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# Silver Saddles: An Equestrian Intervention for Older Adults with Dementia

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## Case Study

### Silver Saddles: An Equestrian Intervention for Older Adults with Dementia

by Christine Jensen,  
Jessica Lyon, Tina Thomas,  
and Rachel Scrivano

#### Educational Objectives

1. Demonstrate the encouraging outcomes therapeutic horseback riding programs can have for older adults with memory loss.
2. Describe the importance of trained volunteers and staff at both the riding center and the long-term care community for aiding older adults with memory loss during the therapeutic riding program.
3. Showcase the research process and pilot results.
4. Highlight lessons learned and future directions for Silver Saddles.

#### Partners

The Geriatric Training and Education (GTE) initiative within the Virginia Center on Aging helped to fund a partnership between Dream

Catchers and the Riverside Center for Excellence in Aging and Life-long Health (CEALH). Colleagues from William & Mary, both in the School of Education and in Public Health, supported the trainings and the pilot project. Tina Thomas, Director of Programs and Services, Alzheimer's Association of Greater Richmond, developed the training curricula in collaboration with Christy Jensen, of CEALH.

#### Background

The Centers for Disease Control and Prevention (2018) estimate that by the year 2050, 13.8 million Americans aged 65 and older will be affected by Alzheimer's disease, a disease that becomes more prevalent with age. Those with dementia can experience both psychological and physical symptoms, such as depression, agitation, and cognitive decline, (Van der Linde, et al., 2017), as well as decreased balance and unsteady gait, increasing the risk of falls (Kearney, et al., 2013).

Hoping to improve the negative symptoms associated with Alzheimer's disease, some have introduced animal-assisted therapy

programs in their communities. For example, Richeson (2003) found that older adults who interacted with dogs and their handlers for five hours a week for three weeks had significantly decreased agitation and medication intake and increased sociability. However, cognitive ability did not improve. As hypothesized, agitated behaviors returned during a three week follow-up.

Horses have also been used in animal-assisted therapy after noting the benefits children with autism have experienced in social functioning (Bass, Dunchowny, & Llabre, 2009). A recent study at Ohio State University suggests that spending time with horses in activities such as grooming, touching, and leading worked to ease disruptive behaviors, like wandering and resisting care, in older adults with Alzheimer's disease (Dabelko-Schoeny et al., 2014). The Connected Horse program, a partnership with Stanford University and the University of California–Davis, is designed to increase non-verbal communication skills for both older adults with dementia and their caregivers through therapeutic activities

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with horses; it has shown that participating older adults experience more positive perception of social support, awareness, and appreciation for their caregivers ([www.connectedhorse.com](http://www.connectedhorse.com)). Although there have been other programs like these, they have focused solely on groundwork activities and have not offered a riding component, most likely due to potential risks associated with older adults and horseback riding. Shortly, we will address how we managed these risks with the Silver Saddles program.

Dream Catchers at the Cori Sikich Therapeutic Riding Center, located near Williamsburg, Virginia, is a non-profit organization specializing in therapeutic horseback riding, grooming, and other equine-assisted activities for individuals with disabilities or impairments. Since its founding 25 years ago, Dream Catchers has focused on developing and offering therapeutic riding programs for children with autism and related developmental disorders. In partnership with the William & Mary School of Education, several studies have shown substantial positive impact (e.g., increased socialization, improved mobility, and reduced agitation on children who participate).

### **The Beginning of Silver Saddles**

Inspired by these findings, Dream Catchers partnered with several long-term care communities and Tina Thomas (formerly dementia coordinator at one of these facilities, now at the Alzheimer's Association Greater Richmond Chapter), to develop Silver Saddles as an equine-assisted intervention for

older adults with memory loss. Silver Saddles incorporates horseback riding and grooming activities designed for those with early to moderate dementia who are residents in long-term care facilities (LTCFs). The program divides participants into two groups; one that has the capacity to ride a horse with assistance (with physician approval), and another that can interact with horses from the ground (e.g., grooming, feeding, learning through live interaction). Residents travel to Dream Catchers, via the LTCF-provided van, and spend two hours each week for eight to ten weeks. The program is typically offered during the spring and fall months to avoid extreme temperatures that can be challenging for the participants and the horses (Raia, 2017).



Dream Catchers provides three to four trainers for each session plus two to three volunteers to support each participant. Further, the program requires the participating LTCFs to make some of their staff available to assist their residents during the sessions. These staff members may include an activities director, dementia care coordinator, certified nursing assistant, social worker, or other direct care staff. In the first successful pilot program in the spring of 2014, the staff at one continuing care retirement community (CCRC) in Williamsburg sent 11 residents with mild to moderate

dementia to participate. The LTCF staff identified these participants as having an interest in and the ability to afford the sessions (costs are \$50-150 per session based on the therapeutic program provided, i.e., riding or ground only), and the Dream Catchers staff cleared them to enroll.

Another CCRC in Williamsburg learned of Silver Saddles and expressed interest in engaging their residents. In the fall of 2015, this second CCRC sent 11 residents to participate as well as four staff members. After the first session, both the staff and administration of Dream Catchers and the CCRC recognized the importance of offering specialized training on dementia care that would enhance the experience for the participants, the staff, and volunteers alike. This is where CEALH joined with Silver Saddles to assist in developing and offering training, while evaluating the outcomes of the training programs and the riding programs.

### **The Silver Saddles Program**

#### Training

While many of the Dream Catchers staff members and volunteers had limited interaction with individuals with dementia, they had a strong desire to support them and to learn the skills to do so. Further, there needed to be specialized training about the Silver Saddles program and the therapeutic riding approach to increase LTCF staff awareness when they accompanied their residents to the program.

CEALH conducted eight dementia care training sessions for staff

members at participating LTCFs, and staff and volunteers at Dream Catchers and other riding centers around the state. The purpose was to enhance the abilities of staff and volunteers to assess the immediate needs of the participants in a therapeutic horsemanship environment and to prepare for changes in interest and abilities during the course of the program. These training sessions consisted of four topics that were presented by CEALH and the Alzheimer's Association: 1) Understanding the impact of dementia, grief, and loss on older adults; 2) How to engage in person-centered dementia care and the value of living in the moment; 3) Administering the Montreal Cognitive Assessment (MoCA) test and the Personal Health Questionnaire (PHQ-9); and 4) Communication strategies for working effectively with persons with dementia.

In February 2017, a statewide training was held in conjunction with the annual meeting for the Therapeutic Riding Association of Virginia (TRAV). The 23 participants represented eight different therapeutic riding centers across the Commonwealth. The goal of this training, which was realized, was to strengthen the knowledge base of therapeutic riding instructors and volunteers about Alzheimer's and dementia care.

### Recruitment

During the spring 2017 program, five participants enrolled from one CCRC, and two of these individuals had authorized representatives (e.g., family members) who provided consent for them to participate in the pilot study. Fourteen Dream

Catchers staff and volunteers and six LTCF staff participated in focus groups, and one family member completed a phone interview.

### Measures

Participants first completed a demographic survey which also asked about previous experience interacting with horses. The MoCA is a standardized 10-minute, 30-point cognitive screening test to assist health professionals in detecting memory impairment, and the PHQ-9 is a standardized tool that serves as a proxy for quality of life and assesses degree of depression. These two tools were administered by the LTCF staff before, half-way-through, and after the riding sessions concluded to assess cognition and depression, respectively. The LTCF staff recorded falls and use of antianxiety medications weekly. The purpose of the focus groups was to solicit additional feedback on the participants' behavior and quality of life, as well as the caregivers' quality of life.

### Program Procedure

Each participant (and family member/authorized representative) is required to complete an application for Dream Catchers. This includes a medical history/physician release form, plus personal information, a confidentiality policy, and a Media/Videography/Imaging Release form. Additionally, Dream Catchers requires authorized representatives to complete a Waiver & Indemnity Agreement and for the partner organization to coordinate payment. Participants are then cleared for participation by medical staff of the facility, when they are

under direct care of the facility medical staff, or by their primary physician. Dream Catchers staff also assess potential participants for contraindications, mobility, balance, height/weight, emotional and cognitive status, and endurance.

At each Silver Saddles session, staff continuously evaluate participants to ensure they are fit to participate on any given day. Those who ride have volunteers (trained by Dream Catchers staff) on each side of them while they are mounted on the horse, with additional volunteers leading the horses and assisting on the ground. Both the mounted and ground portions of the class are taught by instructors certified by the Professional Association of Therapeutic Horsemanship (PATH) International. Members of the research team attended each Silver Saddles session to observe and build rapport with staff and participants. Some participants were cleared by their physicians to mount and ride the horses, while others participants were cleared only for ground-based activities.

### **Pilot Results**

While it may be an unconventional practice to place 90-year-old men and women on horses for the sake of health and happiness, the impact is noticeable. As shared by the dementia care coordinator at the LTCF, "The day we came back from the first program, the doctor was sitting at the front desk filling out paperwork and looked up to see the residents getting off the bus. The doctor told me the looks on the residents' faces said it all. She had never seen them more engaged."

Of the two participants in the pilot study, one was male and one was female, both being 90 years old and having a mild-to-moderate dementia diagnosis for approximately three years. Both participants had previous experience with horses: one started riding horses at age five; the other owned a horse as a child. They had also participated in a previous Silver Saddles session. The MoCA test was administered and scored three times by the LTCF staff. Interestingly, each participant gained two points over the course of the program; the clinical input was, "Short term memory does not improve remarkably but orientation shows some improvement. Perhaps the program improves alertness and awareness from the interaction with people and animals outside of the residential assisted living." It should be noted that different LTCF staff completed the MoCA tests, so it is possible that each staff member interpreted responses differently. However, these gains are worth considering as a potential benefit of Silver Saddles participation. The purpose in Silver Saddles is not to increase memory scores over the 10-week program, but to improve social interaction and "living in the moment" experiences for participants. There were no changes in the PHQ-9, as depression scores were extremely low throughout the program period.

### **Focus Groups**

We conducted focus groups at the midpoint of the intervention (after four lessons) and within a month of the last lesson with Dream Catchers' staff and volunteers. Overall, the biggest challenge identified by the Dream Catchers' team at mid-

point was communication with the participants. It was difficult at times for the instructors and volunteers to determine how well the participant felt physically. But they would try to gauge participants' well-being by asking questions such as "Are you too hot or too cold?" or "Does something hurt?" The Dream Catchers' staff also requested being in closer contact with the LTCF and they suggested a brief call the morning of the session to allow the LTCF staff to identify who would be at the session so that the riding center staff could prepare. The call also enabled an overview on how each participant seemed to be doing, which might affect engagement level.

After the program concluded, the same questions were asked as at the midpoint. Focus group respondents stressed that the biggest benefits happened in the moment (e.g., smiling and engaging more with their volunteers as they rode or groomed the horse). They also agreed that communication and patience remained their biggest challenges. The riding center instructors requested that the LTCF send a CNA to each session in case a medical situation arose or a participant needed to use the restroom. The consensus remained that the length of the sessions seemed appropriate so that participants could do everything at their own pace. As shared by one of the LTCF staff, "I love it! It is a form of Recreational Therapy at its finest! The residents always have a great time, which is easy to see on their faces during each session."

In addition, LTCF staff were invited to participate in an end-of-program

focus group. They reported improvements in the residents once they returned to the facility, noting such things as decreased agitation. Some of the staff expressed that the two-hour session length may be too long, as participants appeared more tired near the end. The Dream Catchers' staff maintained that the two hours is necessary so that no one feels rushed and each participant can move at his or her own pace in interacting with and riding the horse. One family member completed a mid-session and end-of-program interview. This individual was positive about the increased quality of life the loved one experienced, and that the session length of two hours seemed appropriate. The only suggestion made was to consider ways to engage and involve the family members at some of the sessions.

### **Case Study #1**

Jack has ridden horses since he was five years old. Serving under General Patton in World War II, he worked closely with the Spanish Riding School in Vienna, Austria where he helped to save the Lipizaner horse breed from certain death by starving Russian soldiers. Today, at 90 years old, Jack's passion for horseback riding remains strong. Although Jack has arthritis in his hips and knees, he enjoys walking and thus was a good candidate for participation in Silver Saddles. He has participated in two 10-week programs in the past two years, and his family indicated they have seen improvements in his outlook on life as a result of Silver Saddles. Before he began participating, the LTCF staff indicated he would rarely come out of his assist-

ed living room and seemed to be withdrawn. After several weeks of being encouraged to leave his room, get on the bus, and try Silver Saddles, he seemed hooked. The staff then reported that on the days they were participating in the program, he was dressed and ready at the nurse's station well in advance of departure time.

Jack participates in the warm-up time (chair exercises and a brief educational program). During the sessions, Jack is seen engaging with Norman, the horse assigned to Jack based on his height and weight, through petting and grooming. Jack is then asked to put on his required helmet for riding and he makes his way over to the mounting platform. Although he has experienced some challenges in mounting Norman due to this arthritis, Jack is willing to give it his best effort as he knows he is supported by the Dream Catchers' staff and volunteers. Once he is mounted, the volunteers lead Norman through the barn while Jack uses the reins and instructs Norman to turn different directions, to trot, and even gallop circles. Silver Saddles has offered Jack an opportunity to leave the LTCF, travel to the country, and engage with horses while reminding those of us observing of his affection for the Lipizzaner horses.

## Case Study #2

Jeanne is 90 years old and a college graduate. She has more moderate to late stage dementia. In fact, the first time she rode Macy, her horse at Dream Catchers, and then dismounted, she turned to the horse and asked where she came from as she had no recollection of her rid-

ing experience. The LTCF staff indicated that she was agreeable to getting dressed on the mornings they departed the facility for Dream Catchers, but would often ask throughout the 25-minute van ride where they were going. It's not clear if she recognized the barn as they arrived over the 10-week program, but once off the van, she would often comment that it "smelled like a farm." Upon seeing the horses come out of the stables, she would remind us that she owned a horse as a little girl. She willingly participated in the warm-up activities and enjoyed being able to nurture and pet Macy. When asked to put on her helmet and walk over to the platform, she would jokingly ask if her helmet looked okay and matched her outfit and if someone could keep an eye on her purse. Jeanne didn't appear to have any mobility issues, but would sometimes arrive in dress shoes instead of tennis shoes. She did express some concern that she might fall when trying to mount the horse. The staff and volunteers were right beside her and beside Macy and offered her step-by-step instructions to mount Macy. She was fine once on the horse, so there were times when the volunteers would sing songs with her to calm her during the mounting process. Her favorite song was "The Old Rugged Cross," so most of the staff and volunteers made an effort to learn the first few lines. Silver Saddles has offered Jeanne an opportunity to connect with her childhood and the time that her family owned a horse.

## Lessons Learned and Next Steps

The research team identified several lessons learned:

1. It can be challenging to recruit a sufficient number of facilities and participants to complete a randomized trial. The primary reasons facilities chose not to participate included: lack of interest, not enough staff available, and other key activities that they were trying to offer.
2. Significant staff training is needed to support the program, both in terms of data collection and in implementing Silver Saddles. Staff members at the LTCF tend to have little training in research protocols or in the use of some of the tools we used in the pilot. For example, we noticed some variability on MoCA scores between staff administering the survey. Further, we have found it challenging to collect data on changes in quality of life. We are considering the incorporation of a social engagement measure into the next iteration of this research.
3. Data collection should be very simple. There should be a low burden on busy LTCF staff and minimal requests for additional information. The research team should also provide the facility with clear instructions and templates.
4. Participants and staff suggest that future work should involve caregivers, together or separate from the participants. This may include caregivers whose loved ones reside with them in the community, in addition to those in congregate settings.
5. It is time consuming to oversee the program and research component adequately. A future study should have a dedicated research coordinator who is able to work at least half-time on the study.

The Silver Saddles program experi-

## Editorials

enced success due to high-quality, in-depth dementia training sessions for staff and volunteers and because of the dedicated partners at both the riding center and LTCF. Other riding centers around the state are following the Silver Saddles model and are expanding their programming to include persons with dementia. Silver Saddles and programs like it may serve as a non-pharmacological intervention for improvements in quality of life for individuals living with dementia.

### Study Questions

1. Why is it important to train staff in dementia care, research protocols, and therapeutic riding at both the riding center and the LTCF?
2. What were the identified benefits for participants in the Silver Saddles program?
3. What were the challenges with measurement of the program's impact?

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