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Virginia Center on Aging
and
Virginia Department for Aging and Rehabilitative Services

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 Lifelong 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). 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, halfway-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 midpoint 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 Lipizzaner 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 reigns 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 riding 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-

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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From the Director, Virginia Center on Aging

Edward F. Ansello, Ph.D.

Fighting Frailty with the Mediterranean Diet

What we eat affects our well-being not just in the obvious ways, like our appearance and whether we look fat or thin. Newly published analyses of various studies highlight the benefits of diet, specifically the Mediterranean (Med) Diet, in reducing risks of frailty.

Let's define terms. Frailty has been a term in use for some time, but defining it has been elusive. In 2001, L.P. Fried and colleagues argued in the *Journal of Gerontology: Biological Sciences & Medical Sciences* that frailty in old age is sufficiently prevalent and serious that it may have a biological basis and be a distinct syndrome. They assessed data from the Cardiovascular Health Study on over 5,300 community-dwelling older men and women at baseline and then at follow up four and seven years later. Fried's team defined the frailty syndrome clinically as having three or more of the following criteria: unintentional weight loss (10 pounds in the past year), self-reported exhaustion, weakness (grip strength), slow walking speed, and low physical activity.

The overall prevalence of frailty in their study population was about seven percent; it increased with age, and was more common among women. Frailty overlapped with comorbidity and disability, meaning the three conditions could occur simultaneously, but frailty independently predicted falls, worsening mobility or disabilities in Activities of Daily Living, hospitalization, and death in the next three years.

Bottom line: frailty is its own risk factor for disability.

Now, research published in the *Journal of the American Geriatrics Society* (Kojima et al., January 11, 2018) and adapted in the *Journal of the American Medical Association* (Voelker, May 15, 2018) cites the benefits of the Med diet in fighting frailty.

We may be familiar with evidence that the Med Diet reduces risks of cardiovascular disease, diabetes, and overall cancer. This diet is low in saturated fat, emphasizing plant foods like vegetables, fruit, seeds, tree nuts, olives, and whole grains, low to moderate wine consumption with meals, low to moderate consumption of dairy products, fish, and poultry, and minimal consumption of red and processed meats.

It looks like the Med Diet also combats frailty.

Kojima and colleagues' systematic review and meta-analysis of four recent (2012-2017) studies, having a total of almost 5,800 older adults, showed that adherence to the Med Diet is associated with significantly lower incident frailty risk. And the greater the adherence to the Med Diet the lower the risk of frailty. The studies measured adherence to a Med Diet with the MDS (Mediterranean Diet Score), a ten point scale (0 to 9). The difference in risk for frailty between those with a high Med Diet Score (6-9) and those with a low Med Diet Score (0-3) was 56% in only four years.

Why?

Kojima and colleagues suggest that there may be several potential mechanisms at play. One possibility is that the Med Diet is full of antioxidants. "Fruits and vegetables are rich in carotenoids and vitamins, and red wine contains abundant polyphenols. Oxidative stress is a risk factor for frailty, and fruits and vegetables rich in antioxidants may decrease the risk of frailty by counteracting oxidative status."

Another possible mechanism at work is inflammation. Individuals who are frail have higher levels of inflammatory markers like C-reactive protein, and several studies have linked chronic inflammation with frailty (and cardiovascular problems and cognitive impairment). The Med Diet may have an anti-inflammatory effect.

Voelker's *JAMA* summary noted that investigators at Washington University in St. Louis described specific components of the Med Diet that have anti-inflammatory properties; these include the outer layer of wheat bran having anti-inflammatory phytochemicals, salmon and avocados being abundant in omega-3 fatty acids that bind to a receptor that inhibits inflammation, and, most interestingly, newly pressed extra virgin olive oil containing *oleocanthal*, a phenolic compound with an anti-inflammatory effect similar to ibuprofen. In addition, the Med Diet's recommendation of

consuming fish twice a week means an individual is increasing intake of vitamin B12; insufficient B12 in a diet predicts development of memory loss and gait disorder, the latter being a clinical hallmark of frailty.

Kojima and colleagues note other Med Diet impacts:

"A Mediterranean diet is associated with low levels of inflammatory markers and may reduce frailty risk through this mechanism. Adherence to a Mediterranean diet has been associated with better cognitive function, lower rates of cognitive decline, and lower risks of Alzheimer's disease and dementia. Moreover, the Mediterranean diet has been associated with lower incidence of cardiovascular disease and certain types of cancers, such as colorectal cancer. All of the above may contribute to the accumulation of fewer health deficits over time, resulting in a lower incidence of frailty."

Voelker also points to an underlying change in our nutrition as we grow older: many of us tend to lose our appetite. As a result, we become less active and have less energy. Reduced income can also play havoc with diets, as we cannot afford to buy some foods we should or wish to. Not surprisingly, economically disadvantaged older adults, older women, African American elders, and those already with disabilities are more likely to develop frailty.

A solution might lie in the cultural underpinnings of the Med Diet. In the cultures around the Mediterranean, such as in Italy and Greece, food tends to be consumed in social settings. Meals are often an experience shared with family and/or friends. Some researchers have noted that the Med Diet is not just about food but is also about lifestyle. Meal time is a time to socialize and re-connect. The pleasure of this regular happening may well be an important component in how the Med Diet positively affects one's health.

So, while we may or may not be able to adopt more of a Med Diet, depending on income and circumstances, we may well be able to establish, re-establish, or maintain social connections which are associated with the benefits of the Med Diet.

It's appropriate for each of us to examine our eating habits, not just our nutrition intake. The various aspects of the Med Diet hold potential benefits beyond the important feature of helping to reduce frailty.

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Virginia Department for Aging and Rehabilitative Services
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From the
Commissioner, Virginia Department for Aging and Rehabilitative Services

Liz Havenner, Human Services Program Coordinator
Department for Aging and Rehabilitative Services
Division for Community Living
Office for Aging Services

Lifespan Respite for Family Caregivers

Just over one million Virginians are providing care for a family member, partner or friend with a chronic, disabling or serious health condition (Reinhard, et al., 2015). The American Community Survey (ACS) estimates that there are 65,085 Virginians under the age of 18 living with at least one disability. Brault (2010) reports that 14% of those caring for individuals with a disability and/or chronic disease support a child, 18 and under, with special needs. There are an estimated 133,887 children under 18 in Virginia who are cared for and live with their grandparents and 40,910 more children who are cared for and live with other relatives (Grandfacts State Fact Sheets for Grandfamilies: Virginia, 2017).

More than one-third of these households do not have parents present, leaving grandparents or relative caregivers, that is, those related by blood, marriage, or adoption, to shoulder the responsibility completely. Research shows that children fair better in the care of relative caregivers, having fewer placement changes. In fact, a placement

with a relative almost halves the likelihood that a child would experience a placement change (Zinn, et al., 2006). Still, children and caregivers in grandfamilies face greater health, mental health, social and financial challenges than those in the general population (The Annie E. Casey Foundation, 2012).

In order to maintain the benefits of grandfamilies or other kinship care scenarios and improve their ability to function effectively, relative caregivers need time off from the physical, mental and emotional demands of raising children, especially those with disabilities.

Virginia is home to some 458,000 caregivers providing care for a loved one with a form of dementia. These caregivers provide 521 million hours of unpaid care, saving the Commonwealth over $6 billion (Alzheimer's disease facts and figures, 2017). In 2015, the Virginia Department for Health collected information about caregivers in the Commonwealth for the first time. These data indicated that 21%, or more than one in five, of Virginians are providing care or assistance to a loved one living with a health problem or disability. Almost 8% reported that dementia or other forms of cognitive impairment is the main health problem of the care recipient. Information collected also inquired about the duration and frequency of care. Just under 1/3 of caregivers had been providing care for more than five years, and almost 18% were providing 40 hours or more of care each week, the equivalent of a full-time job. Over 55% were providing up to 8 hours of care per week.

Virginia remains steadfast in its commitment to improving the lives of the more than one million caregivers in the Commonwealth by identifying resources and providing respite services that help to preserve families facing crisis.

Respite is an invaluable resource for caregivers experiencing high levels of stress and burden associated with their caregiving duties. It provides primary family caregivers with reliable care options, while they engage in self-care and tend to other family, social, and community roles that are needed to help maintain friendships, social activities, and balance in one's life. Respite care also functions to enrich a family's general wellbeing and stability. Health professionals on the front line of family care should understand both the impact of caregiver fatigue and resources to help caregivers relieve the stress of their caregiving duties.

The Department for Aging and Rehabilitative Services (DARS) convened the Virginia Family Caregiver Stakeholder Workgroup in July 2017 in response to requests from legislators and advocates to study and develop ways for the Commonwealth to encourage and support families and communities in assisting aging adults and individuals with disabilities. Recognizing that caregiver fatigue can contribute to negative health outcomes, depression, isolation, exhaustion, and an increased use of medications, the Workgroup included caregiver respite among its 15 recommendations to present to key legislators and decision makers, communities, health care and LTSS providers, employers, and others to support family caregivers.

In addition, the Administration for Community Living (ACL) recently awarded DARS the *Advancing State Lifespan Respite Systems* grant to support Virginia's efforts to preserve and strengthen our families providing care for their loved ones; the grant expands the existing Lifespan Respite Program, strengthens current partnerships and forges new ones, and identifies gaps in respite care, particularly for caregivers of individuals with dementia and for grandparents and relative caregivers.

From September 1, 2014, to the present, Virginia has provided 667 families temporary respite in the form of vouchers. This equates to approximately 24,000 respite hours. Including the 471 respite vouchers provided to individual caregivers in 2012, Virginia has provided temporary respite to 1,138 families throughout the Commonwealth to date. Caregiver testimony demonstrates that our respite program positively affects caregivers. At the same time, our experience has revealed areas for improvement that will increase the efficacy of Virginia's lifespan respite program.

With this new grant funding from ACL, Virginia's goal is to expand and enhance its current coordinated system of affordable, accessible, person/family-centered lifespan respite support throughout the Commonwealth; this would help families who provide unpaid care to individuals of any age, with an emphasis on those with a diagnosis of dementia, as well as helping grandparents or relative caregivers providing care to a child not more

than 18 years of age or an individual 19 to 59 years of age who has a severe disability.

DARS plans to serve an additional 450 families who have not previously benefitted from the respite program. Funds from this new opportunity will also support expanding the Virginia Family Caregiver Solution Center to include resources for grandparents and relative caregivers. Further, this funding opportunity will enable the Virginia Caregiver Coalition to grow as it focuses on another caregiver segment and network system, including memory centers and kinship groups.

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2018/2019 DARS Meeting Calendar

Commonwealth Council on Aging
December 19, 2018; March 13, July 10, September 18, and December 18, 2019

Alzheimer's Disease and Related Disorders Commission:
December 11, 2018; March 19, June 11, August 20, and December 3, 2019

Public Guardian and Conservator Advisory Board
November 8, 2018; March 7, June 20, September 5, and November 21, 2019

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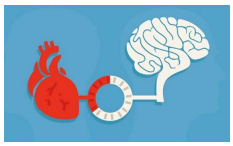
Cardio-Brain Health Link



The rate of new cases of dementia (incidence) with age is declining across the developed nations. Because more of us are aging into later life, this still translates to ever greater raw numbers of older adults with dementia (prevalence). So there is good news about dementia mixed with the bad news of more cases.

Something that may help with both incidence and prevalence of dementia in later life is improving control of cardiovascular risk factors.

Better cardiovascular control may be behind the decline in new case incidence, for reduced oxygen to the brain (ischemia) caused by restricted blood vessels or hardening of the arteries (atherosclerosis) contribute to both stroke and vascular dementia, the second most common form of dementia after Alzheimer's; and even Alzheimer's is often "mixed," being a combination of Alzheimer's plaques and tangles and vascular problems. Conversely, it would be logical that improving cardiovascular health would improve conditions in the brain.

Notably, the recent decline in dementia incidence has come after a halving of cardiovascular and cerebrovascular disease incidence over the past 60 years.

At the same time, there have now been a number of longitudinal, studies showing that cardiovascular

risk factors in midlife are associated with development of cognitive impairment and dementia in late life.

A recently published study in the *Journal of the American Medical Association* (*JAMA*, August 21, 2018) suggests that cardiovascular health even earlier in life, the mid-twenties, can have great consequences much later in life. Williamson and colleagues assessed the relationships between cardiovascular health factors with the structure and function of the brain, using MRI technology with 125 young adults averaging 25 years old.

Williamson and colleagues used the American Heart Association's (AHA) Life's Simple 7 as their cardiovascular health metric. The Life's Simple 7 has four modifiable health behaviors (nonsmoking, healthy diet, physical activity, and body mass index) and three modifiable biological health factors (low blood pressure, low cholesterol, and low fasting glucose); the researchers gave scores according to the degree to which an individual's modifiable health factors are in accord with ideal cardiovascular health and optimal cerebrovascular and brain health.

They found that, even at young age, these cardiovascular health factors were associated with variations in the structure and integrity of the brain. As the editors of *JAMA* note, *"Failure to attain optimal cardiovascular health appears to subtly compromise the fundamental anatomic structure of the brain vascular system in addition to its functional physiology and the integrity of the brain tissue it nourishes."*

The editors at *JAMA* suggest that *"these minor changes in young adults may portend more substantial abnormalities later in life.....It is likely that these changes are the preclinical precursors of more severe late-life neurovascular compromise. These findings further emphasize the importance of both primordial prevention (averting development of cardiovascular risk factors in the first place) and primary prevention (modifying adverse risk factors once present)."*

The same issue of *JAMA* contains a supportive and complementary prospective longitudinal study by Samieri and colleagues. Called the 3-C study because it began with subjects in the three French cities of Bordeaux, Dijon, and Montpelier in 1999-2000, these researchers studied 6,622 community-dwelling older adults (average age 73.7 years at the beginning of the study; 63.4% female) over time.

All participants had no history of cardiovascular diseases or dementia at baseline.

At baseline, the authors collected data through face-to-face interviews on socio-demographics, lifestyle, medication use, a brief food frequency questionnaire, leisure activities, and more. Participants were subsequently interviewed and tested (blood pressure, lipid levels, etc.) every two-three years. Testing included repeated in-person neuropsychological testing (January 1999–July 2016) and systematic detection of incident dementia (date of final follow-up, July 26, 2016).

The authors also used AHA's Life's Simple 7 as a metric of cardiovascular health. They classified each level of the Simple 7 metrics as poor (0 points), intermediate (one point), and optimal (two points), according to the AHA cutoffs and criteria (except physical activity and diet, which needed minor adaptations). For physical activity, because of slight variations in questionnaires, they used two site-specific definitions of optimal status, and for the diet metric, they based scores on increasing consumption of fruit, vegetables, and fish. So, the participants' total score could range from 0 to 14.

After following the participants for an average of 8.5 years, the researchers confirmed a total of 745 incident dementia cases. The incidence rates of dementia decreased as the number of metrics at recommended optimal levels increased.

For instance, compared with the incident rate of dementia of 1.76 per 100 person-years among those with no or one health metric at optimal levels, the absolute rate differences per 100 person-years decreased with each additional metric at optimal level: −0.26 for two metrics, −0.59 for three metrics, and up to −0.96 for six or seven metrics. In multivariable models, the risk of dementia decreased significantly and linearly with both increasing number of metrics at recommended optimal level and increasing global cardiovascular health score.

One should note that having optimal status in the AHA's Life Simple 7 is not easy. At baseline, one-third of these French participants had

poorer cardiovascular health (none to two metrics at optimal levels) and only one in 14 had favorable status (five to seven optimal metrics). This had a profound effect over time: across the study's average follow-up of 8.5 years, among those who survived with none to two optimal metrics at baseline, 13.3 of every 100 individuals developed dementia; in contrast, among those with five to seven optimal metrics, it was 7.1 of every 100 surviving individuals.

The editors at *JAMA* succinctly summarize the take-away from studies by Williamson and colleagues and Samieri and colleagues:

"With these caveats and pending larger, longer trials, these two studies convey an immediately actionable message to clinicians, policy makers, and patients. Available evidence indicates that to achieve a lifetime of robust brain health free of dementia, it is never too early or too late to strive for attainment of ideal cardiovascular health. Avoid smoking, eat a healthy diet, be physically active, maintain normal weight, and keep blood pressure, cholesterol levels, and glucose-insulin levels low. Given the aging population, this positive health message is important to communicate to all members of society."

Helping throughout the Journey of Dementia: A Day with Teepa Snow

Aging Together and its partners, Alzheimer's Association of Central/Western Virginia, Rappahannock Rapidan Community Services, Culpeper Library, and HealthySteps, and with the assistance of a $5,000 grant from the Geriatric Training and Education (GTE) initiative, hosted a day-long training session on June 19, 2018 with renowned dementia care expert, Teepa Snow, OTR/L. Characteristically, Ms. Snow conducted a highly interactive program, emphasizing role-playing, with the goal of improving knowledge, skills, and attitudes to improve care for this vulnerable population.

The audience of 374 registrants was mostly staff of long-term care facilities, home care agencies, hospitals and other professional caregivers; approximately 100 were family members and concerned citizens. Some results: 98% of those completing our survey (231) reported increasing their knowledge of dementia/Alzheimer's "very much" or "quite a bit"; 99% reported increasing their knowledge in responding to challenging behaviors of dementia "very much" or "quite a bit"; 96% increased their knowledge of how environment affects people with memory impairments and how to change environment to improve outcomes "very much" or "quite a bit"; 89% of professional survey respondents indicated that they were "very likely" or "quite likely" to share information/skills with their coworkers. Ms. Snow offered a link to conference materials and encouraged participants to share what they learned in the training with colleagues.

The hosting partners intend to poll attendees soon to assess if and how they are using the skills learned from Ms. Snow at the conference.

Piedmont Dementia Education Committee at Germanna Community College in Culpeper. From L to R: Bonnie Vermillion, Susan Keller, Carol Simpson, Teepa Snow (presenter), Liesa Dodson, Gina Mullins, Kathi Walker.

What Counts as Dark Chocolate?

We've read about potential health benefits of dark chocolate. What makes dark chocolate different from milk chocolate? Last year, the Tufts University *Health & Nutrition Letter* clarified the matter. Compared to milk chocolate, "dark chocolate does not contain milk or milk solids, and dark chocolate is typically lower in added sugars. However, there is not a specific minimum cacoa percentage (the amount of cocoa solids in a product) for dark chocolate in the US." In Europe, dark is defined as at least 35% cocoa solids. As the percentage increases, the chocolate becomes richer in flavanols, which may help blood vessel health and help lower blood pressure.

COMMONWEALTH OF VIRGINIA

Alzheimer's and Related Diseases Research Award Fund

2017-2018 Final Project Report Summaries

The Alzheimer's and Related Diseases Research Award Fund (ARDRAF) was established by the Virginia General Assembly in 1982 and is administered by the Virginia Center on Aging at Virginia Commonwealth University. The awards this year were enhanced by a $50,000 donation from Mrs. Russell Sullivan of Fredericksburg, in memory of her husband who died of dementia. Sullivan awards are indicated by an asterisk (*). Summaries of the final project reports submitted by investigators funded during the 2017-2018 round of competition are given below. To receive the full reports, please contact the investigators or the ARDRAF administrator, Dr. Constance Coogle (ccoogle@vcu.edu).

VCU **Heather Lucas, PhD**

Developing an Expression Platform for Tetrameric Alpha-Synuclein to Advance Systemic Biochemical Studies

The dynamic protein α-synuclein (αS) is universally known to be a key player in Parkinson's disease (PD) pathology and other synucleinopathies. In its monomeric form, αS is considered to be an intrinsically disordered protein that is known to aggregate into fibrillar strands that make up the major component of Lewy bodies, the pathological hallmarks of PD. Recent reports, based on studies investigating αS from human red blood cells and brain tissue, have suggested that a tetrameric form of αS also exists. Tetrameric αS has the potential to be a valuable PD drug target due to its aggregation resistance. Therefore, the focus of this project was to develop technology for the isolation and purification of tetrameric αS using a recombinant platform. Utilizing a mild purification technique that employs ammonium sulfate precipitation, in conjunction with sequential chromatography steps, the investigators enabled streamlined access to this elusive protein. Improved access to the tetramer will provide a path to targeted drug discovery, as well as a source for fundamental knowledge on the mechanisms linking αS biochemistry with PD etiology. The investigative group's expression platform represents the first reported method for accessing this elusive conformer without the addition of structure-modifying additives, while also facilitating the installation of the N-terminal acetyl group present in the native human form of αS. Biophysical evaluation of their recombinant tetrameric αS confirms this multimeric conformer as aggregation-resistant, underpinning its therapeutic significance and importance as a scaffold for future biochemical and/or biophysical studies. *Dr. Lucas may be contacted at (804) 828-7512, hrlucas@vcu.edu.*

VA Tech **Harald Sontheimer, PhD***

Is Amyloid Toxic for Glial Cells?

This project investigated the hypothesis that the gradual buildup of amyloid plaque, the pathological hallmark of Alzheimer disease (AD), may be toxic to glial support cells rather than neurons. More specifically, the plaque may impair the interaction between astroglial cells and blood vessels, which is essential to maintaining the blood brain barrier and keeping harmful molecules and immune cells out of the brain. The investigators used a sophisticated imaging approach based on laser scanning microscopy through a glass window mounted in place of the skull above the brain of mice harboring human APP mutations. This allowed them to image the same blood vessels daily for many months and, indeed, document a gradual buildup of plaque around many blood vessels. Using a contrast medium injected into the blood stream, they could then show that leakage occurred only on vessels with amyloid plaque, indicating the focal and selective break down of the blood brain barrier by amyloid.
Dr. Sontheimer may be contacted at (540) 526-2229, sontheimer@vt.edu.

VCU **Xuejun Wen, MD, PhD**

An In Vitro Model for Alzheimer's Disease based upon 3D Self-Assembled Neurovascular Microtissues

Conventional model systems that rely on *in vivo* transgenic animal models cannot capture the complexity and biology of human systems. As a result, therapeutic strategies that are efficacious in animal models fail in pre-clinical and clinical human trials. In order to improve the translational potential of experimental studies, establishing an *in vitro* humanized model for AD is imperative. The investigator previously established two induced pluripotent stem cell (iPSC) lines, one from an AD patient carrying a PSEN1 gene mutation and the other an AD patient carrying an APP gene mutation. For this study, the research team fabricated an *in vitro* AD tissue model based upon 3D self-assembled neurovascular microtissues of primary AD cortical neurons and glia cells that are associated with microvasculatures. This project was intended to validate the model through testing of neurovasculature delivered drugs. To better mimic the native brain microenvironment, the lab group developed a new bioreactor to achieve creeping flow conditions which mimic the interstitial fluid flow in native brain tissue. They then tested several known compounds/drugs that either benefit AD patients or pose toxicity to neural tissues. Their experiments compared multiple models, such as 2D static culture model, 3D static/no-flow suspension culture, and 3D creeping flow model. The results showed that the 3D creeping flow model best represents the *in vivo* conditions in humans. These results then, define guidelines for the development of *in vitro* models of the specialized neurovascular tissue environment that will advance understanding of healthy states and pathologies, identifying therapeutic targets, and drug testing. *Dr.Wen may be contacted at (804) 828-5353, xwen@vcu.edu.*

VA Tech **Ling Wu, MD, PhD, and Bin Xu, PhD***

Drug Repurposing for Tau Aggregation Inhibitors as Neuroprotective Agents for Alzheimer's Disease

The goal of this project was to apply an interdisciplinary approach involving cellular, biochemical, and biophysical drug screening and neurobiological methods to discover and validate novel candidates, from the National Institutes of Health Clinical Collection repurposing library, that will inhibit human tau aggregates and their neurotoxicity. The outcomes from this pilot project now serve as the basis for a future comprehensive drug discovery and translational research program to devise potential treatment strategies for AD. The investigators were able to produce in high-quality all six recombinant human tau isoforms that are competent to form aggregates and mature filaments. They discovered that human tau 3 repeat isoforms have significantly faster aggregation than those of the corresponding 4 repeat isoforms. Using a molecular biology approach, the researchers have identified that the second repeating segment is a key contributor to the formation of toxic aggregations of human tau isoforms. The conditions for growing each of the six human tau isoform filaments have been developed, and multiple detailed biochemical and biophysical characterizations of selected tau aggregation inhibitors (TAIs) have been identified. Several strong TAIs in cell-based assays have been validated for their neuroprotective effects. This project laid a strong foundation that allows the collaborators to perform in vivo efficacy tests of selected compounds in a human tau AD mouse model and discover potential new treatment strategies. Results serve as the basis for high-resolution structure studies of the filaments of human tau isoforms and the design of future structure-based inhibitors. *Dr. Wu may be contacted at (540) 231-8442, wul3@vt.edu; Dr. Xu may be contacted at (540) 231-1449, binxu@vt.edu.*

VCU **Shijun Zhang, PhD***

Development of NLRP3 Inflammation Inhibitors for AD

Inflammasomes are important protein complexes that regulate innate immunity. The Nucleotide-binding Oligomerization Domain-like receptor family pyrin domain-containing-3 (NLRP3) inflammasome plays a role in inflammatory disease and is the one that has been most often studied. NLRP3 inflammasome activation leads to the production of interleukin (IL)-1β and promotes inflammatory cell death. Notably, recent studies have indicated a critical role for NLRP3 inflammasome and IL-1β in the pathogenesis of AD. Therefore, development of novel NLRP3 inflammasome inhibitors (NLRP3Is) may represent novel effective disease modifying agents for AD. Previously, the investigators developed small molecule NLRP3Is and identified one lead compound with in vivo efficacy to reduce AD pathology and improve memory functions. The goal of this funded project was to develop more potent NLRP3Is analogs based on the lead compound and evaluate them in vitro for their inhibitory potencies. The research team successfully synthesized and structurally characterized a series of analogs with modifications on two domains of the lead structure, and completed biological characterization to evaluate the synthesized analogs. The studies established that structural modifications on the sulfonamide domain can only be limited to certain substituents. Modifications on the phenyl ring, in general, improved inhibitory potencies, although potency was decreased if the substituent was beyond a certain length. This could be due to limited cell permeability, so future work will further characterize a new lead compound. *Dr. Zhang may be contacted at (804) 628-8266, szhang2@vcu.edu.*

UVA **Zhiyi Zuo, MD, PhD***

Empathic Transfer of Postoperative Cognitive Dysfunction

Caregiving spouses of patients with dementia have an increased chance of suffering from dementia later. Although the mechanism for this phenomenon is not clear, increased stress due to caregiving to the patients and similar living environments are thought to contribute to it. Postoperative cognitive dysfunction (POCD) is a relatively new but well-documented clinical entity that affects patients after heart and non-heart surgeries. POCD not only affects patients' daily activity but also predicts high mortality. Recent studies from the investigator's laboratory (and others) have indicated that inflammation in the brain (i.e., neuroinflammation), an abnormal process for many chronic brain diseases including AD, may be involved in POCD. The researcher's preliminary data showed that mice living in the same cage with mice that have surgery (cage-mates) also develop neuroinflammation and POCD. Results from this funded project showed that cage-mates had increased levels of inflammatory mediators in the blood. Mice that could see, but did not live in the same cage with, mice that had surgery also had increased inflammatory mediators in the brain. Cage-mates also presented with anxious behavior. Finally, this study showed that the ventral posterior nucleus of the thalamus, which relays somatosensory information to the cerebral cortex, is activated in the cage-mates of mice with surgery. These results suggest the transfer of pathological process through sight and have significant implications for bystander health. These findings may help us understand how caregiving spouses of patients with dementia may develop dementia later in life. *Dr. Zuo may be contacted at (434) 924-2283, zz3c@virginia.edu.*

Should I Transfer My House To My Kids?

By Emily Martin, Esq.

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One of the most common questions we get from clients is whether they should transfer their house to their children. The answer to this question is almost always absolutely not! Many people think that transferring their house to someone else will allow them to protect their home from having to be sold in the event that they need to go on Medicaid or receive VA benefits. They believe that getting the house out of their own name will help them qualify for these benefits more easily, and that such a tactic is easier and less expensive than executing and funding estate planning documents. However, there are several reasons why this is never a good idea.

Your Children May Have to Pay Crippling Amounts of Capital Gains Tax.

If you are elderly, it is very likely that you purchased your home thirty, forty, or even fifty years ago. The price you paid for your house at that time was probably much less than its current value. For example, say that you paid $35,000 for your house, and it is now worth $250,000. If you transfer the house to your daughter and she later wants to sell the house, she would have to pay capital gains tax on the difference between the price you paid for the house and the value it had at the time she received it: $215,000. You can see how much this can add up!

In the alternative, if you transfer the house through a will or a trust, your beneficiaries will receive what is called a step-up in basis equal to the value of the house at the time they inherited it rather than the value of the house at the time you purchased it.

You Could Be Prevented or Disqualified From Receiving Medicaid Benefits.

As you may know, there is a five-year "look-back" period for Medicaid eligibility purposes. This means that, when your Medicaid application is being reviewed, any gifts or "uncompensated transfers" that you have made in the past five years will result in a "penalty period." In 2018, every $6,422.00 worth of uncompensated transfers that you made in the past five years will result in your Medicaid benefits being withheld for one month. Medicaid will not penalize applicants for transfers that occurred more than five years ago.

If you transfer your home to your children and then require long-term care within five years of the transfer, Medicaid will consider this to be an uncompensated transfer. This type of transfer has the potential to delay your Medicaid benefits and possibly even prevent you from ever qualify for Medicaid.

Debt, Disability, Divorce, or Death

There are a few other reasons why the idea of transferring ownership of a parent's house to their children is never a good idea. If you transfer your home to your child and they have significant debts, then creditors could inquire as to the assets in their name. If your house is in their name, then creditors could make claims against that property in order to recover the debt owed to them. This could result in your child having to sell your house to satisfy his or her creditors.

Additionally, if your child becomes disabled and requires Medicaid or government benefits of her own, owning your house could prevent her from qualifying for these benefits in the same way that it might prevent you from qualifying for benefits if you need long-term care.

Another potential issue is divorce. If you transfer your home to your child and then they go through a divorce, your house could be considered an asset to be divided or dealt with as part of the property agreement with their former spouse.

Finally, if your child passes away before you do and you have transferred your home to him, then your house could be considered part of his estate and distributed to his heirs instead of yours.

Obviously, none of these outcomes are ideal. If you own a home and you are looking to qualify for Medicaid, VA benefits, or other long-term care benefits, an experienced elder law attorney can work with you to implement strategies that will preserve your assets while allowing you to accomplish your goals and receive the benefits you need.

Emily A. Martin, JD, is an attorney with the Hook Law Center in

Virginia Beach. Her practice areas include estate planning, guardianship and conservatorship, and long-term care planning.

VCU Gerontology Celebrates Inaugural Year of Accredited Assisted Living Program

by Jen Pryor, Gerontology Program Director & Joint Program Director, Assisted Living Administration Specialty Area

Back in November of 2016, the National Association of Long Term Care Administrator Boards (NAB) granted the VCU Department of Gerontology accreditation for the Master in Gerontology with the assisted living administration specialty. This was a huge accomplishment because we became the first program nationally to be accredited for assisted living administration and the first NAB accredited program in Virginia. Almost two years later, we continue to be proud and excited about what this accreditation means for our MS in Gerontology students seeking to become licensed assisted living administrators.

Lately, I have read about the struggles within the long-term care industry both from the perspectives of providers and older adults utilizing or seeking these services. This industry has a strong desire to do better, but due to a number of barriers, it is often difficult to achieve the types and quality of services that are expected and needed. In many cases, I've seen older adults expressing concerns about abuse, neglect, discrimination, and missed opportunities. For example, the VCU Gerontology Facebook page posted an article recently about the struggle of LGBT individuals to find fair and safe housing options free from bias and bullying. Articles like these are what drive me to find unique ways to prepare students seeking licensure.

Closing out with the summer 2018 semester, we completed our first official academic year with our NAB accreditation. In the Spring, Dr. Jenny Inker and I taught our three credit Long Term Care Administration course for the first time. This course was structured in a way to highlight services along the full continuum of care and focus on the key domains of practice for long-term care administrators.

Students heard from guest speakers from Cedarfield Pinnacle Living in Richmond about the long journey of culture change; from Annette Kelley at the Department of Social Services and Corie Tillman-Wolf from the Board of Long Term Care Administrators about the importance of licensing and regulations for assisted living communities and administrators; and from Alumna Ginger Ragan (MS 2011) about building relationships with prospective residents and families through her extensive experience in Sales and Marketing. Over the summer, students took two additional courses, diving deeper into Financial Management and Human Resources.

I am encouraged by the discussions I've been part of with these students, guest speakers, and community partners as these students ask the hard questions. There is no doubt that the students in this program will contribute to change in the long-term care industry as Gerontologists and administrators. I am proud of the work we've done this far, and I am so excited as we continue to develop our specialty area.

Joyful Voices: A Community Chorus for Singers with Dementia

Joyful Voices is for singers with dementia and their caregivers. This chorus meets at Salisbury Presbyterian Church, Midlothian on Thursday mornings from 10:00 a.m. - 12:00 noon. The ensemble provides an exciting opportunity for people in the surrounding community to join for a unique choral experience and offers two public concerts a year. Every registered singer must have a registered caregiver accompany him/her to each rehearsal. Joyful Voices encourages all caregivers to sing with the group, but this is not mandatory, as dementia-aware volunteers are available to assist as needed. Participants sing old and new songs, learn vocal technique and ensemble skills, and share musical memories together. No vocal experience is required, just a love of singing.

The chorus also offers opportunities for volunteers to sing along, contribute refreshments, help with set up and clean up, and assist with preparing the printed repertoire for chorus members. For information, call (804) 794-5311, ext. 128.

Calendar of Events

October 18, 2018
Wildfire Prevention and Safety. Presented by Chesterfield Fire & EMS. 2:00 p.m. - 3:00 p.m. Mayes-Colbert Ettrick Recreation Center, South Chesterfield. For information, call (804) 748-1993.

October 23-24, 2018
Reflections: Looking Back - Moving Forward. Annual Fall Conference of the Virginia Assisted Living Association. Virginia Beach. For information, visit www.valainfo.org.

October 25, 2018
Fire and Fall Prevention. Presented by Chesterfield Fire & EMS. 2:00 p.m. - 3:00 p.m. Mayes-Colbert Ettrick Recreation Center, South Chesterfield. For information, call (804) 748-1993.

October 25-27, 2018
Innovate, Collaborate and Inspire. Regional Conference of the Aging Life Care Association, Southeast Chapter. Hilton Knoxville, Knoxville, TN. For information, visit www.aginglifecare.org/ALCA/_iCore/Events/Event_Display.aspx?EventKey=SECON2018.

October 28, 2018
Caring for the Caregiver: Hack Pitch Event. Presented by Virginia Navigator and its Lindsay Institute for Innovations in Caregiving. The public is cordially invited to see the new apps to help family caregivers that the teams have competed to create in 25 hours. Troutman Sanders, LLP, Richmond. For information, visit tinyurl.com/Y6UPM59E.

November 8, 2018
Advocacy, Equity, Access: 2018 Virginia Oral Health Summit. Presented by the Virginia Oral Health Coalition. The Westin Richmond, Richmond. For information, visit www.vaoralhealth.org.

November 13, 2018
The Virginia Association for Home Care and Hospice Annual Conference. The Place at Innsbrook, Glen Allen. For information, visit www.vahc.org.

November 14-18, 2018
The Purposes of Longer Lives. Annual Scientific Meeting of the Gerontological Society of America. John B. Hynes Veterans Memorial Convention Center, Boston, MA. For information, visit www.geron.org.

November 15, 2018
Annual Alzheimer's Education Conference. Presented by the Alzheimer's Association Central and Western Virginia Chapter. Holiday Inn Valley View, Roanoke. For information, call (800) 272-3900 or email ephipps@alz.org.

December 7, 2018
The *Spring Catalog* will be available on site and online at the Lifelong Learning Institute in Chesterfield. For information, visit www.LLIChesterfield.org, or email info@LLIChesterfield.org.

January 23, 2019
Virginia Center on Aging's 33rd Annual Legislative Breakfast. Richmond. 7:30 a.m. - 9:00 a.m. For information, call (804) 828-1525 or email eansello@vcu.edu.

February 2, 2019
Seventh Annual Emswiller Interprofessional Symposium. Presented by the VCU Center for Interprofessional Education and Collaborative Care. For information, visit https://ipe.vcu.edu/symposium.

April 9-13, 2019
Mining the Gems: Investing in Our Future. 40th Annual SGS Conference. Sheraton Bay Point Resort, Panama City Beach, FL. For information, visit www.southerngerontologicalsociety.org.

April 26-28, 2019
30th Annual Virginia Geriatrics Society Conference. This event is for physicians, registered nurses, nurse practitioners, physician assistants, pharmacists, and others involved in the care of older patients. Hilton Richmond Hotel & Spa/Short Pump, Richmond. For information, visit www.vgsconference.org.

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Choice, Safety, Freedom, and Risk in Aging with Lifelong Disabilities

A workshop offered by the Area Planning and Services Committee for Aging with Lifelong Disabilities (APSC)

November 15, 2018
Eastern Henrico Recreation Center, Richmond

Individuals aging with lifelong disabilities enjoy the same rights as you and I. The right to make choices, take chances, and explore new experiences. The role of those supporting these individuals is both important and challenging. This workshop explores how we can encourage choice-making and minimize vulnerability.

Session topics include:
- Supported decision-making
- Preventing financial exploitation
- The good and bad of social media
- Scenarios on choice versus safety: Open discussion with a panel
- Edith & Eddie documentary
- The NPR series on sexual exploitation of adults with lifelong disabilities

Registration fee of $20 (early bird) includes materials, lunch, and break. Registration after November 8th and on-site is $25, but only if there is space available.

For information and registration, please visit www.apscva.org.

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