interventions specifically created for an individual have shown most effectiveness with fall reduction. It was also shown that with detailed education provided to staff working in long-term care, that falls reduced significantly. Another commonality of effective interventions was engaging individuals with cognitive impairments in regular exercise to reduce falls. A limitation is that when hearing the word “cognitive impairment” each author may interpret that differently.
<b>3</b>	<b>Overview of Article</b>
<b>Type of article</b>	<b>Overall Type:</b> Primary Research Study <b>Specific Type:</b> Pilot Study
<b>APA Reference</b>	Leverenz, M., & Lape, J. (2018). Education on fall prevention to improve self-efficacy of nursing staff in long term care: A pilot study. <i>Internet Journal of Allied Health Sciences and Practice</i> , 16(3), 1-9. <a href="https://doi.org/10.46743/1540-580X/2018.1744">https://doi.org/10.46743/1540-580X/2018.1744</a>
<b>Abstract</b>	<b>“Purpose:</b> Fall prevention is an ongoing concern in long-term care. Self-efficacy of nursing staff affects their performance levels related to fall prevention. Research concerning falls in the elderly is plentiful but there are no published studies addressing self-efficacy of nursing staff for implementation of fall prevention strategies in long-term care. The authors hypothesize that fall prevention education by an occupational

	<p>therapist would be effective to improve the self-efficacy of nursing staff for implementation of fall prevention strategies and self-efficacy to prevent resident falls. <b>Method:</b> A pre-test post-test pilot study implementing a five-week, multifaceted, fall prevention education course was conducted by an occupational therapist. The SEPF-A and SEPF-N were administered to the nursing staff respective of their professional licensure to assess falls self-efficacy before and after the course. <b>Results:</b> Eight participants (6 certified nursing assistants &amp; 2 nurses) completed the course. A statistically significant improvement (<math>p = .043</math>, <math>\alpha = .05</math>) in falls self-efficacy was noted for the nursing assistants. Following training, there was a 40% increase in the SEPF-A and a 67% increase in the SEPF-N indicating an improvement in self-efficacy related to falls. <b>Conclusion:</b> Fall prevention training by a licensed expert may be an effective approach to increase self-efficacy of nursing staff for implementation of fall prevention strategies and for prevention of resident falls in long-term care.” (p. 2)</p>
<b>Author</b>	<p><b>Credentials:</b> OTD, OTR/L</p> <p><b>Position and Institution:</b> Director of Rehabilitation Services at Friendship Manor in Rock Island, IL (he is also an Adjunct Professor of Occupational Therapy at Chatham University in Pittsburgh, PA)</p> <p><b>Publication History in Peer-Reviewed Journals:</b> Limited</p>
<b>Publication</b>	<p><b>Type of publication:</b> Scholarly Peer-reviewed Journal</p> <p><b>Publisher:</b> BioMed Central</p>
<b>Date and Citation History</b>	<p><b>Date of publication:</b> 2018</p> <p><b>Cited By:</b> 10</p>
<b>Stated Purpose or Research Question</b>	<p>“No known study to-date has focused on improving self-efficacy of nursing staff through education by a fall prevention expert in the long-term care setting; therefore, the purpose of this pilot study was to apply literature on multifaceted fall prevention strategies guided by an occupational therapy frame of reference, to the design and implementation a multifaceted fall prevention educational program for a sample of nursing staff in one long-term care facility to determine the impact on the staff’s self-efficacy.” (p. 4)</p>
<b>Author’s Conclusion</b>	<p>“Self-efficacy is important to measure because it has influence on desirable behaviors. Outcomes of this study suggest that training by a credible expert for long-term care nursing staff can improve their self-efficacy to implement fall prevention strategies. Further research is needed to determine if improved self-efficacy of nursing staff related to fall prevention ultimately leads to a reduction in resident falls.” (p. 11)</p>
<b>Overall Relevance to your Doctoral Capstone Project</b>	<p><b>Overall Relevance of Article:</b> Good</p> <p><b>Rationale:</b> This article’s purpose is to develop fall prevention strategies and educate those working in long-term care on utilizing education to reduce falls. This directly correlates with what I will be doing for my capstone project.</p>

<b>Overall Quality of Article</b>	<b>Overall Quality of Article:</b> Moderate <b>Rationale:</b> While authors are in OT field, primary author only has one published article. As this is a pilot study, further research is needed (however, great start).
<b>Your Focused Question and Clinical Bottom Line</b>	<b>Question:</b> Is fall prevention education provided to long-term care staff by an OT effective? <b>Clinical Bottom Line:</b> Yes, education on fall prevention provided by professional OT has been shown to increase staff knowledge in fall prevention and self-efficacy for staff implementing fall prevention interventions.
<b>Your Lay Summary</b>	This article talks about an occupational therapist teaching people who work in healthcare about what they can do to help decrease falls.
<b>Your Professional Summary</b>	The purpose of this pilot study was to determine whether fall prevention education provided to staff working in long-term care settings was effective when taught by an occupational therapist. There were eight participants in this study. Following the study and education provided, it was seen that nursing assistants reported higher self-efficacy following the fall prevention training. The types of interventions that staff were trained in were surrounding assistive device usage, mobility, utilizing therapeutic use of self, and assessing visual considerations. Limitations to this study were small sample size/number of individuals participating in the education training and all participants were females. Something to consider is staff learning preferences when providing education and training to ensure teaching information in best way for participants.
<b>4</b>	<b>Overview of Article</b>
<b>Type of article</b>	<b>Overall Type:</b> Primary Research Study <b>Specific Type:</b> Qualitative, quantitative and mixed/multi-methods studies
<b>APA Reference</b>	Surr, C. A., & Gates, C. (2017). What works in delivering dementia education or training to hospital staff? A critical synthesis of the evidence. <i>International Journal of Nursing Studies</i> , 75, 172–188. <a href="https://doi.org/10.1016/j.ijnurstu.2017.08.002">https://doi.org/10.1016/j.ijnurstu.2017.08.002</a>
<b>Abstract</b>	<b>“Background:</b> The quality of care delivered to people with dementia in hospital settings is of international concern. People with dementia occupy up to one quarter of acute hospital beds, however, staff working in hospitals report lack of knowledge and skills in caring for this group. There is limited evidence about the most effective approaches to training hospital staff on dementia. <b>Objective:</b> The purpose of this literature review was to examine published evidence on the most effective approaches to dementia training and education for hospital staff. <b>Design and review methods:</b> The review was conducted using critical synthesis and included qualitative, quantitative and mixed/multi-methods studies. Kirkpatrick’s four level model for the evaluation of training interventions was adopted to structure the review. <b>Data sources:</b> The following databases were searched: MEDLINE, PsycINFO, CINAHL, AMED, British Education Index, Education Abstracts, ERIC (EbscoHost), The Cochrane Library-Cochrane reviews, Economic evaluations, CENTRAL (Wiley), HMIC (Ovid), ASSIA, IBSS (Proquest), Conference Proceedings Citation

	<p>Indexes (Web of Science), using a combination of keyword for the following themes: Dementia/Alzheimer's, training/education, staff knowledge and patient outcomes. <b>Results:</b> A total of 20 papers were included in the review, the majority of which were low or medium quality, impacting on generalisability. The 16 different training programmes evaluated in the studies varied in terms of duration and mode of delivery, although most employed face-to-face didactic techniques. Studies predominantly reported on reactions to training and knowledge, only one study evaluated outcomes across all of the levels of the Kirkpatrick model. Key features 2 training that appeared to be more acceptable and effective were identified related to training content, delivery methods, practicalities, duration and support for implementation. <b>Conclusions:</b> The review methodology enabled inclusion of a broad range of studies and permitted common features of successful programmes to be identified. Such features may be used in the design of future dementia training programmes, to increase their potential for effectiveness. Further research on the features of effective dementia training for hospital staff is required." (p. 1)</p>
<b>Author</b>	<p><b>Credentials:</b> NA (Claire Surr)  <b>Position and Institution:</b> Professor of Dementia Studies, Leeds Beckett University  <b>Publication History in Peer-Reviewed Journals:</b> Moderate</p>
<b>Publication</b>	<p><b>Type of publication:</b> Scholarly Peer-reviewed  <b>Publisher:</b> Leeds Beckett Repository</p>
<b>Date and Citation History</b>	<p><b>Date of publication:</b> August 4<sup>th</sup>, 2017  <b>Cited By:</b> 81</p>
<b>Stated Purpose or Research Question</b>	<p>"The aims of this review were to identify the factors associated with effective dementia education and training for staff working in hospital settings." (p. 6)</p>
<b>Author's Conclusion</b>	<p>"This review has demonstrated that specific features of dementia training that may be associated with greater pedagogical, practice or clinical effectiveness can be identified from the evidence base and suggestions for the design of future training programmes for hospital staff made." (p. 40)</p>
<b>Overall Relevance to your Doctoral Capstone Project</b>	<p><b>Overall Relevance of Article:</b> Good  <b>Rationale:</b> In order to provide the best education to staff working at BeeHive regarding fall prevention, management of dementia-related behaviors, and safe transfers, it is important to know in what ways research has shown the most effective education. This article does an excellent job describing types of education and what has been shown most impactful and beneficial to staff.</p>
<b>Overall Quality of Article</b>	<p><b>Overall Quality of Article:</b> Good  <b>Rationale:</b> Reputable author with other published work in the related fields of study. This is a scholarly peer-reviewed publication as well.</p>

<b>Your Focused Question and Clinical Bottom Line</b>	<p><b>Question:</b> How can one provide effective dementia education and training to healthcare staff?</p> <p><b>Clinical Bottom Line:</b> Training was most effective when it was practical, relatable, staff felt supported and were given time to learn, and multiple methods of delivery provided with the information.</p>
<b>Your Lay Summary</b>	<p>This article was about ways that a person could teach other people about dementia. The definition of dementia is given at the beginning of the paper to make sure whoever reads it understands. There were pre-identified ways in which the teaching was essentially rated (good-bad). Many papers were read about that talked about different ways to teach people about dementia. There are several ways to teach people in a way that they can understand what you are teaching. When thinking about how you learn best, there are many things that play a role in that. Looking at how someone learns and what interests them will give best results.</p>
<b>Your Professional Summary</b>	<p>A specific model was used to evaluate the effectiveness of the training and education. The levels (Kirkpatrick levels) help to examine the staff's reaction, determine depth of learning, behavioral changes, and assess the outcomes post staff education on dementia. 20 different papers were used for this review, and among those 20 papers, there were 16 different training programs mentioned. An important aspect mentioned within this article is that there is more than one way to measure the effectiveness of staff education. Not only do you want staff to learn and increase their breadth of knowledge, but you also want them to be satisfied with how the education was provided too. Along with staff satisfaction, the education being provided should be relevant in order to increase staff engagement in the training. Education must be able to be carried out for a long period of time as well. A limitation of this study is that no non-English papers were included in the review, thus limiting possible further ideas.</p>
<b>5</b>	<b>Overview of Article</b>
<b>Type of article</b>	<p><b>Overall Type:</b> Review of Research Study</p> <p><b>Specific Type:</b> Review of Research</p>
<b>APA Reference</b>	<p>Arvanitakis, Z., Shah, R. C., &amp; Bennett, D. A. (2019). Diagnosis and management of dementia: Review. <i>Journal of American Medical Association</i>, 322(16), 1589–1599. <a href="https://doi.org/10.1001/jama.2019.4782">https://doi.org/10.1001/jama.2019.4782</a></p>
<b>Abstract</b>	<p><b>“IMPORTANCE</b> Worldwide, 47 million people live with dementia and, by 2050, the number is expected to increase to 131 million.</p> <p><b>OBSERVATIONS</b> Dementia is an acquired loss of cognition in multiple cognitive domains sufficiently severe to affect social or occupational function. In the United States, Alzheimer disease, one cause of dementia, affects 5.8 million people. Dementia is commonly associated with more than 1 neuropathology, usually Alzheimer disease with cerebrovascular pathology. Diagnosing dementia requires a history evaluating for cognitive decline and impairment in daily activities, with corroboration from a close friend or family member, in addition to a thorough mental status examination by a clinician to delineate impairments in memory, language, attention, visuospatial cognition such as spatial orientation, executive function, and mood. Brief cognitive impairment screening questionnaires can assist in initiating and organizing the cognitive</p>



	<p>assessment. However, if the assessment is inconclusive (eg, symptoms present, but normal examination findings), neuropsychological testing can help determine whether dementia is present. Physical examination may help identify the etiology of dementia. For example, focal neurologic abnormalities suggest stroke. Brain neuroimaging may demonstrate structural changes including, but not limited to, focal atrophy, infarcts, and tumor, that may not be identified on physical examination. Additional evaluation with cerebrospinal fluid assays or genetic testing may be considered in atypical dementia cases, such as age of onset younger than 65 years, rapid symptom onset, and/or impairment in multiple cognitive domains but not episodic memory. For treatment, patients may benefit from nonpharmacologic approaches, including cognitively engaging activities such as reading, physical exercise such as walking, and socialization such as family gatherings. Pharmacologic approaches can provide modest symptomatic relief. For Alzheimer disease, this includes an acetylcholinesterase inhibitor such as donepezil for mild to severe dementia and memantine (used alone or as an add-on therapy) for moderate to severe dementia. Rivastigmine can be used to treat symptomatic Parkinson disease dementia. <b>CONCLUSIONS AND RELEVANCE</b> Alzheimer disease currently affects 5.8 million persons in the United States and is a common cause of dementia, which is usually accompanied by other neuropathology, often cerebrovascular disease such as brain infarcts. Causes of dementia can be diagnosed by medical history, cognitive and physical examination, laboratory testing, and brain imaging. Management should include both nonpharmacologic and pharmacologic approaches, although efficacy of available treatments remains limited.” (p. 1)</p>
<b>Author</b>	<p><b>Credentials:</b> MD, MS</p> <p><b>Position and Institution:</b> Rush Alzheimer’s Disease Center, Rush University Medical Center (Chicago, IL)</p> <p><b>Publication History in Peer-Reviewed Journals:</b> Moderate-Extensive</p>
<b>Publication</b>	<p><b>Type of publication:</b> Peer-reviewed Journal</p> <p><b>Publisher:</b> American Medical Association</p>
<b>Date and Citation History</b>	<p><b>Date of publication:</b> 2019</p> <p><b>Cited By:</b> 604</p>
<b>Stated Purpose or Research Question</b>	<p>“This review summarizes diagnosis and management of dementia, defined as significant cognitive impairment in 2 or more cognitive domains.” (p.1)</p>
<b>Author’s Conclusion</b>	<p>“Alzheimer disease currently affects 5.8million persons in the United States and is a common cause of dementia, which is usually accompanied by other neuropathology, often cerebrovascular disease such as brain infarcts. Causes of dementia can be diagnosed by medical history, cognitive and physical examination, laboratory testing, and brain imaging. Management should include both nonpharmacologic and pharmacologic approaches, although efficacy of available treatments remains limited.” (p. 8)</p>



<b>Overall Relevance to your Doctoral Capstone Project</b>	<b>Overall Relevance of Article:</b> Moderate-Good <b>Rationale:</b> This article provides a great background on what dementia/Alzheimer's is and how it impacts one's ability to complete daily activities. As well as this, the article mentions ways in which behaviors can be linked with the disease and how to manage some of the behaviors.
<b>Overall Quality of Article</b>	<b>Overall Quality of Article:</b> Good <b>Rationale:</b> This article has been cited hundreds of times and has a credible publisher. Along with this, the reference list at the end of the article is extensive and contains several credible resources.
<b>Your Focused Question and Clinical Bottom Line</b>	<b>Question:</b> Why should individuals be educated on managing dementia-related behaviors? <b>Clinical Bottom Line:</b> More than 47 million individuals are living with dementia; it is very common and important for people to be aware of. Along with dementia come behaviors at times, it is important for people to be aware of these possible behaviors so they can react appropriately to the individual and provide most beneficial redirection and management.
<b>Your Lay Summary</b>	The article talks about people who live with memory problems can sometimes have some symptoms that come along with that. Within this paper, memory problems are described in more detail as well as the behaviors. The importance of knowing about the topic talked about in the article is because of how common memory problems are. Talking about it more will allow more people to know about the topic. Thinking about how to help manage behaviors that are shown by people living with memory problems is hard. There are many ways to help and work with individuals like this. In order to best help a person, knowing about them and what they like and want is important.
<b>Your Professional Summary</b>	This article is a review of research article addressing the management of dementia related behaviors and why learning about dementia related behaviors is so important. The article described the prevalence and definitions of terms related to dementia at the beginning to set a solid stage for the reader to understand the article. A total of 200 articles were looked at for this paper. Aspects such as cognition, psychological, behavioral, sleep, and physical were mentioned in regard to dementia in both its early and late stages. Several non-pharmacological approaches to managing dementia were mentioned within this article such as ensuring individuals are receiving adequate sleep, determining the most effective route to communicate with each individual, and engaging the individuals in cognitively stimulating activities to challenge their thought processes. Along with the non-pharmacological approaches, there are medications used to assist with the management of some behaviors as well.
<b>6</b>	<b>Overview of Article</b>
<b>Type of article</b>	<b>Overall Type:</b> Review of Research Study <b>Specific Type:</b> Observational Cohort Study
<b>APA Reference</b>	Cameron, E. J., Bowles, S. K., Marshall, E. G., & Andrew, M. K. (2018). Falls and long-term care: A report from the care by design observational

	cohort study. <i>BMC Family Practice</i> , 19(1), 73. <a href="https://doi.org/10.1186/s12875-018-0741-6">https://doi.org/10.1186/s12875-018-0741-6</a>
<b>Abstract</b>	<p><b>Background:</b> Falls and the resulting complications are common among frail older adults. We aimed to explore risk factors and potential prevention strategies for falls in elderly residents of Long-Term Care Facilities (LTCF). <b>Methods:</b> This was a cross sectional study design using data from the Care by Design (CBD) study, within Nova Scotia's Capital District Health Authority. This observational time series cohort study collected data before, during and after the implementation of CBD, a new model of coordinated primary care in LTCF. Here, we analyzed data collected after the implementation of CBD (September 1, 2011-February 28, 2012). <b>Results:</b> Falls were frequent; 56.2% of our sample of 395 residents fell at least once. In univariate analyses, male gender (<math>p = 0.009</math>), dementia (<math>p = 0.005</math>), and use of Selective Serotonin Reuptake Inhibitors or Selective Serotonin Norepinephrine Reuptake Inhibitors (SSRI/SNRI) (<math>p = 0.084</math>) showed statistically significant associations with having fallen. Benzodiazepine use appeared to be protective for falls (<math>p = 0.058</math>). In a fully adjusted multivariable linear regression model, dementia (<math>\beta</math> coefficient 0.96, 95% CI: 0.83,1.84; <math>p = 0.032</math>), visual impairment (<math>\beta</math> 0.84, 95% CI: 0.13,1.56; <math>p = 0.021</math>), and use of any PIMs (<math>\beta</math> 0.34, 95% CI: 0.037,0.65; <math>p = 0.028</math>) were associated with increased risk of having fallen. Benzodiazepine use remained associated with reduced numbers of falls (<math>p = 0.009</math>), and SSRI/SNRI use was associated with increased numbers of falls (<math>p = 0.007</math>). Male gender was associated with increased falls in the model which excluded frailty (<math>p = 0.022</math>), though gender lost statistical significance once frailty was added to the model (<math>p = 0.06</math>). <b>Conclusions:</b> In our sample of LTCF residents, falls were common. Cognitive impairment, male gender, visual impairment, PIM use and use of SSRI/SNRI medications were associated with increased risk of falls, while benzodiazepine use appeared to be associated with a decreased risk of having fallen. Falls remain an important problem among LTC residents. Screening for falls during patient encounters is recommended, along with further research to identify risk factors and target interventions." (p. 1)</p>
<b>Author</b>	<p><b>Credentials:</b> NA (Emily J. Cameron)</p> <p><b>Position and Institution:</b> Faculty of Medicine, Dalhousie University, Halifax, NS, Canada</p> <p><b>Publication History in Peer-Reviewed Journals:</b> Limited</p>
<b>Publication</b>	<p><b>Type of publication:</b> Scholarly Peer-reviewed</p> <p><b>Publisher:</b> Open Access – Creative Commons Attribution</p>
<b>Date and Citation History</b>	<p><b>Date of publication:</b> 2018</p> <p><b>Cited By:</b> 73</p>
<b>Stated Purpose or Research Question</b>	<p>"We aimed to explore risk factors and potential prevention strategies for falls in elderly residents of Long-Term Care Facilities (LTCF)" (p. 1).</p>

<b>Author's Conclusion</b>	"Our study examined modifiable and non-modifiable risk factors for falls among LTCF residents. Keeping in mind the study limitations, we found that certain medications, impaired cognition, and visual impairment were associated with increased falls risk" (p. 8).
<b>Overall Relevance to your Doctoral Capstone Project</b>	<b>Overall Relevance of Article:</b> Good <b>Rationale:</b> As this article dives into factors causing falls in residents living in long-term care facilities, that is directly relating to my capstone project. It is important for me to know and understand what may put someone at an increased risk for falls so I can educate staff on how to reduce the fall prevalence.
<b>Overall Quality of Article</b>	<b>Overall Quality of Article:</b> Moderate <b>Rationale:</b> This article has been cited almost one hundred times and has a credible publisher. Along with this, the reference list at the end of the article is extensive and contains several credible resources.
<b>Your Focused Question and Clinical Bottom Line</b>	<b>Question:</b> What are some factors that can increase an individual's fall risk? <b>Clinical Bottom Line:</b> Medication use, decreased cognition, and various visual impairments have been noted to increase fall rates in some individuals.
<b>Your Lay Summary</b>	This article talked about things that can happen that might make someone fall more often than others. If a person is taking certain medications, they might fall more. Or, if a person cannot see as well as another person, they may have more falls as well. It was found through research that older men fall more than women. There are things that people can do to help decrease how many times they may fall. Knowing how to help someone decrease their falls will allow them to live a better life. Older adults living in senior housing or facilities are also at a high risk for falls.
<b>Your Professional Summary</b>	This article is an observational cohort study. The beginning of the article provided the reader with some background information regarding falls in the older adult population, such as prevalence and rates of re-occurrence. The sample size was 395 LTC residents, 64% of that sample had dementia. Most of the participants were female and over the age of 77 years old. Of those 395 residents, only five did not yet have any data regarding past falls (shows prevalence of falls in older adults). Results yielded medications, cognition, vision, and gender as some factors that increase fall risk. A limitation of this is that the sampling was not random and reading through charts was a way to gather information on residents (some charting on a fall may have been missed which in turn skews results). It was gathered that there are some ways in which risk factors can and cannot be modified to reduce an individuals' prevalence of falls.
<b>7</b>	<b>Overview of Article</b>
<b>Type of article</b>	<b>Overall Type:</b> Primary Research Study <b>Specific Type:</b> Mixed methods (qualitative and quantitative)
<b>APA Reference</b>	Coughlin, D., Nordman-Oliveira, S., Schlaak, M., & Ford, J. H. (2019). Falls prevention process in assisted living communities. <i>Journal of</i>

	<i>Applied Gerontology</i> , 38(6), 805–824. <a href="https://doi.org/10.1177/0733464817748776">https://doi.org/10.1177/0733464817748776</a>
<b>Abstract</b>	“Falls are a significant issue for older adults, and many older adults who once received care in nursing homes now reside in assisted living communities (ALCs). ALC staff needs to address resident falls prevention; however, federal or state requirements or oversight are limited. This research explores falls prevention in Wisconsin ALCs in the context of the Kotter Change Model to identify strategies and inform efforts to establish a more consistent, proactive falls prevention process for ALCs. A mixed methods approach demonstrated inconsistency and variability in the use of falls risk assessments and prevention programs, which led to the development of standardized, proactive falls prevention process flowcharts. This process, as delineated, provides ALCs with an approach to organize a comprehensive falls reduction strategy. Findings highlight the importance of educating staff regarding assessments, resident motivation, falls prevention programs and feedback, all key components of the falls prevention process” (p. 805).
<b>Author</b>	<b>Credentials:</b> MSN, RN, APNP, FNP-BC <b>Position and Institution:</b> Researcher at Center for Health Systems Research and Analysis at the University of Wisconsin-Madison <b>Publication History in Peer-Reviewed Journals:</b> Limited
<b>Publication</b>	<b>Type of publication:</b> Scholarly peer-reviewed <b>Publisher:</b> HHS Public Access
<b>Date and Citation History</b>	<b>Date of publication:</b> June 2019 <b>Cited By:</b> 10
<b>Stated Purpose or Research Question</b>	“The falls prevention process and flowchart were evaluated within the context of Kotter’s 8 Step Change Model to determine if the process developed supports implementation of a change in the approach to falls prevention in ALCs (Kotter, 1995)” (p. 2).
<b>Author’s Conclusion</b>	“The falls prevention process flow charts incorporate existing components of falls prevention processes currently used in Wisconsin ALCs. In turn, the flowcharts provides a compressive, standardized, proactive approach to addressing the falls prevention process in these communities and a baseline for further assisted living specific falls prevention research” (p. 11).
<b>Overall Relevance to your Doctoral Capstone Project</b>	<b>Overall Relevance of Article:</b> Moderate-Low <b>Rationale:</b> This article is somewhat relevant to my research question as it talks about programs in place currently in WI that address falls in individuals living in assisted living communities. It is less focused on causal factors of falls, however, it has good information regarding different programs that could help to reduce fall rates in the assisted living setting.
<b>Overall Quality of Article</b>	<b>Overall Quality of Article:</b> Good <b>Rationale:</b> This article contains a stated aim that is met and a stated methodology that is adhered to. It has been peer-reviewed and edited by

	a reputable authority. Information contained in the article is supported by credible sources.
<b>Your Focused Question and Clinical Bottom Line</b>	<p><b>Question:</b> What are the 8 steps to the Kotter's 8 Step Change Model and what role does this model play in fall prevention?</p> <p><b>Clinical Bottom Line:</b> The steps are increasing urgency, building strong/guided teams, understanding the vision, communicating strongly, creating some short-term wins, not giving up, making sure the education sticks. Research is slightly limited, however been shown that following steps within an organization can assist with fall prevention.</p>
<b>Your Lay Summary</b>	There are steps that can be followed to make sure that falls are not happening as often. Sometimes these steps can be called models. This paper looked at a certain model and if it helped address falls and lower them in WI specifically. Many older people live in facilities like nursing homes and assisted livings so that they can get help with anything they may need. Falls happen often in these homes, and it is important to understand how to decrease them. There is not a set way to ensure falls are addressed in these homes, so a flow chart was created for staff to follow to have a set protocol in place for WI facilities.
<b>Your Professional Summary</b>	This mixed methods primary research study was completed to assess the effectiveness of an 8-step model. The falls prevention questionnaire, falls prevention structured interview guide, and flowchart development were all important aspects of this article. Within assisted living facilities in WI, it has been shown that there is lack in structure and approaches to help reduce fall rates. There needs to be some urgency placed on this topic as falls impact the lives of several older adults, especially those that reside in ALFs/SNFs. A flowchart was created for the use of staff and management at ALFs to allow some commonality for addressing and mitigating falls throughout facilities in WI. Research on fall prevention in ALFs is limited and there is a major need for continued research in this topic area.
<b>8</b>	<b>Overview of Article</b>
<b>Type of article</b>	<p><b>Overall Type:</b> Review of Research</p> <p><b>Specific Type:</b> Systematic Review and Meta-Analysis</p>
<b>APA Reference</b>	Vallée, A., Blacher, J., Cariou, A., & Sorbets, E. (2020). Blended learning compared to traditional learning in medical education: Systematic review and meta-analysis. <i>Journal of Medical Internet Research</i> , 22(8), 1-19. <a href="https://doi.org/10.2196/16504">https://doi.org/10.2196/16504</a>
<b>Abstract</b>	<p><b>Background:</b> Blended learning, which combines face-to-face learning and e-learning, has grown rapidly to be commonly used in education. Nevertheless, the effectiveness of this learning approach has not been completely quantitatively synthesized and evaluated using knowledge outcomes in health education. <b>Objective:</b> The aim of this study was to assess the effectiveness of blended learning compared to that of traditional learning in health education. <b>Methods:</b> We performed a systematic review of blended learning in health education in MEDLINE from January 1990 to July 2019. We independently selected studies, extracted data, assessed risk of bias, and compared overall blended learning versus traditional learning, offline blended learning versus</p>

	<p>traditional learning, online blended learning versus traditional learning, digital blended learning versus traditional learning, computer-aided instruction blended learning versus traditional learning, and virtual patient blended learning versus traditional learning. All pooled analyses were based on random-effect models, and the I<sup>2</sup> statistic was used to quantify heterogeneity across studies. <b>Results:</b> A total of 56 studies (N=9943 participants) assessing several types of learning support in blended learning met our inclusion criteria; 3 studies investigated offline support, 7 studies investigated digital support, 34 studies investigated online support, 8 studies investigated computer-assisted instruction support, and 5 studies used virtual patient support for blended learning. The pooled analysis comparing all blended learning to traditional learning showed significantly better knowledge outcomes for blended learning (standardized mean difference 1.07, 95% CI 0.85 to 1.28, I<sup>2</sup> =94.3%). Similar results were observed for online (standardized mean difference 0.73, 95% CI 0.60 to 0.86, I<sup>2</sup> =94.9%), computer-assisted instruction (standardized mean difference 1.13, 95% CI 0.47 to 1.79, I<sup>2</sup> =78.0%), and virtual patient (standardized mean difference 0.62, 95% CI 0.18 to 1.06, I<sup>2</sup> =78.4%) learning support, but results for offline learning support (standardized mean difference 0.08, 95% CI -0.63 to 0.79, I<sup>2</sup> =87.9%) and digital learning support (standardized mean difference 0.04, 95% CI -0.45 to 0.52, I<sup>2</sup> =93.4%) were not significant. <b>Conclusions:</b> From this review, blended learning demonstrated consistently better effects on knowledge outcomes when compared with traditional learning in health education. Further studies are needed to confirm these results and to explore the utility of different design variants of blended learning” (p. 1).</p>
<b>Author</b>	<p><b>Credentials:</b> MD, PhD</p> <p><b>Position and Institution:</b> Diagnosis and Therapeutic Center, Hypertension and Cardiovascular Prevention Unit, Paris France</p> <p><b>Publication History in Peer-Reviewed Journals:</b> Extensive</p>
<b>Publication</b>	<p><b>Type of publication:</b> Scholarly peer-reviewed journal</p> <p><b>Publisher:</b> JMIR Publications</p>
<b>Date and Citation History</b>	<p><b>Date of publication:</b> October 8<sup>th</sup>, 2020</p> <p><b>Cited By:</b> 245</p>
<b>Stated Purpose or Research Question</b>	<p>“The objective of this review was to evaluate the effectiveness of blended learning for health education on knowledge outcomes assessed with subjective (eg, learner self-report) or objective evaluations (eg, multiple-choice question knowledge test) of learners’ factual or conceptual understanding of the course in studies where blended learning was compared with traditional learning” (p. 2).</p>
<b>Author’s Conclusion</b>	<p>“Even though conclusions could be weakened by heterogeneity across studies, the results of this synthesis reinforced that blended learning may have a positive effect on knowledge acquisition related to health professions. Blended learning could be promising and worthwhile for further application in health professions” (p. 14).</p>
<b>Overall Relevance to</b>	<p><b>Overall Relevance of Article:</b> Good</p>



<b>your Doctoral Capstone Project</b>	<b>Rationale:</b> This is an extremely relevant source as it specifically dives into which types of education and learning are most effective and beneficial for those in the medical field. This is in line with my question and will help me decide how to best educate staff at BeeHive when I start my Capstone experience.
<b>Overall Quality of Article</b>	<b>Overall Quality of Article:</b> Good <b>Rationale:</b> There is a clearly stated aim that is met as well as a clearly stated methodology that appears to be adhered to. This article has been peer-reviewed, edited by a reputable authority, and supported by several credible sources.
<b>Your Focused Question and Clinical Bottom Line</b>	<b>Question:</b> What is blended learning and how effective is it? <b>Clinical Bottom Line:</b> Results yield that blended learning may have a positive impact when providing healthcare staff with education. Blended learning is a mix of several learning types such as face to face learning and learning online asynchronously/synchronously.
<b>Your Lay Summary</b>	There are many ways that someone can learn something. Looking at the benefits and effectiveness of those many ways will allow us to best teach other people new information. This article talks about how something called blended learning may be a way that people learn well. Blended learning is learning information in more ways than just one such as reading things. More information is needed in this area though to truly say if there is one best way to teach other people.
<b>Your Professional Summary</b>	This systematic review and meta-analysis study was completed to address how blending learning may be beneficial when teaching healthcare professionals. 56 articles were looked at and 9,943 participants were included in those articles. 47 of the 56 studies were conducted in areas that had high incomes. There were several types of blended learning listed throughout this article, but the main point being, blended learning utilized more than one mode of education (online articles and in person role playing for example). Limitations of this study are that there was publication bias found as well as only one database was used to conduct the literature searches (MEDLINE). It was stated that the reader should take increased caution when interpreting the results of this study as well.
<b>9</b>	<b>Overview of Article</b>
<b>Type of article</b>	<b>Overall Type:</b> Primary Research Study <b>Specific Type:</b> Survey Research
<b>APA Reference</b>	Slusser, L. R., Rice, M. S., & Miller, B. K. (2012). Safe patient handling curriculum in occupational therapy and occupational therapy assistant programs: A descriptive study of school curriculum within the United States of America. <i>Work</i> , 42(3), 385–392. <a href="https://doi.org/10.3233/WOR-2012-1407">https://doi.org/10.3233/WOR-2012-1407</a>
<b>Abstract</b>	“Even though conclusions could be weakened by heterogeneity across studies, the results of this synthesis reinforced that blended learning may have a positive effect on knowledge acquisition related to health professions. Blended learning could be promising and worthwhile for further application in health professions” (p. 1).

<b>Author</b>	<p><b>Credentials:</b> NA (Lisa R. Slusser)</p> <p><b>Position and Institution:</b> University of Toledo, OH</p> <p><b>Publication History in Peer-Reviewed Journals:</b> Limited</p>
<b>Publication</b>	<p><b>Type of publication:</b> Scholarly peer-reviewed journal</p> <p><b>Publisher:</b> IOS Press</p>
<b>Date and Citation History</b>	<p><b>Date of publication:</b> October 24<sup>th</sup>, 2011</p> <p><b>Cited By:</b> 24</p>
<b>Stated Purpose or Research Question</b>	<p>“The research questions guiding this study include: 1) do occupational therapy and occupational therapy assistant curricula include SPH information, 2) is the curricular content limited to only teaching body mechanics and manual transfer training, and 3) are respondents aware of whether their state has SPH legislation?” (p. 3).</p>
<b>Author’s Conclusion</b>	<p>The results demonstrate a need for more comprehensive curricular safe patient handling content including information highlighting the risk associated with performing manual patient transfers as well as instruction in the use of safe patient handling equipment, policy, and guidelines” (p. 7).</p>
<b>Overall Relevance to your Doctoral Capstone Project</b>	<p><b>Overall Relevance of Article:</b> Moderate</p> <p><b>Rationale:</b> Although the purpose of this article is to evaluate the OT curriculum regarding safe patient handling, information learned throughout on how to handle patients safely will indirectly benefit my learning for my capstone project. It is important I know how to safely transfer and ambulate with patients so I can best teach the staff at BeeHive how to as well.</p>
<b>Overall Quality of Article</b>	<p><b>Overall Quality of Article:</b> Good</p> <p><b>Rationale:</b> There is a clearly stated aim that is met as well as a clearly stated methodology that appears to be adhered to. This article has been peer-reviewed, edited by a reputable authority, and supported by several credible sources.</p>
<b>Your Focused Question and Clinical Bottom Line</b>	<p><b>Question:</b> What are the most important aspects to be aware of to ensure you are handling patients safely?</p> <p><b>Clinical Bottom Line:</b> Patient and staff safety, utilize proper body mechanics when completing transfers and utilize mechanical lifts as needed. Education must be provided on lift equipment so that it is properly used.</p>
<b>Your Lay Summary</b>	<p>Learning how to safely get a person in and out of bed is critical to some professions. Knowing how to stand and lift without damaging your body is something to think about whenever working with a patient. Taking the time to understand how to move yourself and patients will allow you to excel in your position. Major injuries can be caused if a person moves themselves and someone else in a way that is not safe.</p>



<b>Your Professional Summary</b>	This survey research study was completed to evaluate and assess current OT programs and how transfers and other safe patient handling topics are being taught. Regarding a survey of hands-on experience that participants completed, the results yielded that none of the participants had experience working with overhead lifts while completing in classroom learning. A critical part of going out into the field and being prepared is being able to practice real-life situations in class. Understanding how to use ceiling lifts, gait belts, sit to stand lifts, and portable lifts is critical. This article also talks about state legislation surrounding accreditation standards and how many students who participated in the study were unaware. One of the easiest ways to ensure a patient's safety by working with them in sessions is to ensure they have a gait belt on. Participants in this scoping review were OT students, there were 111 participants total. Limitations of this study are that some participants were living in an area in which there is law surrounding what is being taught for safe patient handling and their responses could have skewed the overall data.
<b>10</b>	<b>Overview of Article</b>
<b>Type of article</b>	<b>Overall Type:</b> Review of Research Study <b>Specific Type:</b> Scoping Review
<b>APA Reference</b>	Shaw, L., Kiegaldie, D., & Farlie, M. K. (2020). Education interventions for health professionals on falls prevention in health care settings: A 10-year scoping review. <i>BMC Geriatrics</i> , 20(1), 1-13. <a href="https://doi.org/10.1186/s12877-020-01819-x">https://doi.org/10.1186/s12877-020-01819-x</a>
<b>Abstract</b>	“ <b>Background:</b> Falls in hospitals are a major risk to patient safety. Health professional education has the potential to be an important aspect of falls prevention interventions. This scoping review was designed to investigate the extent of falls prevention education interventions available for health professionals, and to determine the quality of reporting. <b>Method:</b> A five stage scoping review process was followed based on Arksey and O'Malley's framework and refined by the Joanna Briggs Institute Methodology for JBI Scoping Reviews. Five online databases identified papers published from January 2008 until May 2019. Papers were independently screened by two reviewers, and data extracted and analysed using a quality reporting framework. <b>Results:</b> Thirty-nine publications were included. Interventions included formal methods of educational delivery (for example, didactic lectures, video presentations), interactive learning activities, experiential learning, supported learning such as coaching, and written learning material. Few studies employed comprehensive education design principles. None used a reporting framework to plan, evaluate, and document the outcomes of educational interventions. <b>Conclusions:</b> Although health professional education is recognised as important for falls prevention, no uniform education design principles have been utilised in research published to date, despite commonly reported program objectives. Standardised reporting of education programs has the potential to improve the quality of clinical practice and allow studies to be compared and evaluated for effectiveness across healthcare settings” (p.1).
<b>Author</b>	<b>Credentials:</b> NA

	<p><b>Position and Institution:</b> Faculty of Health Science at Holmesglen Institute in Australia</p> <p><b>Publication History in Peer-Reviewed Journals:</b> Limited</p>
<b>Publication</b>	<p><b>Type of publication:</b> Scholarly peer-reviewed Journal</p> <p><b>Publisher:</b> Open Access</p>
<b>Date and Citation History</b>	<p><b>Date of publication:</b> October 5<sup>th</sup>, 2020</p> <p><b>Cited By:</b> 26</p>
<b>Stated Purpose or Research Question</b>	<p>“This scoping review aims to (i) investigate the extent of reporting of falls prevention education interventions for health professionals in a healthcare setting, (ii) appraise the quality of reporting of falls prevention education interventions using the 4Ps model of education design” (p. 2).</p>
<b>Author’s Conclusion</b>	<p>“Investigation and reporting of well-designed education programs for health professionals on falls prevention in institutional settings is needed to determine the effectiveness of this type of intervention for falls prevention. Use of a standardised reporting framework for education interventions in falls prevention research, such as the extended 4Ps model, has the potential to improve knowledge and prevent falls” (p. 10)</p>
<b>Overall Relevance to your Doctoral Capstone Project</b>	<p><b>Overall Relevance of Article:</b> Good-Moderate</p> <p><b>Rationale:</b> For my capstone project, I will be providing staff working at BeeHive Homes with education on the role in fall prevention. This article mentions interventions proven to be beneficial with preventing falls.</p>
<b>Overall Quality of Article</b>	<p><b>Overall Quality of Article:</b> Good</p> <p><b>Rationale:</b> There is a clearly stated aim that is met as well as a clearly stated methodology that appears to be adhered to. This article has been peer-reviewed, edited by a reputable authority, and supported by several credible sources.</p>
<b>Your Focused Question and Clinical Bottom Line</b>	<p><b>Question:</b> What is the 4P model and how is it used to address fall prevention education?</p> <p><b>Clinical Bottom Line:</b> This model looks at the planning, process, product, and presage of a fall prevention program to evaluate its effectiveness.</p>
<b>Your Lay Summary</b>	<p>Everyone learns differently, and in order to best teach someone something, it is important to know how they learn best. Some people do well with listening to videos while other people like to practice things hands on or read about it. There are many ways to teach the same thing, and being able to change how you teach something can allow people to better understand you. There is a model that can be used to see how beneficial a certain kind of teaching is for someone or a group of people. This model looks at education as a whole and also piece by piece to see what is working and not working, what should and should not be changed.</p>
<b>Your Professional Summary</b>	<p>This scoping review article aimed to address how falls are reported, and how healthcare staff are provided with education on fall prevention. Educational programs were completed and evaluated with the 4P Model:</p>

	<p>planning, presage, process, and product. The several resources used to deliver the education included simulation and role playing, evaluation and surveys for feedback, videos, handouts, didactic learning, and online educational models. There were results yielding benefits of supportive learning in which there is some individual mentoring and support as well as peer/peer discussion and huddles at the beginning of shifts too. Collaborating with others is an excellent way to learn and teach others new material too. A limitation of this study is that only staff working in hospital settings participated. Staff working in different settings may learn differently, and that is not expressed in this article.</p>
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## **Appendix C: Educational Handouts**

### **Educational Handouts for Team Members Working at BeeHive Homes**

Maureen Cara Doran

St. Catherine University

Capstone Project completed in partial fulfillment of the Doctor of Occupational Therapy Degree

Faculty Advisor: Dr. Stephanie de Sam Lazaro, OTD, MA, OTR/L

### Overview of Handout Packet Structure

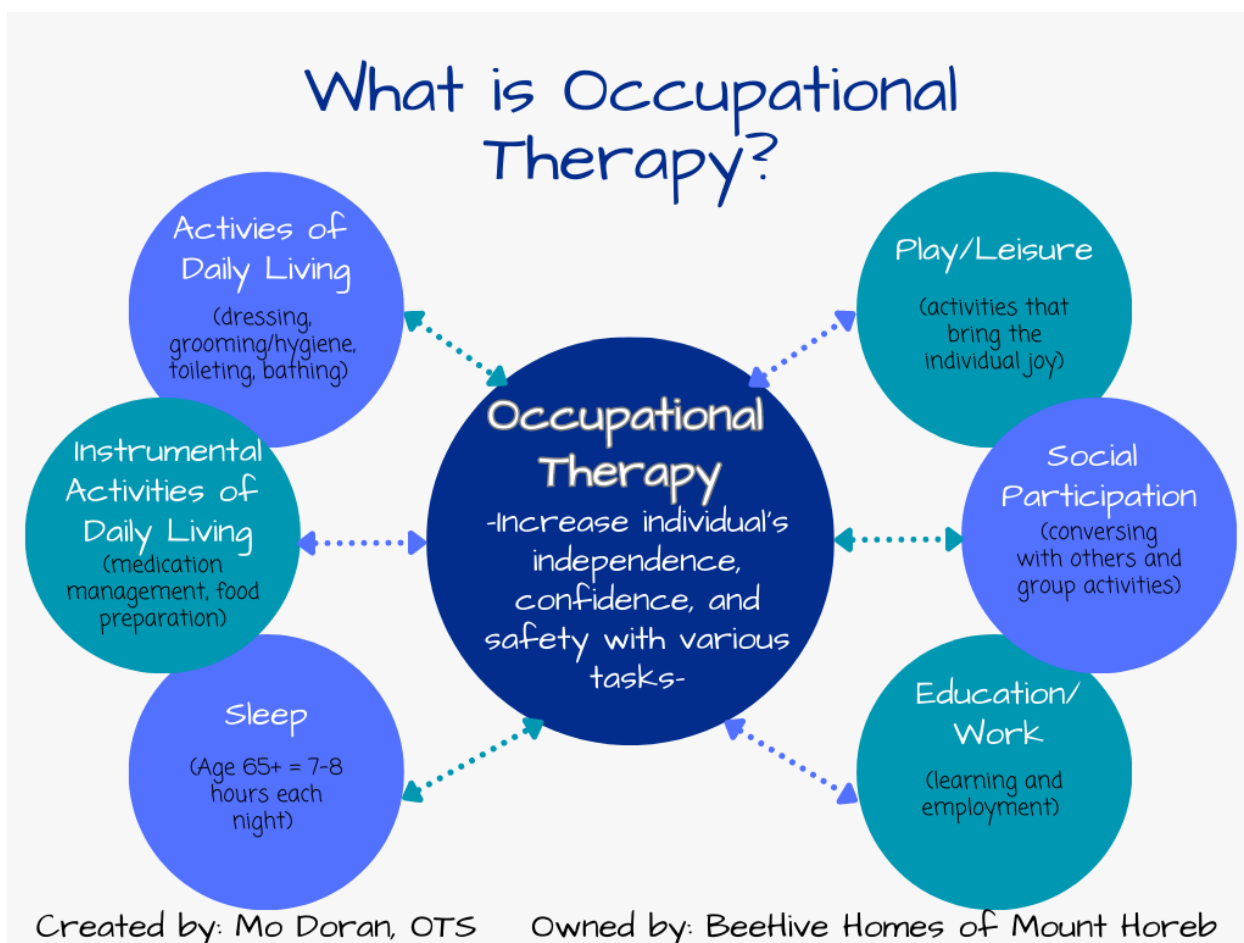
This packet contains information relating to occupational therapy's role in memory care settings, including diagnoses and considerations for increased safety. This packet is broken up into multiple sections:

1. Section **one (1)** contains background information on occupational therapy, the profession's role in memory care, and relating the occupational therapy profession to BeeHive.
2. Section **two (2)** contains background information on dementia, types of dementia, Parkinson's Disease, and incontinence.
3. Section **three (3)** contains background information on falls.
4. Section **four (4)** contains background information relating to safe-resident transfers.
5. Section **five (5)** contains techniques for team members to utilize for managing dementia-related behaviors and fall prevention.
6. Section **six (6)** contains techniques to advocate for both the resident and team member quality of life, including strategies to prevent burnout.

**\*\*All handouts created by Maureen Doran, Doctor of Occupational Therapy Student at Saint Catherine University (Saint Paul, MN), owned by BeeHive Homes of America, Inc.\*\***

## **Section One (1)**

## Occupational Therapy Role



### Occupational Therapy Role in Memory Care

- Provide education to team members to increase individual's level of independence
- Provide recommendations to team members on how to prevent falls
  - Individuals living with dementia are at an increased fall risk
- Work with individuals with various types of dementia, Parkinson's Disease, and other diagnoses
  - Several of these individuals experience urinary and bowel incontinence as a result of their diagnosis (an example of a technique used by occupational therapists to manage this is implementing a toileting schedule)
- Help team members understand dementia-related behaviors and how to respond to such behaviors in a calm manner
- Educate team members on the importance of creating a daily routine
  - Including toileting times and activities

## Examples of Occupational Therapy Categories at BeeHive

<p><b>Activities of Daily Living</b></p> <ul style="list-style-type: none"> <li>• Assisting with dressing/brushing teeth and hair</li> <li>• Assisting residents with showers</li> <li>• Taking residents to the bathroom</li> </ul>
<p><b>Instrumental Activities of Daily Living</b></p> <ul style="list-style-type: none"> <li>• Medication passers are responsible for making sure each resident gets their daily medications</li> <li>• Some residents enjoy participating in simple food preparation tasks (making cookies)</li> <li>• Sometimes, residents enjoy folding laundry with team members</li> </ul>
<p><b>Sleep</b></p> <ul style="list-style-type: none"> <li>• Ensuring residents are in bed at their usual time will allow the best night's sleep</li> <li>• Keep residents awake during the day, so they sleep at night</li> <li>• Some residents receive medications before bed to assist with sleeping through the night</li> </ul>
<p><b>Play/Leisure</b></p> <ul style="list-style-type: none"> <li>• Engaging residents in activities that are meaningful to them <ul style="list-style-type: none"> <li>◦ Gardening, playing cards, coloring</li> </ul> </li> <li>• Offering to sit with residents outside to enjoy the fresh air</li> </ul>
<p><b>Social Participation</b></p> <ul style="list-style-type: none"> <li>• Bus outings and meal times where residents can communicate</li> <li>• Engaging residents in group activities such as group walks or games</li> </ul>
<p><b>Work/Education</b></p> <ul style="list-style-type: none"> <li>• Allowing residents to assist with folding laundry, watering plants, sweeping, and dusting if they want</li> <li>• Talking to residents about their past education and jobs</li> <li>• Many residents love to share about their previous education and what they used to do for work</li> </ul>

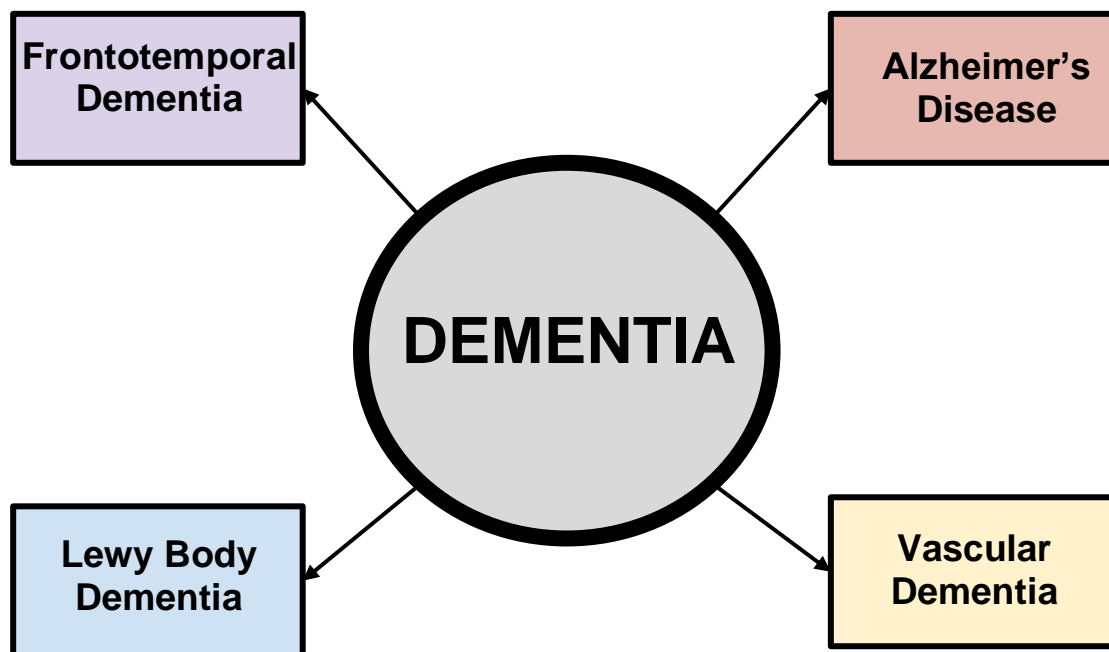
\*\*We want the residents to feel helpful and have a purpose each and **EVERY** day.



## **Section Two (2)**

## Types of Dementia

- Dementia is the “**UMBRELLA**” term for changes in an individual’s memory
- Dementia causes **PHYSICAL** changes in the individual's brain
- Dementia is **NOT** a normal part of the aging process



\*\*Parkinson’s Disease Dementia can develop in individuals who have been living with Parkinson’s Disease for > 1 year.

### Signs and Symptoms

- Hard time with
  - **Memory:** Forgetting names or where items were last placed
  - **Attention:** Easily distracted when engaging in activities such as eating
  - **Communication:** Hard time finding words to verbalize needs
  - **Reasoning, judgment, and problem solving abilities:** Standing without asking for help, forgetting to shut off the stove after cooking, unable to locate an item such as a wallet, cannot retrace steps
  - **Vision changes:** Not able to tell how close objects are, unable to track moving objects

Most Common	Alzheimer’s Disease
	Vascular Dementia
	Frontotemporal Dementia
Least Common	Lewy Body Dementia

## References

Alzheimer's Association. (n.d.). *Types of dementia: Parkinsons' Disease dementia.*

<https://www.alz.org/alzheimers-dementia/what-is-dementia/types-of-dementia/parkinsons-disease-dementia>

Alzheimer's Association. (n.d.). *What is dementia?: Types of dementia.*

<https://www.alz.org/alzheimers-dementia/what-is-dementia/types-of-dementia>

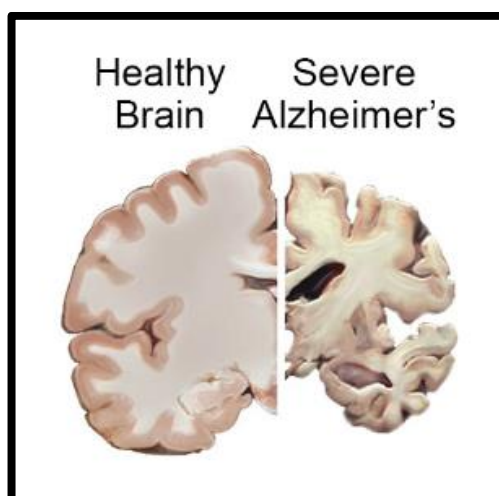
Centers for Disease and Healthy Aging. (April 5, 2019). *Alzheimer's Disease and healthy aging: About dementia.* <https://www.cdc.gov/aging/dementia/index.html>

National Institute on Aging. (December 8, 2022). *Alzheimer's Disease and related dementias, basics of Alzheimer's Disease and dementia: What is dementia? Symptoms, types, and diagnosis.* <https://www.nia.nih.gov/health/what-is-dementia#:~:text=Alzheimer's%20disease%2C%20the%20most%20common,amyloid%20plaques%20and%20tau%20tangles.>

## Type of Dementia: Alzheimer's Disease

### Background Information

- There is a build up of amyloid plaques and tau tangles in the brain that cause a loss of connection between neurons/nerve cells
  - This leads to progressive memory loss, difficulties engaging in daily activities, changes in personality and interests, and changes in response to pain and temperature
- This type of dementia is the **MOST** common type
- Three stages:
  - Mild/early
  - Moderate/middle
  - Severe/late



(National Institute on Aging, 2023)

Symptoms Experienced in the Mild/Early Stage
Hard time finding words to express thought and feelings <ul style="list-style-type: none"> <li>● Residents may find it difficult to communicate needs</li> </ul>
Losing items <ul style="list-style-type: none"> <li>● Residents may not remember where their phone is</li> </ul>
Hard time solving problems <ul style="list-style-type: none"> <li>● Residents may be unable to fix issues such as putting their shoe on the correct foot</li> </ul>
Increased time required to complete daily tasks <ul style="list-style-type: none"> <li>● Residents may experience frustration with getting dressed or going to the bathroom</li> </ul>
Hard time planning and organizing <ul style="list-style-type: none"> <li>● Residents may need prompting on the routine of day (when meals are)</li> </ul>

<b>Symptoms Experienced in the Moderate/Middle Stage</b>
<p>Increased confusion and memory loss</p> <ul style="list-style-type: none"> <li>Residents may forget life events/phone number/address/season/date</li> </ul>
<p>Decreased short-term memory</p> <ul style="list-style-type: none"> <li>Residents may not remember having eaten a meal</li> </ul>
<p>Hard time recognizing friends and family members</p> <ul style="list-style-type: none"> <li>Residents may not remember team members and family members consistently</li> </ul>
<p>Repeating stories and questions</p> <ul style="list-style-type: none"> <li>Residents may ask you the same question multiple times on a shift</li> </ul>
<p>Requiring more assistance with activities of daily living</p> <ul style="list-style-type: none"> <li>Residents may require assistance with above tasks from team members</li> </ul>
<p>Changes in personality</p> <ul style="list-style-type: none"> <li>Residents may experience increased depression/anxiety/agitation</li> </ul>
<p>Increased delusions and paranoia</p> <ul style="list-style-type: none"> <li>Residents may begin thinking people are “out for them” or stealing from them</li> </ul>
<p>Increased wandering</p> <ul style="list-style-type: none"> <li>Residents may feel restless and walk around home or attempt to stand from their chair</li> </ul>
<p>Disruptions with sleep and increased urinary and bowel incontinence</p> <ul style="list-style-type: none"> <li>Residents may wake up multiple times throughout the night or not recognize when they need to go to the bathroom</li> </ul>

<b>Symptoms Experienced in the Severe/Late Stage</b>
<p>Almost to complete total memory loss</p> <ul style="list-style-type: none"> <li>Residents may be unable to remember past/present/future events/things</li> </ul>
<p>No awareness of surroundings</p> <ul style="list-style-type: none"> <li>Residents may not be aware of others around them during visits</li> </ul>
<p>Totally dependent on others for self cares and other activities</p> <ul style="list-style-type: none"> <li>Residents will require assistance with dressing, toileting, ect.</li> </ul>
<p>No ability to communicate with others</p> <ul style="list-style-type: none"> <li>Residents may be unable to speak (or very little) to express needs</li> </ul>
<p>Increased susceptibility to infections</p> <ul style="list-style-type: none"> <li>Residents may be at risk for pneumonia and skin infections (unable to recognize feelings of sickness/need for medical attention)</li> </ul>

## References

Cleveland Clinic. (December 10, 2022). *Alzheimer's Disease*.

<https://my.clevelandclinic.org/health/diseases/9164-alzheimers-disease>

National Institute on Aging. (April 5, 2023). *Alzheimer's Disease and related dementias, basics of Alzheimer's Disease and dementia: Alzheimer's Disease fact sheet* [photo].

<https://www.nia.nih.gov/health/alzheimers-disease-fact-sheet>

National Institute on Aging. (July 8, 2021). *Basics of Alzheimer's Disease and dementia: What is Alzheimer's Disease?* <https://www.nia.nih.gov/health/what-alzheimers-disease>

## Type of Dementia: Frontotemporal Dementia

### Background Information

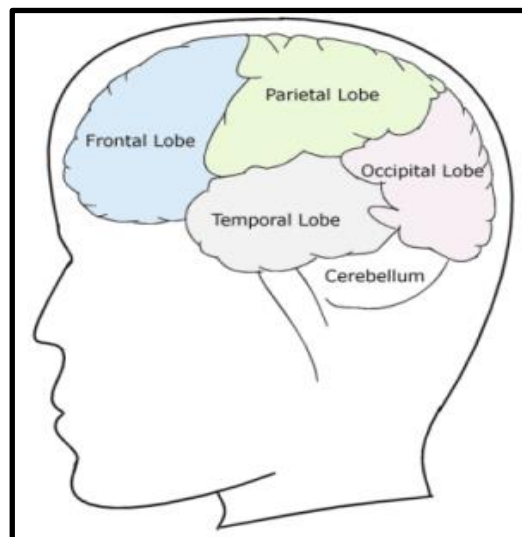
- The frontal and temporal parts of the brain shrink because the nerve cells in these lobes are lost
- The frontal and temporal lobes in the brain control and regulate personality, language, and behaviors
- Previous learning and memories fade away

### Age of Onset

- Between ages 40-65

### Prevalence

- Makes up 10-20% of total dementia cases
- Affects both men and women equally



(Natural Eye Care, n.d.)

### Symptoms

Behavioral	Motor	Speech and Language
Increased behaviors that are not socially appropriate	Onset of tremors and muscle spasms (shaking)	Difficulties finding the correct words
Decreased interpersonal skills (unable to recognize emotion of others)	Increased muscle stiffness	Increased difficulty naming objects and items
Decreased judgment (decreased safety insight)	Increased muscle weakness (loss of muscle strength)	Not understanding what words mean
Increase in repetitive behaviors and movements (clapping, snapping, tapping)	Laughing and crying at inappropriate times	Hard time creating sentences (creates frustration with communication)
Decreased completion of self cares (requires more assistance)	Decrease in coordination (difficulties feeding self)	Difficulties understanding written language
Bringing things to mouth (may not always be edible)	Difficulties with walking (balance impaired)	Speech may sound choppy

## References

John Hopkins Medicine. (n.d.). *Health: Frontotemporal dementia*.

<https://www.hopkinsmedicine.org/health/conditions-and-diseases/dementia/frontotemporal-dementia>

Mayo Clinic. (November 16, 2021). *Diseases and conditions: Frontotemporal dementia*.

<https://www.mayoclinic.org/diseases-conditions/frontotemporal-dementia/symptoms-causes/syc-20354737>

Natural Eye Care. (n.d.) *Parts of the brain* [photo]. [https://www.naturaleyecare.com/natural-](https://www.naturaleyecare.com/natural-brain-care/parts-of-the-brain.asp)

[brain-care/parts-of-the-brain.asp](https://www.naturaleyecare.com/natural-brain-care/parts-of-the-brain.asp)



## Type of Dementia: Lewy Body Dementia



(Alzheimer's Association, n.d.)

### Background Information

- Abnormal alpha-synuclein proteins (called “Lewy Bodies”) are found in the brain
  - These deposits impact the brain's normal chemical messengers in a negative manner - cause changes in thinking, movement, mood, and behaviors

### Who is Impacted?

- More than 1 million individuals in the United States are impacted by this type of dementia
- Men are often more impacted than women

### Age of Onset

- Symptoms are typically shown when the individual is 50+ years old

### Common Symptoms of Lewy Body Dementia

Changes in reasoning and thinking	Increased sleeping throughout the day
Visual hallucinations (seeing things that are not actually there)	Resting tremors, decreased speed in movements (slow and shaky movements)
Decreased attention span (inability to engage in activities for long periods of time)	Increased anxiety/paranoia (asking repetitive questions)
REM sleep behavior disorder (acting out dreams)	Increased urinary incontinence (unable to verbalize when toileting is needed)

## References

Alzheimer's Association. (n.d). *Types of dementia: Dementia with lewy bodies* [photo].

<https://www.alz.org/alzheimers-dementia/what-is-dementia/types-of-dementia/dementia-with-lewy-bodies>

National Institute on Aging. (July 29, 2021). *Related dementias: What is lewy body dementia?*

*Causes, symptoms, and treatments.* <https://www.nia.nih.gov/health/what-lewy-body-dementia-causes-symptoms-and-treatments>

## Type of Dementia: Vascular Dementia

### Background Information

- This type of dementia is caused when there is decreased blood flow and oxygen to the brain
  - Can develop following a stroke that blocks off an artery (does not allow blood through)
  - Strokes do **NOT** always cause vascular dementia
- Symptoms
  - Vary depending on which areas of the brain are not receiving blood flow
  - Onset of symptoms can be gradual or sudden

### Common Symptoms of Vascular Dementia

Increased confusion and depression/apathy	Difficulties with concentration
Hard time organizing actions and thoughts	Hard time planning and communicating with others
Increased unsteadiness with walking	Increased need to use the bathroom
Slowed thoughts	Increased agitation and restlessness
Sleep problems	Hallucinations or delusions

### Causes

- Strokes: causes blood flow to be blocked in arteries in the brain
- Brain hemorrhage: can be caused by increased blood pressure and weakened blood vessels, causing bleeding into the brain
- Blood vessels that are narrowed: can be caused by abnormal aging of vessels (atherosclerosis), high blood pressure, and diabetes

### Risk Factors

Age (65+)	History of heart attacks or strokes
Atherosclerosis	High cholesterol or high blood pressure
Diabetes	Smoking
Obesity	Abnormal heart rhythm (atrial fibrillation)

## References

Mayo Clinic. (July 29, 2021). *Diseases & conditions: Vascular dementia*.

<https://www.mayoclinic.org/diseases-conditions/vascular-dementia/symptoms-causes/syc-20378793#:~:text=Vascular%20dementia%20is%20a%20general,t%20always%20cause%20vascular%20dementia>.

National Institute on Aging. (November 1, 2021). *Related dementias: Vascular dementia:*

*Causes, symptoms, and treatments.* <https://www.nia.nih.gov/health/vascular-dementia>

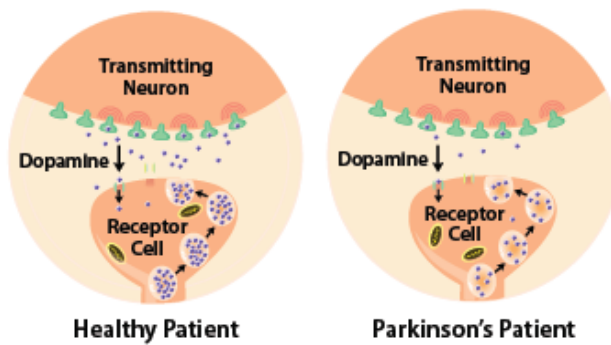
U.S Department of Health and Human Services (HHS). (n.d.). *Alzheimer's and related*

*dementias: What is vascular dementia?* <https://www.alzheimers.gov/alzheimers-dementias/vascular-dementia>

## Parkinson's Disease

### Background Information

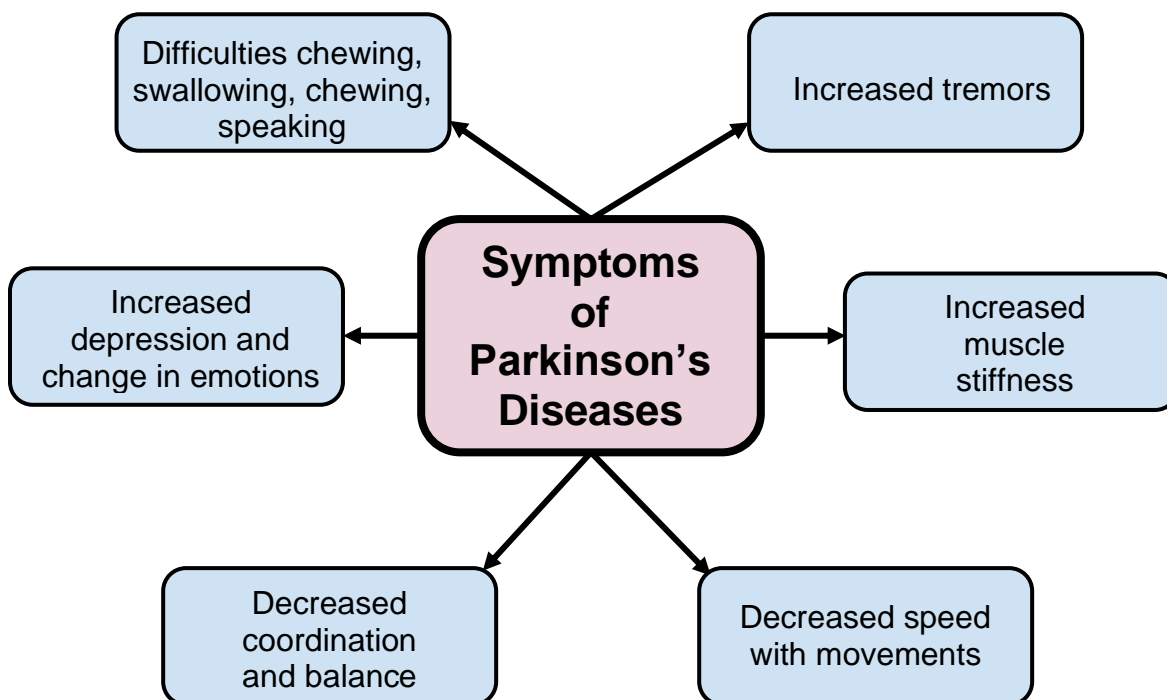
- This is a progressive disease (worsens over time)
- Neurons in the brain that would typically produce dopamine die or become impaired (less dopamine being produced = impacted movements)



(Oregon Health & Science University, n.d.)

### Who is impacted by this disease?

- Men are more affected than women
- Typically develops after age 55 (can, however, impact younger ages too)
- Roughly 60,000 new Parkinson's Disease diagnoses each year



\*\*With Parkinson's Disease Dementia, individuals experience memory loss along with the above listed symptoms.

## References

American Association of Neurological Surgeons. (n.d.). *Neurological conditions and treatments:*

*Parkinson's disease.* <https://www.aans.org/en/Patients/Neurosurgical-Conditions-and-Treatments/Parkinsons-Disease>

National Institute on Aging. (April 14, 2022). *Health topics A-Z: Parkinson's disease: Causes,*

*symptoms, and treatments.* <https://www.nia.nih.gov/health/parkinsons-disease#:~:text=Parkinson's%20disease%20is%20a%20brain,have%20difficulty%20walking%20and%20talking.>

Oregon Health & Science University. (n.d.). *Brain institute: Understanding Parkinson's disease*

[photo]. <https://www.ohsu.edu/brain-institute/understanding-parkinsons-disease>

## Incontinence

### Types of Incontinence

- Urinary Incontinence
  - Leaking urine intermittently
  - Continued leaking after urination
  - Complete bladder control loss
  - Overactive bladder - constant feeling of needing to go to the bathroom
  - Impacts women more than men
- Bowel Incontinence
  - Some leakage of bowel movement when passing gas
  - No control of bowels at all
  - Impacts both men and women equally

### Causes

<b>Urinary tract infections</b> <ul style="list-style-type: none"> <li>● Make sure thorough cleaning is completed for all residents following toileting (wiping FRONT to BACK, especially with females)</li> </ul>
<b>Constipation</b>
<b>Problems with prostate gland</b> (males)
<b>Side effects of certain medication usage</b> <ul style="list-style-type: none"> <li>● Sleeping medications and antidepressants (relax bladder muscles)</li> <li>● Coffee and tea may increase urination (similar to taking a diuretic medication)</li> </ul>
<b>Gastrointestinal conditions/ other medical conditions</b>
<b>Environmental obstacles</b> <ul style="list-style-type: none"> <li>● Individual may be unable to locate bathroom</li> <li>● Clothing is difficult to remove</li> </ul>

### Importance of Creating a Toileting Schedule

- Creates a routine for the individual
  - Individuals living with dementia have decreased abilities to create their own routine, team members are here to assist with that
- Utilizing the bathroom right away in the morning when getting up/dressed
- Assist the resident to the bathroom every 2 hours throughout the day
- Adjust the schedule as needed
  - If the resident is typically soiled when it is their toileting time, increase their frequency of toileting times (each hour), if a resident typically holds for 4 hours on a typical day, then decrease their toileting frequency

### Example of Toileting Schedule (Every 2 hours)

6am __	2pm __
8am __	4pm __
10am __	6pm __
12pm __	8pm __

### Example of Toileting Schedule (Every 4 hours)

6am __
10am __
2pm __
6pm __
Before bed __

- Each resident will require a specific schedule to fit their individual needs
- Adjust as needed, ensure all team members are aware of the schedule
- A resident may attempt to get up on their own if they need to use the restroom (this poses a **HUGE** fall risk)
- Sticking to a routine schedule will allow the resident to become acquainted and less likely to attempt getting up on their own to the toilet
- Can be helpful to print a toileting schedule to keep in the resident's room to remind them of their set toileting times



## References

Alzheimer's Association. (n.d.). *Daily care: Incontinence*. <https://www.alz.org/help-support/caregiving/daily-care/incontinence#:~:text=Provide%20a%20reminder%20to%20use,meals%20and%20j ust%20before%20bedtime>.

Alzheimer's Society. (February 23, 2023). *Toileting problems, continence, and dementia*. <https://www.alzheimers.org.uk/get-support/daily-living/toilet-problems-continenence#:~:text=A%20person%20with%20dementia%20is,bowel%20don't%20work%20properly>.

## **Section Three (3)**

## General Fall Facts

**25%** of older adults (65+) have reported a fall

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Every **20 minutes**, there is a death caused from a fall

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More than **8 million** falls require medical attention each year

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Falls are the leading **cause of death** for older adults age 65+

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In the year 2020, **3 million** fall-related visits to the emergency department were recorded

---

Individuals living with dementia have an **increased** risk for falling

---

More than **95%** of hip fractures are caused by a fall

## References

Centers for Disease Control and Prevention. (2020). *Older adult falls: A growing problem that can be prevented* [Factsheet]. [https://www.cdc.gov/steady/pdf/steady\\_clinicianfactsheet-a.pdf](https://www.cdc.gov/steady/pdf/steady_clinicianfactsheet-a.pdf)

Centers for Disease Control and Prevention. (2021). *Older adult fall prevention*. <https://www.cdc.gov/falls/index.html>

Centers for Disease Control and Prevention. (2016). *Older adult fall prevention: Hip fractures*. <https://www.cdc.gov/falls/hip-fractures.html>

National Safety Council. (n.d.). *Safety topics: Fall safety: Take steps to regain independence longer*. <https://www.nsc.org/community-safety/safety-topics/older-adult-falls>

## Factors Leading to Falls

### Medication Factors that Increase Fall Risk

Psychoactive medications and antidepressants (can result in mood changes)	Impaired judgment and coordination
Taking 5+ medications (polypharmacy)	Decreased alertness and sleep
Delirium (confusion and disorientation)	Decrease in blood pressure when changing positions (orthostatic hypotension)

### Medical Diagnoses Factors that Increase Fall Risk

Hypertension (high blood pressure)/ orthostatic hypotension	Arthritis (inflammation/swelling in joints)
Dementia	Vision problems (changes in depth perception)
Cancer and heart problems	Incontinence

### Environmental Factors that Increase Fall Risk

Uncleared walkways, clutter, uneven surfaces	Inadequate footwear
Inadequate lighting	Slippery floor surfaces
Inappropriate use of assistive devices	Lacking support systems (railings)

### Functional Impairment Factors that Increase Fall Risk

Gait abnormalities (walking/mobility)	Weakness of arms and legs
Decreased independence with completion of various tasks	Need for use of a wheelchair or walker

### Neuropsychiatric Symptom Factors that Increase Fall Risk

Increased restlessness	Cognitive impairments (decreased executive functioning)
Wandering	Impaired sense of safety
Increased agitation	Memory difficulties

## References

- Centers for Disease Control and Prevention. (2021). *Older adult fall prevention*.  
<https://www.cdc.gov/falls/index.html>
- Coughlin, D., Nordman-Oliveira, S., Schlaak, M., & Ford, J. H. (2019). Falls prevention process in assisted living communities. *Journal of Applied Gerontology, 38*(6), 805–824.  
<https://doi.org/10.1177/0733464817748776>
- Damián, J., Pastor-Barriuso, R., Valderrama-Gama, E., & de Pedro-Cuesta, J. (2013). Factors associated with falls among older adults living in institutions. *BMC Geriatrics, 13*(6), 1-9.  
<https://doi.org/10.1186/1471-2318-13-6>
- DeVol, S. A. (2013). A multidisciplinary fall management program design using home health for elderly residents with dementia residing in an assisted living setting. *GeriNotes, 20*(1), 9–13.
- Fernando, E., Fraser, M., Hendriksen, J., Kim, C. H., & Muir-Hunter, S. W. (2017). Risk factors associated with falls in older adults with dementia: A systematic review. *Physiotherapy Canada, 69*(2), 161–170. <https://doi.org/10.3138/ptc.2016-14>
- Jensen, L. E., & Padilla, R. (2011). Effectiveness of interventions to prevent falls in people with Alzheimer's disease and related dementias. *The American Journal of Occupational Therapy, 65*(5), 532–540. <https://doi.org/10.5014/ajot.2011.002626>
- Kato-Narita, E. M., & Radanovic, M. (2009). Characteristics of falls in mild and moderate Alzheimer's disease. *Dementia & Neuropsychologia, 3*(4), 337–343.  
<https://doi.org/10.1590/S1980-57642009DN30400013>

Lim, S. C. (2017). Managing the elderly with dementia and frequent falls. *General Medicine Open*, 2(1), 1-4. <https://doi.org/10.15761/GMO.1000120>

National Center for Assisted Living. (2014). *A conversation about falls in assisted living* [Fact sheet]. [https://www.ahcancal.org/Assisted-Living/Provider-Resources/Documents/Falls\\_Consumer.pdf](https://www.ahcancal.org/Assisted-Living/Provider-Resources/Documents/Falls_Consumer.pdf)

Zimmerman, S., Greene, A., Sloane, P. D., Mitchell, M., Giuliani, C., Nyrop, K., & Walsh, E. (2017). Preventing falls in assisted living: Results of a quality improvement pilot study. *Geriatric Nursing*, 38(3), 185–191. <https://doi.org/10.1016/j.gerinurse.2016.09.003>

## **Section Four (4)**



## Gait Belt Usage and Importance



(Images taken by Maureen Doran, OTD Student)

- Use when a resident requires assistance with transfers and/or with ambulation
- Use if a resident is unstable when standing and requires redirection/physical gestures to avoid running into walls/other objects
- A gait belt does not mean that a resident has decreased independence
  - Used as a prevention measure to decrease fall risk
  - If a gait belt is not on a resident during transfers/ambulation, there is no **SAFE** way to lower the resident to the ground or stabilize them if a moment of instability occurs
- Belt should be snug around resident's waist **OR** above chest area (see images above)
  - 2 fingers should fit between the gait belt and the resident (see images above)
- **EXPLAIN** why the gait belt is being used to residents: "I am going to get this belt around you for both your safety and mine. I will remove it as soon as we are done."
- Putting on a gait belt
  - Through the "teeth" loop first and then through other loop
  - Tuck in the extra slack
- **REMOVE** the gait belt when the resident is at their final destination (has transferred into bed for a nap, is seated safely in wheelchair/on couch/chair)
  - Remove the belt gently (avoid pulling on belt as that can scrape the resident's skin)
- Gait Belts **SHOULD NOT** be used to lift a resident off the ground following a fall
  - They can be used to **ASSIST** a resident up if the resident is able to help with standing

## References

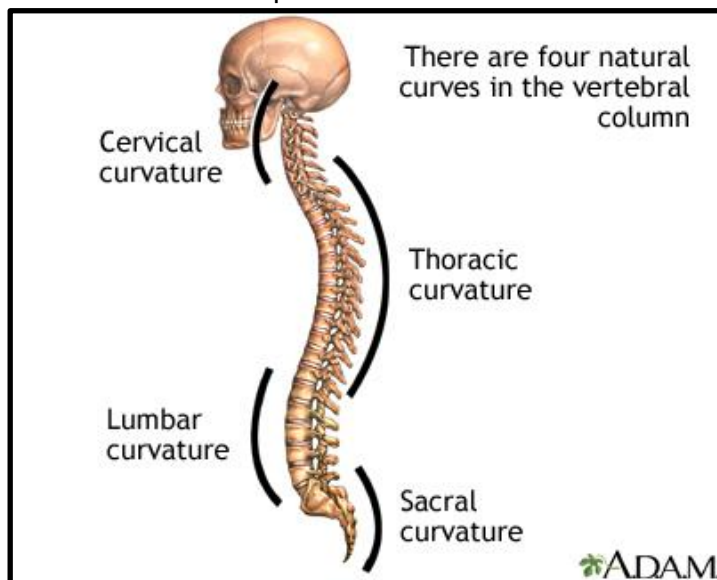
Anton. P, Rosso. K. (2017). *Using a gait belt* [PDF].

<https://www.med.umich.edu/1libr/FallsPreventionCommittee/UsingAGaitBelt.pdf>

## Proper Body Ergonomics with Transfers

### Proper Body Mechanics and Positions with Transfers:

- **BEFORE** the transfer, ensure the path in which you will be moving with the resident is cleared from objects
- Bend at the knees and hips (avoid bending at your waist)
- Maintain the 4 curvatures of the spine



(MedlinePlus, 2021)

- Ensure feet are approx. 12 inches apart and flat on the floor
- Pivot **WITH** the resident (avoid twisting at waist)
- Ensure you are close to the resident during each transfer



(Amputee Coalition, 2009)

- Take your time with **ALL** transfers
- Proper body positioning will increase **BOTH** your safety and safety of the residents
- Take breaks when your body is feeling tired to decrease injury risk

## References

Amputee Coalition. (2009). *Body mechanics: Positioning, moving, and transfers*.

[https://www.cdss.ca.gov/agedblinddisabled/res/VPTC2/5%20Injury%20and%20Fall%20Prevention/Positioning\\_Moving\\_Transfers.pdf](https://www.cdss.ca.gov/agedblinddisabled/res/VPTC2/5%20Injury%20and%20Fall%20Prevention/Positioning_Moving_Transfers.pdf)

MedlinePlus. (July 28, 2021). *Medical encyclopedia: Lifting and bending the right way*.

<https://medlineplus.gov/ency/patientinstructions/000414.htm>

MedlinePlus. (July 28, 2021). *Medical encyclopedia: Spinal curves* [photo].

<https://medlineplus.gov/ency/imagepages/19463.htm>

Stanford University. (n.d.). *Ergonomics: safe lifting*.

<https://ehs.stanford.edu/topic/ergonomics/safe-lifting>

## Proper Use of a Walker

- Walkers are also referred to as assistive devices or walking aids
- These provide increased protection against falls when used properly
  - Increase stability and support with standing, transfers, and walking
- When standing up, the resident should be approximately one foot from the front of their walker
- Make sure the walker is at an adequate height so the resident is not hunched over when standing and holding onto the walker handles
  - Can adjust the height with the legs of the walker
- Some walkers (4 wheeled) have a seat attached
  - Can be used in a pinch if the resident needs a seated rest break
- Encourage residents to move slowly when using a walker, there is no need to rush
- It is recommended that non-skid tips are placed on 2 wheeled walkers to prevent sliding (see image below)
- 4 wheeled walkers have breaks (see image below)
  - Ensure these are locked when transitioning from a sitting to standing position



Image of 2 wheeled walker (left) and 4 wheeled walker (right)  
(Images taken by Maureen Doran, OTD Student)

## References

Fairview. (n.d.). *Patient education: Preventing falls: Moving safely using a cane or walker.*

<https://www.fairview.org/patient-education/89327>

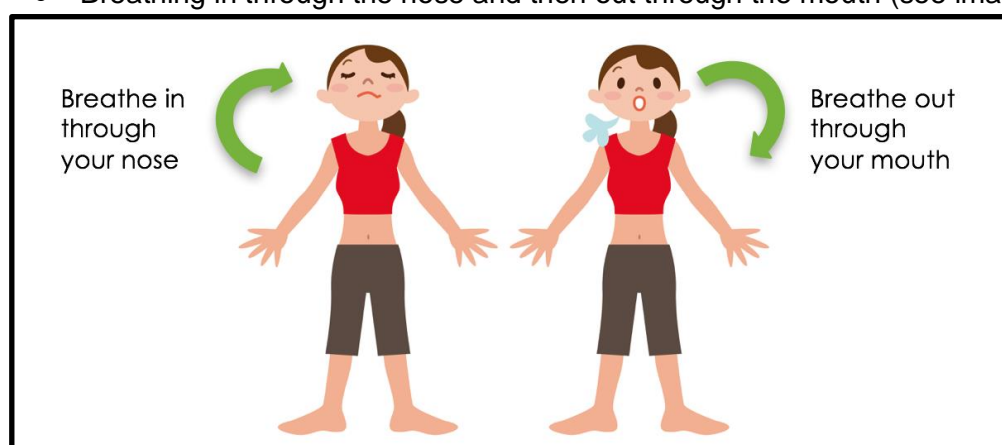
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[prevention/art-20047358](https://www.mayoclinic.org/healthy-lifestyle/healthy-aging/in-depth/fall-prevention/art-20047358)

## **Section Five (5)**

## Managing Dementia-Related Behaviors

- Remove what is potentially causing the behavior
- Allow the resident to have space
- Be agreeable with the resident, have their side
- Talk to the resident at their **EYE** level
  - Avoid talking down to the resident
  - If the resident is in a wheelchair, crouch down to meet them where they are at
  - Sit off to the side of the resident (less intimidating than directly facing them)
- Hand under hand technique is oftentimes reassuring to the resident
- Engage the resident in deep breathing techniques
  - Breathing in through the nose and then out through the mouth (see image below)



(Aligned Modern Health, n.d.)

- Speak **SLOW** and in a calm manner
  - The residents can read your emotions and body language, try to be as relaxed as you can
- If the resident is able to let you know what they need, please tend to their needs
  - If the resident is unable to voice needs, try to figure out if there are any needs **NOT** being met
- Investigate the **WHY** behind the behaviors that are occurring
  - For example: If a resident is wandering, they may be looking for something, need to use the bathroom, or want to walk. In this scenario, you could walk with them and engage them in conversation, or help them to the bathroom.
- Find something that the resident is interested in doing or enjoys and engage them in activities or conversation
- Provide one step instructions to decrease frustration
- Ensure that sentences and communication are kept **SIMPLE** to also decrease frustration and agitation



# 10 Tips for Communicating With a Loved One With Dementia



Get their Attention



Set a Positive mood



State your message clearly



Ask simple Questions



Listen with your eyes



Show affection



Break it Down



Reminisce



Maintain your Humor



Redirect

(WellPath Partners, 2021)

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*people with dementia*. <https://www.alzheimers.org.uk/about-dementia/symptoms-and-diagnosis/symptoms/preventing-aggression>

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*dementia* [photo]. <https://wellpathpartners.com/ten-tips-for-communicating-with-a-loved-one-with-dementia/>

## Managing and Preventing Falls

### Fall Factors Relating to Medication Usage

<p><b>Are you assessing each resident for possible changes in condition?</b></p> <ul style="list-style-type: none"> <li>• Monitor for increase slouching, need for assistance with tasks, increased confusion/delirium</li> </ul>
<p><b>Are you hydrating residents throughout the day?</b></p> <ul style="list-style-type: none"> <li>• Dehydration can cause a decrease in blood pressure causing the resident to experience dizziness</li> </ul>
<p><b>Are residents taking medications that may increase their sleepiness?</b></p> <ul style="list-style-type: none"> <li>• Monitor each resident closely to ensure their safety</li> </ul>
<p><b>Are team members taking time when assisting residents with transfers?</b></p> <ul style="list-style-type: none"> <li>• Slowly transition between positions when transferring/assisting residents to decrease likelihood of the resident experiencing changes in blood pressure leading to dizziness</li> </ul>
<p><b>Are all medications increasing the resident well-being and quality of life?</b></p> <ul style="list-style-type: none"> <li>• Certain non-essential medications can increase dizziness and lightheadedness, which increases fall risk</li> </ul>



(American Academy of Sleep Medicine, 2019)

### Fall Factors Relating to Medical Diagnoses

<p><b>Are the residents' glasses on if they typically wear them?</b></p> <ul style="list-style-type: none"> <li>• Please make sure residents have these on so they can see where they are going and have more awareness of where they are</li> </ul>
<p><b>Are the residents wearing hearing aids if they typically wear them?</b></p> <ul style="list-style-type: none"> <li>• Please make sure residents have these in so they can hear other residents and team members and have increased interactions throughout the day</li> </ul>
<p><b>Are residents' needs being met?</b></p> <ul style="list-style-type: none"> <li>• Some medical diagnoses may decrease a resident's ability to ask for help with certain tasks (team members determine what the resident needs) or increase a residents need to use the bathroom, assist with this as needed to ensure resident safety</li> </ul>



(Acoustic Audiology and Hearing Aid Services, 2020)

### Environmental Factors that Increase Fall Risk

#### Are walkways and rooms cleared of clutter?

- Remove throw rugs, electrical cords, and other objects that are hazards

#### Are spills being cleaned up in a timely manner?

- Clean and dry the kitchen floor following meals, dry bathroom floors following showers as needed

#### Are residents wearing proper footwear throughout the day?

- Make sure shoelaces are tied, tennis shoes or supportive slippers are worn when residents are walking around, gripper socks are another option to be worn if the resident is refusing to wear shoes

#### Do resident rooms and all common areas have adequate lighting?

- Make sure in all areas of the home, residents can see where they are going
- Install night lights as needed throughout the home and in resident rooms

#### Are all grab bars secured in bathrooms and showers?

- These allow for safe hand placement and additional stability when residents are transferring to the toilet or shower



(Amazon, n.d.)

### Functional Impairment Factors that Increase Fall Risk

#### Are wheelchair brakes being locked prior to transfers?

- Lock the brakes before standing the resident and before assisting the resident back to a seated position in the chair

#### Does the resident typically use a walker to walk and transfer?

- If so, make sure they are using the device appropriately to prevent falls

#### Does the resident experience increased weakness in the arms or legs?

- Following behind with a wheelchair when the resident is walking to make sure there is a safe break option if the resident needs

#### Is the resident requiring more assistance with completion of tasks?

- Assist with the tasks as needed, have the resident complete as much on their own as they can SAFELY

#### Are you using a gait belt when assisting residents with transfers and walking?

- Each resident should have a gait belt in their room to use when needed (increases stability with transfers and walking)

#### Are team members utilizing 2 people for all Hoyer lift and EZ stand transfers?

- Work together as a team and make sure you have a team member with you when using these lifts to ensure the resident is safe



(Image taken by Maureen Doran, OTD Student)

### Neuropsychiatric Symptom Factors that Increase Fall Risk

#### Are team members responding to floor/chair/bed/pendant alarms in a timely manner?

- Residents are likely to attempt transfers, walking, and other tasks on their own that may not be safe due to their decreased sense of safety - make sure you are attending to residents when an alarm goes off to assist them as needed

#### Are residents being engaged physically and mentally throughout the day?

- Make sure residents are being engaged each day to stimulate their brains and bodies
- Engaging residents in activities can help with decreasing restlessness and wandering

#### Are you responding and communicating with residents and team members throughout the day?

- Make sure all team members are on the same page and have a plan for the shift so that all residents are taken care of and provided with best care
- When communicating with residents, remain calm and put yourselves in their shoes to prevent agitation



(Walmart, n.d.)

## References

- Acoustic Audiology and Hearing Aid Services. (2020). *Why don't hearing aids correct my hearing the way my glasses correct my eyesight?* [photo]. <https://www.acousticaudiology.ca/why-dont-hearing-aids-correct-my-hearing-the-way-my-glasses-correct-my-eyesight>
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Walmart. (n.d.). *Floor mat exit alarm for elderly fall prevention & anti-wandering - Economy system* [photo]. <https://www.walmart.com/ip/Floor-Mat-Exit-Alarm-for-Elderly-Fall-Prevention-Anti-Wandering-Economy-System/317017831>



## **Section Six (6)**

## Advocating for Quality Care

### STEP 1: FOLLOW CORE VALUES

#### RESPECT

“Treat each resident with the highest respect at all times, BeeHive Homes is their home”

- You are caring for the residents at BeeHive, please treat them how you would want a loved one treated

#### HAPPINESS

“We are in the business of creating smiles”

- Did you know that your smile brings an abundance of happiness and joy to the residents?

#### SERVICE

“When you serve with love, you will love to serve”

- Provide cares with the best intentions and all the love you have, it will be noticed

#### TIME

“Your greatest gift is often your time”

- Please allow each resident to take the time they may need for their activities, assist as needed

#### GRATITUDE

“Count your many blessings”

- Think about what a **HUGE** difference you are making in the lives of each resident and their families. You are doing amazing work!

### STEP 2: SHARE YOUR KNOWLEDGE

- You know the disease, you know the residents, share what you know
- Your knowledge will help others understand the disease and how someone deserves to be cared for
- Advocate for each resident by sharing your knowledge on what they may like or what to engage them in

### STEP 3: SPEAK UP

- If you see something that needs to be changed, say something
- If you see a resident acting in a manner that is unusual for them, do your best to figure out what you can do to help
- Not all residents are able to voice their needs, you are their voice, please do what you can to ensure their needs are met

### STEP 4: ASK FOR HELP

- If you have questions, ask someone who may be able to assist you
- No one has all the answers, work as a team to combine all personal strengths

## References

Alzheimer's Society of Manitoba. (2014). *What is an advocate?* [Factsheet].

<https://www.alzheimer.mb.ca/wp-content/uploads/2014/06/Factsheet-1-What-is-Advocacy-letterhead.pdf>

Isaac, A. (2021). Advocacy for Alzheimer's. *Delaware Journal of Public Health*, 7(4), 16–18.

<https://doi.org/10.32481/djph.2021.09.004>

\*\*Core values of BeeHive Homes in Mount Horeb, WI (U. Miller, personal communication, June 14th, 2022).

## Preventing Burnout

### What is burnout?

- Stress experienced by an individual due to job demands
- In the last 10 years, there has been a significant increase in individuals experiencing burnout in the workplace
- Burnout can happen in any job position
- Finding ways to manage stress and have work-life balance will decrease risk of burnout

### How can I help prevent workplace burnout?

- Your health is **JUST** as important as the health of the residents living at BeeHive
- Communicate with team members and let them know when you need a break
  - Taking breaks is **OKAY**, in fact, it is **ENCOURAGED** (just be sure team members are okay with it, that they know you are taking a break, and when you plan to return)
- You are doing difficult work that is both physically and mentally draining each shift
  - You are making a **HUGE** positive impact in the lives of each resident

**Thank YOU for all that YOU do!**

- What are some things that bring you joy?
  - Do you like to go on walks outside, cooking or baking, spending time with friends or family, reading, crafts?
- Saying **NO** is **OKAY**: please only take on what you can reasonably handle
- You are working as a team, you are **NOT** alone
  - Please ask team members for help if you need anything



(Image taken by Maureen Doran, OTD Student)

### References

De Hert, S. (2020). Burnout in healthcare workers: Prevalence, impact and preventative strategies. *Local and Regional Anesthesia*, 13, 171–183.

<https://doi.org/10.2147/LRA.S240564>

## Appendix D: Transfer and Mechanical Lift Videos



The above QR Code will take you to the playlist containing the eight (8) videos with transfer demonstrations.

## **Appendix E: Transfer Training**

### **BeeHive Homes Transfer and Lift Training**

Maureen Cara Doran

St. Catherine University

Capstone Project completed in partial fulfillment of the Doctor of Occupational Therapy Degree

Faculty Advisor: Dr. Stephanie de Sam Lazaro, OTD, MA, OTR/L

**\*\*Training updated and created by Maureen Doran, Doctor of Occupational Therapy Student at Saint Catherine University (Saint Paul, MN), owned by BeeHive Homes of America, Inc.\*\***

# Body Mechanics & Transfer Preparation Training

## Proper Body Mechanics and Positions with Transfers:

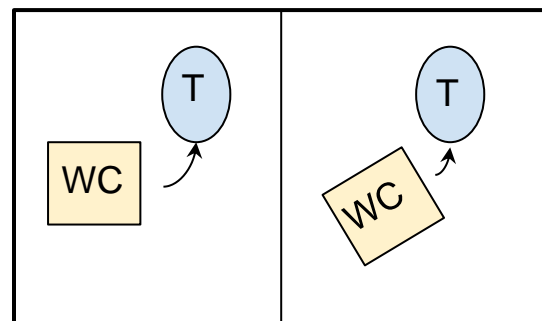
- **BEFORE** starting the transfer, make sure the path that you will be moving with the resident is cleared from objects
- Stand close to the resident
- Bend at your knees and hips (avoid bending at your waist)
- Make sure your feet are about 12 inches apart and flat on the floor
- Maintain the 4 curvatures of the spine
- Move **WITH** the resident (avoid twisting at waist)
- Take your time with **ALL** transfers
- Proper body positioning will increase **BOTH** your safety and the safety of the residents

## Preparing Resident for a Transfer:

- Help the resident scoot forward to the edge of their bed/chair
- Have the resident get their nose over their toes (ensure they are bent forward)
- Have the resident push with their arms from the arm rests or from a non-moving surface
- When a resident is using a walker, make sure one hand is placed on their walker and the other hand is pushing up from a non-moving surface

## General Transfer Safety Tips:

- Make sure the resident has on supportive footwear **OR** is wearing socks with grips
- Stand the resident slowly to avoid them experiencing dizziness
- Check the resident for any changes in condition
- If the resident is transferring from their wheelchair to another surface, make sure the wheels of the wheelchair are **LOCKED** before standing
- Block the resident's feet with your feet to provide more support if needed
- When transferring a resident from their wheelchair to the toilet, make sure their wheelchair is placed in a position where the resident is able to stand and move back **WITHOUT** the chair getting in the way (see in image on the right)
- If the resident is standing up from a chair that has the potential to move back when the resident starts to stand...
  - A team member should stand behind the chair to prevent sliding and have one hand minimum on the resident's gait belt to stabilize
- Make sure the bed is at a good height for **YOU** during check and changes and repositioning of residents in bed



\*Resident **AND** Team Member **SAFETY** is the **TOP** Priority\*

\*When in Doubt, **ASK FOR HELP**, you are **NOT** Alone\*



## Gait Belt Training



**Above Chest**

**Around Waist**

- Use when a resident needs help with transfers and/or with walking
- Use if a resident is not stable when standing and needs redirection/physical gestures to prevent running into walls/other objects
- A gait belt does not mean a resident has decreased independence
  - Used to help prevent falls
  - If a gait belt is not on a resident during transfers/walking, there is no **SAFE** way to lower the resident to the ground or stabilize them if a moment of instability occurs
  - If a resident is up and standing/walking without a gait belt, make sure they are moved into a safe positioning **PRIOR** to putting on the gait belt
- The gait belt should be snug around the resident's waist **OR** above the chest area (see images above)
  - 2 fingers should fit between the gait belt and the resident (see images above)
- **EXPLAIN** why the gait belt is being used to the residents
- Putting on a gait belt
  - Through "teeth" loop first and then through other loop (chew before you swallow)
  - Tuck in the extra slack (see in images above)
- **REMOVE** the gait belt when the resident is at their final destination (has transferred into bed for a nap, is seated safely in wheelchair/on couch/chair)
  - Remove the belt gently (avoid pulling on belt as that can scrape resident's skin)
- Gait Belts **SHOULD NOT** be used to lift a resident off the ground following a fall
  - They can be used to **HELP** a resident up if the resident is able to help with standing

## EZ Stand Lift Transfers

---

### Requirements for EZ Stand Use:

- The resident must be able to bear the majority of weight in their legs, have upper body strength (be able to hold onto handles), and follow simple commands
- Make sure you have the right size sling to fit the resident
- Check weight limits on sling/lift to make sure the resident is within the weight requirements
- 2 team members working together to make sure the resident is safe

### Prior to Using EZ Stand:

1. Explain and understand **WHY** the resident needs to use the EZ Stand, and if the resident meets all requirements of the EZ stand use
2. Make sure the sling is not ripped/torn in any areas prior to putting behind the resident
3. Make sure the lift has a charged battery prior to utilizing
4. Know where the emergency stop button is prior to starting the transfer
  - a. If needed, push **IN** to stop the lift with the emergency button
  - b. To reset the emergency button, **ROTATE** the button in a clockwise direction
5. Demonstrate understanding and ability to charge the lift battery and locate the battery on the lift
  - a. Power must be **ON** in order for the lift to charge (turning the red button in a clockwise direction)
  - b. If the power is off, the battery will **NOT** charge
6. Demonstrate understanding and ability to lock/unlock the EZ stand breaks
  - a. When lifting a resident
    - i. **UNLOCK** the rear brakes (this will allow the EZ stand to stabilize when the resident is first lifted from their original position)
7. Before lifting the resident, make sure the EZ stand legs are in the **OPEN** position (increases stability and safety)
8. **ONLY** close the legs for a short period of time if needing to go through a narrow passage (example: getting into the bathroom from the resident's room)
9. Transfers to/from wheelchair - wheelchair brakes **MUST** be **LOCKED** before lifting the resident from or lowering the resident into their wheelchair
10. Demonstrate understanding and ability to lower the resident safely into their bed/wheelchair if there is a lift failure
11. **NO** suspension of residents in the sling for distances, the EZ stand is used to transfer a resident from one position to another (should **NOT** be lifting a resident up in their room and transferring them onto the couch in the living room)

### While Operating EZ Stand:

1. The sling **MUST** be snug but comfortable behind the resident
2. Resident's arms should be outside of the sling straps
3. Attach the sling straps onto the hooks ensuring the **SAME** color is attached on each side

4. Instruct the resident to lift their feet on/off the footplate - help as needed (may need to physically help lift the resident's feet)
5. Instruct the resident to hold onto the hand grips on the EZ stand and lean back into the sling
6. Make sure of the following:
  - a. Knees are placed against the knee pad
  - b. Feet are positioned on the footplate
  - c. Bottom edge of the sling is positioned on the resident's lower back and arms are outside of the sling
  - d. The brakes are **UNLOCKED**
  - e. Legs of the lift are in an **OPEN** position
7. Prepare the resident for transfer to reduce their fear/anxiety
8. Cue the resident to stand (push up with their legs, pull with their arms)
9. To lift the resident, press the **UP** arrow, to lower the lift, press the **DOWN** arrow
10. Gently raise the resident minimally from the surface
  - a. Perform a safety check **BEFORE** moving the resident
  - b. If any attachment is not correct, lower the resident, correct the problem, then raise the resident minimally and check again
11. Once the resident is at their final destination
  - a. Unhook the sling from the lift
  - b. Remove the sling from around the resident



**EZ Stand Sling**





**EZ Stand Lift**

# Hoyer Lift Transfers

---

## Requirements for Hoyer Lift Use:

- Make sure you have the correct size sling to fit the resident
- 2 team members working together to make sure the resident is safe
- Check the weight limits on the sling/lift to make sure the resident is within the weight requirements

## Prior to Using Hoyer Lift:

1. Explain and understand **WHY** the resident is requiring the use of the Hoyer, and if the resident meets the requirements of the Hoyer Lift
2. Make sure the sling is not ripped/torn in any areas prior to putting under the resident
3. Make sure the lift has a charged battery prior to utilizing
4. Know where the emergency stop button is prior to starting the transfer
  - a. If needed, push **IN** to stop the lift with the emergency button
  - b. To reset the emergency button, **ROTATE** the button in a clockwise direction
5. Demonstrate understanding and ability to charge the lift battery and locate the battery on the lift
  - a. Power must be **ON** in order for the lift to charge (turning the red button in a clockwise direction)
  - b. If the power is off, the battery will **NOT** charge
6. Demonstrate understanding and ability to lock/unlock the Hoyer Lift brakes
  - a. Brakes should always be **UNLOCKED** when using the Hoyer Lift (allows the lift to find center of gravity)
  - b. **NEVER** lock the Hoyer brakes
7. Before lifting the resident, make sure the Hoyer Lift legs are in the **OPEN** position (increases stability and safety)
8. **ONLY** close the legs for a short period of time if needing to go through narrow passage (example: getting into the bathroom from the resident's room)
9. Transfers to/from wheelchair - wheelchair brakes **MUST** be **LOCKED** prior to lifting the resident from or lowering them into their wheelchair
10. Demonstrate understanding and ability to lower the resident safely into their bed/wheelchair if there is a lift failure
11. **NO** suspension of residents in the sling for distances, the Hoyer Lift is used to transfer a resident from one position to another (should not be lifting a resident up in their room and transferring them onto the couch in the living room)

## While Operating Hoyer Lift:

1. If getting a resident up and out of bed with use of the lift, make sure the bed is raised to a good height to ensure proper body mechanics while placing the sling under the resident
2. The sling **MUST** be centered under the resident
3. The resident's arms should be crossed over their body when using the Hoyer Lift
4. Attach sling straps onto hooks

- a. Top straps must be the **SAME** color, bottom straps must be the **SAME** color
- b. Top straps and bottom straps do not necessarily need to be the same color
5. Spreader bar in which straps are attached should be placed perpendicular to the resident's chest
6. Make sure the following:
  - a. All brakes are **UNLOCKED**
  - b. Legs of the lift are in the **OPEN** position
7. Prepare the resident for the transfer to reduce their fear/anxiety
8. To raise the resident, press the **UP** arrow, to lower the lift, press the **DOWN** arrow
9. Gently raise the resident minimally from the surface
  - a. Perform a safety check **BEFORE** moving the resident
  - b. If any attachment is not correct, lower the resident, correct the problem, then raise the resident minimally and check again
10. Once the resident is at their final destination
  - a. Unhook the sling from the lift
  - b. Take the sling out from behind the resident if resident is in bed (okay to keep sling under the resident if the resident is in a wheelchair)



**Hoyer sling shown with blue straps on top and black straps on bottom**





Side that **IS** against the resident

Side that is **NOT** against the resident



**Hoyer Lift**

## Return Transfer Demonstration Videos

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### 1. Placement of a gait belt video



---

### 2. Transferring a resident with a gait belt video (one person assist)

(use of walker):



(no use of walker):



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### 3. Transferring a resident with a gait belt video (two person assist)



---

### 4. Ambulating with a resident with a gait belt video (one person assist)





5. **Ambulating with a resident with a gait belt video** (two person assist/wheelchair follow)



- 
6. **Transferring a resident with the use of an EZ Stand video** (2 person required)



- 
7. **Transferring a resident with the use of the Hoyer Lift** (2 people required)  
\*\*Proper Hoyer use demonstration incorporated in video below

- 
8. **Safely lifting a resident from the ground following a fall video** (2 people required for Hoyer Lift)



---

All eight (8) videos are contained in a playlist and can be found at the below QR code:



## Return Transfer Demonstration Sign Off Checklist

**Return Demos:** Team members practice with each other/management before working with residents to make sure they are comfortable and safe with below transfers.

1. **Placement of a gait belt** (including safe removal)
2. **Transferring a resident with a gait belt** (one person assist)
3. **Transferring a resident with a gait belt** (two person assist)
4. **Ambulating with a resident with a gait belt** (one person assist)
5. **Ambulating with a resident with a gait belt** (two person assist/wheelchair follow)
6. **Transferring a resident with the use of an EZ Stand** (2 person required)
7. **Transferring a resident with the use of the Hoyer Lift** (2 people required)
8. **Safely lifting a resident from the ground following a fall** (2 people required for Hoyer Lift)

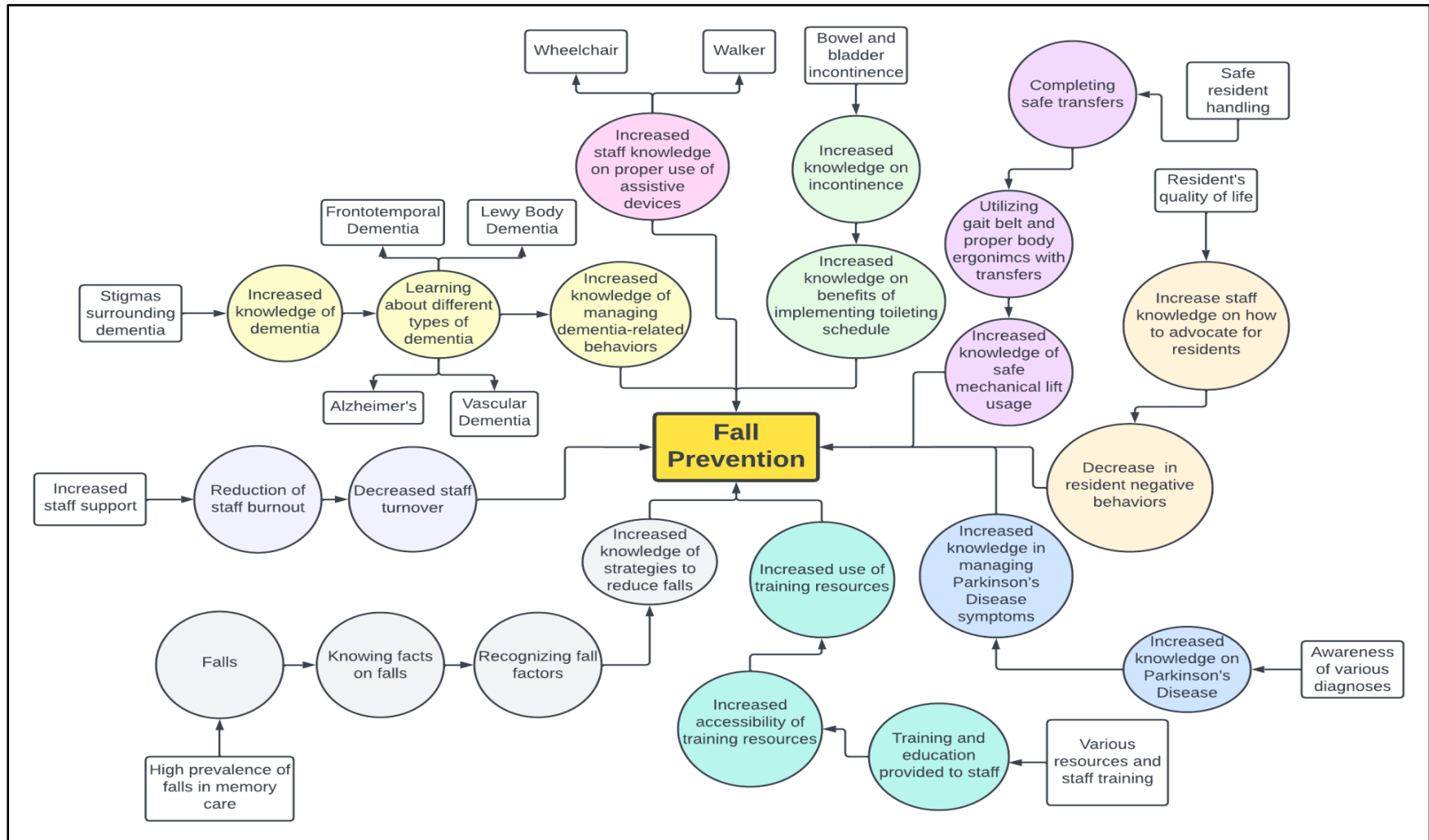
\*\*If the resident is complaining of head, neck, or back pain, **DO NOT MOVE** them from the ground, call 911\*\*

**Team Member Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Trainer Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

\*\*Signatures above represent team member understanding and acknowledgement of understanding in completion of above transfers and use of the EZ Stand and Hoyer Lift\*\*

### Appendix F: Fall Prevention Flowsheet



\*\*Flowsheet created by Maureen Doran, Doctor of Occupational Therapy Student at Saint Catherine University (Saint Paul, MN), owned by BeeHive Homes of America, Inc.\*\*

**Example overview of how to read the above flowsheet:**

- **Falls (gray bubbles):** There is a high prevalence of falls in memory care settings, due to this high prevalence of falls; this is an important topic to address. When team members are educated on fall facts and recognize fall factors, they will develop increased knowledge and confidence in strategies to reduce falls. Having this knowledge will help with fall prevention (decrease in falls).
- **Transfers (purple bubbles):** When working with other individuals needing assistance with transfers, it is critical to have knowledge on general safe resident/person handling. With increased knowledge on how to safely handle a resident with transfers, the resident and team members will be safer. Utilizing a gait belt, proper body ergonomics and safe/proper use of mechanical lifts will further increase ease and safety of both the team member and resident throughout transfers. Increased transfer safety and use of adequate materials will lead to fall prevention.
- **Dementia (yellow bubbles):** There is a negative stigma surrounding the dementia diagnosis; much of this stigma is due to a lack of knowledge and education on the diagnosis. When more individuals are aware of what dementia is and the different types (Alzheimer's, Frontotemporal, Lewy Body, Vascular), they will be more aware of the prevalence and changes this may cause in the lives of others. With more knowledge on the types of dementia, there will be increased knowledge on management of dementia-related behaviors, which will in turn, help with fall prevention.

## Appendix G: Teepa Snow Videos

### -Teepa Snow Training Videos-

[Dementia 101](#)

5 minutes, 50 seconds

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[Challenging Behavior](#)

6 minutes, 37 seconds

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[Meaningful Activities](#)

15 minutes, 16 seconds

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[Brain Changes](#)

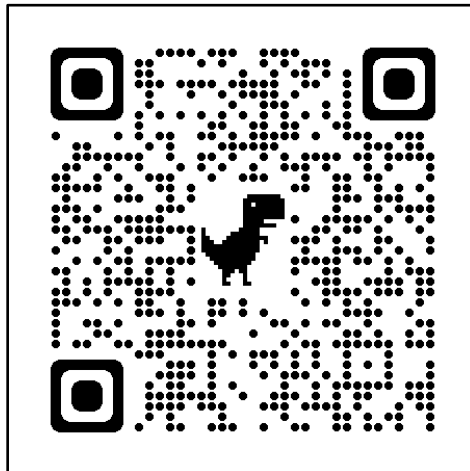
13 minutes, 36 seconds

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[Connecting Through Music](#)

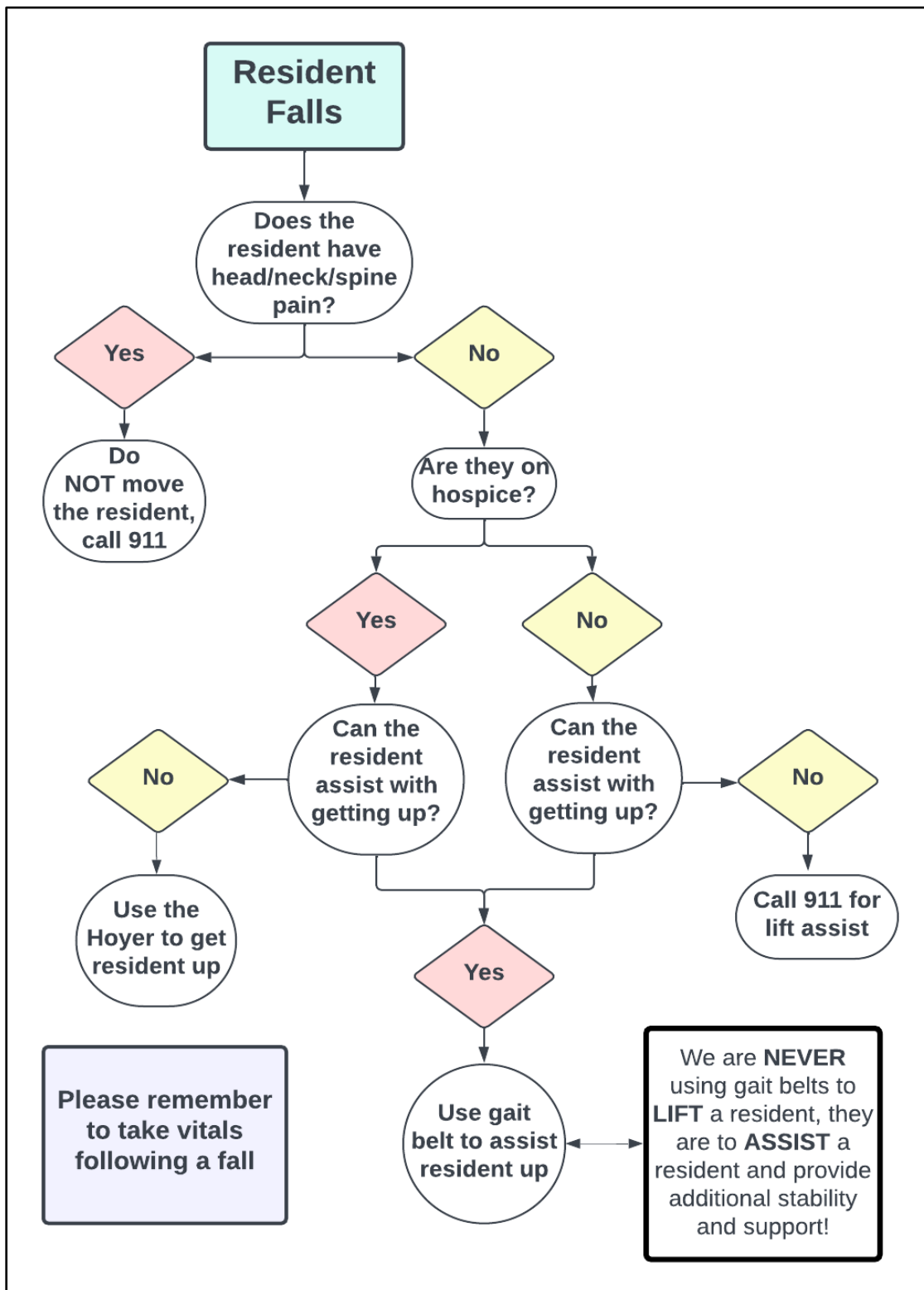
14 minutes, 50 seconds

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\*\*Please scan the above QR code to access Teepa Snow Training Videos\*\*

Appendix H: Resident Fall Protocol Flowsheet



\*\*Flowsheet created by Maureen Doran, Doctor of Occupational Therapy Student at Saint Catherine University (Saint Paul, MN), owned by BeeHive Homes of America, Inc.\*\*

### Appendix I: Post-Education/Training Survey Questions

1. Following this education and training, I feel prepared to prevent falls for residents at BeeHive Homes (circle answer).

Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree
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2. Following this education and training, I feel prepared to manage dementia-related behaviors at BeeHive Homes (circle answer).

Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree
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3. Following this education and training, I feel prepared to complete safe transfers at BeeHive Homes (circle answer).

Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree
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4. Education and training provided was beneficial to my job position and performance (circle answer).

Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree
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5. One thing I learned from the education and training that I will use in my work at BeeHive Homes is

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6. Something I wish the education and training had further information on is

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7. Any other comments?

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## Appendix J: Capstone Poster Presentation Slides



### EFFECTIVENESS OF STAFF EDUCATION ON FALL PREVENTION TECHNIQUES, MANAGEMENT OF DEMENTIA-RELATED BEHAVIORS, AND SAFE TRANSFER COMPLETION

Maureen Doran, OTD Student

Faculty Advisor: Dr. Stephanie de Sam Lazaro, OTD MA, OTR/L

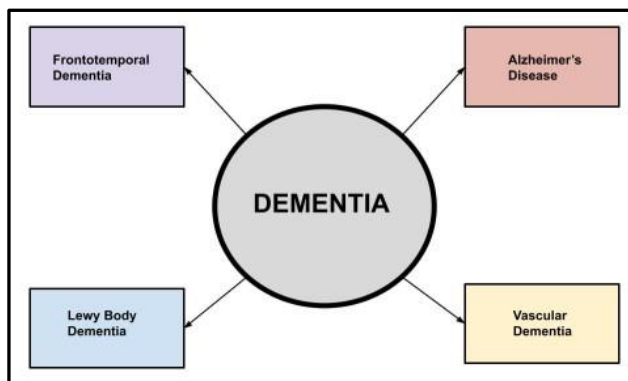
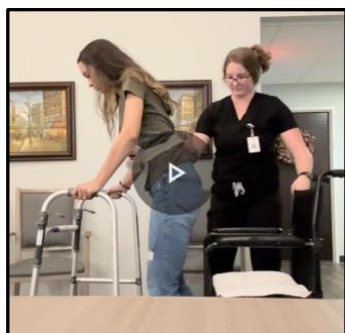
Capstone Mentor: Amber Gates

Acknowledgements: BeeHive Homes of Mount Horeb



### Background & Approach

- Dementia = higher fall risk
- Fall prevention = managing behaviors + safe transfers



2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18



## Results

**Gait Belts**

**Hoyer Lift  
& EZ  
Stand**

**Best Practices**

**Decrease in the Number of Falls**

## Implications and Recommendations

**Adequate  
Coverage  
each Shift**

**Strong Training  
and Orientation**

**Environmental  
Changes**

**Gait Belt  
Supply**

## References

