The Value of Multidisciplinary Care in Parkinson's Disease

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Mark Baron, M.D., is the Associate Director of Research and one of two movement disorders specialists at the Southeast (Richmond) PADRECC. He is an Associate Professor of Neurology at VCU and a movement disorders specialist in the VCU Movement Disorders program. Dr. Baron is also involved in a variety of research programs aimed at reversing abnormal brain signaling.

Educational Objectives

1. To recognize the signs and symptoms of Parkinson's disease (PD).
2. To identify key treatment and management strategies for PD.
3. To discuss the importance of multidisciplinary care and the need for individualized treatment of PD.

Overview of Parkinson's Disease

PD is a common chronic neurological disorder that affects over 1.5 million people in the United States (Olanow, Watts, and Koller, 2001). James Parkinson, an English physician for whom the illness is named, first described PD in 1817 as the "shaking palsy." Today, more people suffer from PD than from multiple sclerosis, muscular dystrophy and Lou Gehrig's disease (ALS) combined. PD is primarily a disease of later life. Advancing age is the most significant risk factor in acquiring this illness. The average age of onset is 60; however, over 10% of cases occur in people under the age of 50 (American Parkinson's Disease Association, 1995).

PD is associated with a marked decrease in the normal amount of the neurotransmitter dopamine in the brain. For reasons unknown, the brain cells responsible for producing dopamine begin to die, causing the striatum, the area of the brain responsible for controlling movement and posture, to become unable to properly initiate and control movement.

It is important for educators, practitioners, and researchers working with older adults to familiarize themselves with this complex condition due to its prevalence. PD is highly variable and affects patients differently; therefore, management strategies must be tailored to the particular needs of each patient and his/her family. As the disease progresses, symptoms can become quite challenging to treat and manage. A firm understanding of the disease process and its management is essential in providing appropriate and quality care.

Signs and Symptoms of Parkinson's Disease

The diagnosis of PD requires two or more of the following primary symptoms, rigidity, tremor, bradykinesia, slowness of movement, and/or poor balance. Because there are a number of conditions and diseases that produce similar symptoms, it is important to be evaluated by a healthcare professional who is knowledgeable about various movement disorders.
In addition to the primary symptoms, people with PD may experience a number of secondary symptoms such as memory changes, stooped posture, speech and swallowing difficulties, depression, and constipation (Marr, 1991).

**Case Study**

JB is a 72-year-old, World War II veteran, who has had symptoms of PD for 12 years. Currently, he takes Sinemet® 25/100 one tablet every 4 hours, four times a day and pramipaxole 1 mg four times a day. He notes that the benefit of each dose of Sinemet™ wears off in about 3 hours. He also complains of bothersome involuntary movements that start shortly after each dose of medication and last for 2 to 3 hours. He is beginning to fall more often, particularly in situations where he tends to be distracted while walking. He needs increasing help with such tasks as buttoning his pants and shirts and cutting food. He is becoming exceedingly slow in dressing and is finding it very difficult to turn in bed at night. He is awakened frequently during the night and has considerable difficulty falling back to sleep. His memory is worsening and on occasion sees things that aren't really there such as squirrels in the house. JB's wife is becoming progressively distressed and is finding it increasingly more difficult to care for her husband.

**Treatment Resources:**

Living with PD can be difficult for patients and their families. The physical, social, emotional, and financial losses that patients and families may experience can become overwhelming. Despite the progressive nature of PD, most people can maintain relatively healthy and normal lives for a number of years. An interdisciplinary treatment approach that incorporates effective and appropriate medication management, proper nutrition, exercise, support and education is essential to maintain functioning and quality of life. This approach may reduce or at least help to minimize the impact of the losses often associated with PD. Options follow.

**Medical Management of PD**

One of the most effective strategies used to treat PD is Sinemet® (carbidopa/levodopa) The levodopa enters the brain and converts to dopamine, replacing this neurotransmitter that is in short supply. At first, the reduction of symptoms is usually quite dramatic; however, over time, there is a decline in the steady response to this drug and patients often develop fluctuations in their symptoms. In addition, individuals can also develop a variety of side effects, such as neuropsychiatric complications, including confusion, hallucinations, and involuntary movements or dyskinesias.

To help reduce fluctuations and other side effects associated with Sinemet®, there are a number of other medications that can be used, including dopamine agonists, COMT inhibitors, anticholinergic medications, antidepressants, and antipsychotic medications.

Medication management of PD is considered as much an art as a science. Proper dosing and timing of the medications must be catered to the unique symptoms and susceptibility to side effects of each patient. Healthcare professionals working with PD patients need to be knowledgeable about the medications, the potential side effects, and be mindful of the time specificity of many of the medications.

**Health Maintenance and Rehabilitation**

Patients with PD may benefit from interventions such as physical, occupational and speech therapy where the treatment and management strategies are aimed at maximizing independence and level of functioning. These interventions do not change the disease progression but can help to increase the safety and functional activity of patients through specialized instruction, equipment, techniques, and therapeutic exercise. Family caregivers are also a focus of these interventions and are taught how they can help their loved ones to be as independent as possible in their activities of daily living and home management. These interventions also allow patients with PD to remain active in their communities.

**Surgical Intervention**

Chronic levodopa use is associated with a series of motor fluctuations in over 75% of people with PD, as the medications used to control symptoms eventually become less effective (Olanow, Watts, and Koller, 2001). Surgical intervention may be appropriate for those patients whose medications are no longer effective or are causing severe side effects. Deep brain stimulation (DBS), the most commonly performed brain surgery for PD, can be a highly effective treatment for ameliorating the advancing symptoms of PD (Ford, 2000). Patients generally continue to take medication, although in some cases the dose can be reduced.
During the DBS procedure, a thin electrode is placed into one of several locations in the basal ganglia such as the globus pallidus, thalamus or subthalamic nucleus. This electrode is connected to a battery pack inserted under the skin of the chest. The battery pack is referred to as a "stimulator" and looks similar to a pacemaker. It functions like an "off switch" by interrupting the electrical impulses in certain parts of the brain that become over-active in PD.

The electrodes must be placed precisely in the right area in the brain in order to have a desired effect. In addition, patients must come back for regular visits to the clinic to have the device programmed. The DBS surgical procedure, therefore, requires special expertise and comprehensive care. The effects of the stimulator are reversible and can be changed or turned off by a trained healthcare professional. This adjustability and reversibility is a significant improvement over previous surgical techniques such as the pallidotomy and thalamotomy in which certain portions of the brain are destroyed (ablated) or permanently switched off. The DBS procedure should not be performed on patients with considerable cognitive decline or changes in memory not related to the medication(s) because these symptoms may be worsened by the procedure.

**Specialty Care, Support and Education**

Disease progression, the range of symptoms, the variation in responses to medication, the development of side effects, and the availability/accessibility to resources contribute to the complexity of the treatment of PD. Optimal treatment and management of PD depend on effective and appropriate medical management. Access to comprehensive specialty care, including neurology care, nursing, psychological and rehabilitation services like that provided at the Richmond/Southeast PADRECC, is important for patients and their family caregivers.

There are a number of organizations that provide support and educational programs, including the American Parkinson Disease Association (APDA) and the National Parkinson Foundation (NPF), two national non-profit organizations dedicated to fighting this disease. Both of these groups offer a variety of educational materials and support services.

People with PD and their families may also benefit from attending Parkinson's support group meetings. These groups provide an opportunity for people who are experiencing similar symptoms and side effects to come together to discuss common problems, learn new coping strategies, and offer support and encouragement to one another. There are hundreds of Parkinson's disease support groups around the country with over 20 located in Virginia. Although there are no specific support groups for family caregivers of PD, there are a number of respite and friendly visitor programs through local Area Agencies on Aging or Adult Day Care Centers that may be able to help.

**Conclusion**

Despite the availability of a number of treatment and management strategies, there is still no cure for PD. The underlying cause of the degeneration of dopamine-producing cells remains a mystery. While researchers work to discover the cause, they also work to find more effective treatments to control the symptoms.

**Study Questions**

1. What are some of the physical and emotional losses experienced by JB and his wife?
2. What are the safety concerns for JB?
3. What other interventions might help improve JB's functional ability?
4. What other interventions might help JB's wife?
5. How would multidisciplinary care be helpful to JB and his wife?

**References**


PADRECC Overview

In 2001, the Department of Veterans' Affairs (VA) created six Parkinson's Disease Research, Education and Clinical Centers (PADRECCs) in an effort to improve care for veterans suffering from Parkinson's disease and to pursue a cure for this condition. The centers are located in Philadelphia, Richmond, Houston, Portland/Seattle, San Francisco and West Los Angeles. The PADRECC offers a variety of clinical and educational programs, as well as research opportunities for veterans who have been previously diagnosed with Parkinson's disease or related disorders or have just started to notice symptoms. Veterans have access to innovative strategies and treatment interventions to improve functional ability and life satisfaction, as well as opportunities to participate in cutting edge research intended to lead to more effective treatments and ultimately a cure for Parkinson's disease. Non-veterans have access to many of these same services and programs through the Movement Disorders Program at Virginia Commonwealth University.

Other PADRECC services include but are not limited to multidisciplinary assessment and treatment, clinical trials, physician consultation, medical management, surgical interventions, neuropsychological services, physical and occupational therapy, speech therapy, nursing services, caregiver resources, educational materials, community education programs, patient and family programs, support groups and programs to educate medical professionals.

To learn more about the Richmond/Southeast PADRECC and/or other PD resources, please call Miriam Hirsch at (804) 675-6952 or toll-free (800) 784-8381 ext 6952 or visit the national PADRECC website at www.va.gov/padrecc.
From the Director, Virginia Center on Aging

Edward F. Ansello, Ph.D.

VCoA’s 25th Anniversary

Can you remember when you were 25? Feeling established, grown, mature. Looking back on what seemed (and was) a long life lived. Having a vague sense of what lay ahead. As we have said in previous issues, organizations also have lives and life histories. The Virginia Center on Aging is 25 years old. We, too, have grown and have much to look back upon. But having lived through many more years beyond age 25 as individuals, we know that there is so much ahead, so many challenges and opportunities to come. And so, we look forward. But, for this issue at least, we are looking back to celebrate 25 years.

People come to mind. This issue will highlight accomplishments by the Center, but these were made possible by people, people who put their convictions to action. We thank the following people we name, and the many more we do not, for making 25 years possible: MaryEllen Cox and Saundra Rollins for years of leadership in chairing our Advisory Committee; Bill Egelhoff, our Director Emeritus, and Dean Tom Barker for dedication to VCoA unbroken by their retirements; Delegates Ken Plum and Frank Hall and Senator Benjamin Lambert for decades of commitment to what is best for Virginia's elders; over 100 academic faculty members, retired professionals, state and local government agency representatives, elected officials, and other citizens who have served on VCoA's Advisory Committee and University Council; Charlotte Wilhelmi, S.J. Ritchey, Karen Roberto, and the late Michael LaBouve for traveling literally from the corners of Virginia to give us counsel; the first and early staffs and associates of VCoA, including Greg Arling, Jim McAuley, Jean Gasen, Michael Romanuk, John Capitman, Jodi Teitelman, Gerald Oster, Ron Holtzman, Michael Priddy, Charlotte Carnes, Ruthie Finley, and Debbie Snyder; Iris Parham, Chair of the Department of Gerontology at VCU, for encouraging collaborations with VCoA from the beginning and sparking valuable partnerships between us and Gerontology and the VGEC; our current staff of talented and dedicated people who have perfected the art of "wearing many hats” in accomplishing our work; and scores of like-minded individuals across Virginia with whom we have partnered in various funded and unfunded projects over the years whose common theme was the betterment of life for older Virginians.

From the Commissioner, Virginia Department for the Aging

Jay W. DeBoer, J.D.

"Caring Choices: Aging in Virginia"

Conference to be held in September

The Virginia Department for the Aging (VDA) is delighted to partner with the American Association of Retired Persons (AARP) to present the Virginia Governor's Conference on Aging, "Caring Choices: Aging in Virginia." The conference will contain information of interest to aging advocates, policymakers and members of the public. It will take place September 25-26, 2003, at the Holiday Inn Koger Center, located off Midlothian Turnpike in Richmond, Virginia. Governor Mark R. Warner and Jane H. Woods, Secretary of Health and Human Resources, are scheduled to attend portions of the conference.

The first half-day of the conference will be devoted to a public policy forum. An "Aging Action Agenda," based on recommendations garnered from the forum, will be presented to Secretary Woods. The second half of the first day will feature workshops on the following topics: "Maximizing Independence & Opportunities," "Cost & Quality of Health Care," and "Financial Planning for Aging & End-of-Life Decisions." Conference participants will choose two workshops they wish to attend. A reception and dinner will close out the first day.

After breakfast on the second day, participants will be able to choose two workshops from a variety of topics related to "The Workplace & Aging." The conference will adjourn after lunch.
Mark your calendar so that you can join us in September for this important event. If you have not already received information about this conference and would like to do so, contact the Virginia Chapter of AARP at:

AARP Virginia State Office

707 East Main Street, Suite 910

Richmond, VA 23219

Phone: (804) 819-1902 Fax: (804) 819-1923 TTY: 1-877-434-7598

Web site: http://www.aarp.org/va/

Weaving the Stories of Life: Loss and Aging

13th Annual Good Grief Conference

Wednesday, October 22, 2003

Hermitage at Cedarfield

The Department of Pastoral Care and the Bereavement Committee at VCU Health System will host the Good Grief conference geared towards equipping and educating professionals in the helping fields who work with persons in grief.

This year's conference will be host to many leaders in the fields of spirituality and psychiatry, including Dr. Henry Simmons, Professor of Religion and Aging at Union Theological Seminary, Dr. Sultan Lakhani, Geriatric Psychiatrist at VCU Health System, Dr. Sandra Hamilton and Dr. Mary Fran Hughes-McIntyre, both of the Virginia Institute of Pastoral Care.

To receive a brochure, please contact Patricia Gault-Coles at 828-0928, pgaultcoles@mcvh-vcu.edu. Students $25.00; VCU/VCUHS and Key Sponsor Employees $45.00; Individual Fee $75.00. Through the Generosity of the LifeNet Memorial Foundation, scholarships are available. Educational Credit provided.

COMMONWEALTH OF VIRGINIA

Alzheimer's and Related Diseases Research Award Fund

2003-2004 ALZHEIMER'S RESEARCH AWARD FUND RECIPIENTS ANNOUNCED

The Alzheimer's and Related Diseases Research Award Fund (ARDRAF) was established by the Virginia General Assembly in 1982 to stimulate innovative investigations into Alzheimer's disease (AD) and related disorders along a variety of avenues, such as the causes, epidemiology, diagnosis, and treatment of the disorder; public policy and the financing of care; and the social and psychological impacts of the disease upon the individual, family and community. The ARDRAF competition is administered by the Virginia Center on Aging at Virginia Commonwealth University in Richmond. The four grant recipients of the 2003-2004 awards are as follows:

UVA James P. Bennett, M.D., Ph.D. and Bradley Miller, M.D., Ph.D. (Department of Neurology/Division of Neuropathology) "Mitochondrial DNA Deletions and Mutations in Alzheimer's Disease Brain Neurons" This research will examine the genetic contribution mitochondria make to Alzheimer's disease (AD). Several aspects of this neurodegenerative disease (i.e., largely sporadic incidence, increasing severity with age, proclivity for neuronal damage) mirror aspects of mitochondrial genetic disease. Until recently, though, it has not been possible to examine directly the mitochondrial DNA content of single neurons. The investigators intend first to use a variety of...
histochemical techniques to identify pathologically impaired or vulnerable neurons in AD and age-matched control brain regions. Next, they will employ laser-capture microscopy, combined with a PCR (polymerase chain reaction) approach, to examine the mitochondrial DNA present in AD and control neurons. The results of these studies will allow for a much more rigorous, statistically pliable analysis of the coincidence of classical AD and functional mitochondrial pathology. (Dr. Bennett can be reached at 434/924-8374; Dr. Miller can be reached at 434/924-9175)

VA Tech Toni Calasanti, Ph.D. (Department of Sociology) "Gender Differences in Informal Care Work for Persons with Alzheimer's Disease" A limited pool of research on Alzheimer's disease (AD) caretakers suggests that men suffer less stress and depression, and fewer physical ailments, than do women. The more qualitative research suggests that women and men experience and express caregiver stress in different ways. This investigation will gather in-depth interview data from a predominately rural sample of spouses who serve as primary caregivers for non-institutionalized persons with AD. The study will explore how gender influences the experiences of spousal caregiving and will identify styles of care work. The data are expected to provide an important basis for future theory and research on caregiving, and suggest ways that helping institutions might best intervene to relieve stress and ensure optimal care. (Dr. Calasanti can be reached at 540/231-8961)

VA Tech Shannon E. Jarrott, Ph.D. and P. Diane Relf, Ph.D. (Department of Human Development/Department of Horticulture) "Horticulture Therapy for Persons with Dementia: Replication of a Pilot Study" Dementia care programs strive to provide appropriate, stimulating programming for their clients. However, the considerable variability of clients' cognitive and physical abilities, along with resource limitations, present serious challenges to care staff. Horticulture therapy, which is the use of plant materials and gardening activities adapted to meet individualized needs and treatment goals, has been associated with increased activity, social interaction, concentration, and positive mood among persons with dementia in adult day services. This study seeks to replicate these findings with horticulture therapy that incorporates adult day services and nursing home clients, as well as a comparison group of clients who do not participate in horticulture therapy. (Dr. Jarrott can be reached at 540/231-5434; Dr. Relf can be reached at 540/231-9279)

ODU Brian K. Payne, Ph.D. and and Randy R. Gainey, Ph.D. (Department of Sociology and Criminal Justice) "The Social Context of Providing Care to Alzheimer's Patients: Specifying Interactions Between Social Disorganization, Service Utilization, Burden, and Mistreatment" This study examines caregiving dynamics in Alzheimer's caregiving situations, with specific attention given to the role of the urban neighborhood. Using protective services data, this study examines whether differences exist at the neighborhood level regarding service distribution and utilization, the experience of burden, and the existence of maltreatment. It is expected that disadvantaged neighborhoods will utilize fewer services, experience more burden, and be the source of more mistreatment than more advantaged neighborhoods. The study will also demonstrate whether services provided to families caring for those with Alzheimer's are distributed equally across neighborhoods. Note: Partial support for this project was provided by a contribution to the ARDRAF from the Alzheimer's Association-Greater Richmond Chapter. (Dr. Payne can be reached at 757/683-3935; Dr. Gainey can be reached at 757/683-4794)

2003-2004 Awards Committee

Paul Aravich, Ph.D.
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Virginia Commonwealth University
“Mark Your Calendars”

Understanding and Managing Parkinson’s Disease: A Program for Health Care Professionals Videoconference

November 12, 2003 12:00 p.m. - 3:00 p.m.

This videoconference will be followed by a one-hour conference call at 3:15 p.m. - 4:15 p.m.

MODULE 1 Overview of Parkinson’s Disease

MODULE 2 Medical Management of Parkinson’s Disease

MODULE 3 New Ways to Do Old Things: Maximizing Independence in Parkinson’s Disease

MODULE 4 Mind, Mood and Memory: Cognitive and Behavioral Changes in Parkinson’s Disease

MODULE 5 Surgical Intervention in Parkinson’s Disease

MODULE 6 Panel Discussion on Current PD Research and Hope for the Future

For additional information about this upcoming videoconference, contact Miriam Hirsch at (804) 675-6952, email: miriam.hirsch@med.va.gov or Kathleen Watson at (804) 828-9060 or email: kdwatson@mail2.vcu.edu

In the Beginning

Edward F. Ansello, Ph.D.

Maybe we should say, before the beginning. The Virginia Center on Aging is the inspiration of many visionaries who anticipated both the wave of aging ahead and the need for comprehensive responses to the opportunities and needs that an older Virginia would present. Prominent members of the General Assembly, especially Delegate Mary Marshall, championed legislation to create VCoA formally as a statutory center in the Code of Virginia. Successful, Governor Dalton signed VCoA into law on March 23, 1978, the date we celebrate as our birthday. Before this, however, there was a VCoA.
The Virginia Center on Aging at Virginia Commonwealth University was launched on October 1, 1977 with receipt of a two-year grant from the U.S. Administration on Aging (AoA) for the development of a "Multidisciplinary Gerontology Center," one of 24 such awards that AoA made that year. This award supplemented a one-year grant being given by the Virginia Office on Aging and university overhead funds made available from the Office of Research and Graduate Affairs at VCU. None of these sources was permanent, but they offered the first critical sparks of life. The actions of the General Assembly and the Governor in early 1978 confirmed and encouraged this life.

In the months before March 23, 1978, the Center was established as an organizational unit under the Office of the Associate Vice President for Research and Graduate Affairs, Drs. John Salley (VP, Research), Lauren Woods (VP, Health Sciences Campus) and John Andrako (Assistant VP, Health Sciences Campus) having decided that a statewide center required a high administrative reporting line. Then-Vice President (and later President of VCU) T. Edward Temple had urged creation of a statewide center earlier while Secretary of Administration under Governor Godwin. Dr. Gregory Arling, a sociologist with a specialization in social gerontology, was appointed Director of the Center on November 1, 1977; VCU leased the old Collegiate School building at 1617 Monument Avenue in Richmond, with VCoA being housed on the first floor; and VCoA's staff and supporters drew up a then-ambitious list of activities to bring aging to the attention of the general public, researchers, educators, and policy makers.

VCoA's intended actions during October 1977 to September 1979 seem modest today, but reflect a highly energetic commitment at the time to issues of importance to older Virginians and their families, matters outside the prevailing youth ethic. VCoA would, of necessity, secure a staff, space, and supporting service; but it would also create an Advisory Board and form Technical Advisory Committees to set priorities for research and education on aging-related health, economics, transportation, housing; award five small grants ($2500 each) competitive-ly to faculty at institutions of higher education across Virginia to produce "state of the art" reports on policy areas related to health, living environments, minority aging, and more; conduct workshops and briefings across Virginia based on these state of the art reports; assess aging-related staff development needs of public agencies across Virginia; provide technical assistance to Virginia's Area Agencies on Aging; establish an aging-related lending library; initiate a gerontological newsletter, and more. The list of intentions is dizzying. Remember that these actions were being undertaken in a state and a country dominated by a youth culture, with the last of the Baby Boomers just entering their teenage years. It is all the more remarkable that VCoA accomplished its intentions and set ever higher goals for research, education, training, and technical assistance to benefit older Virginians and their families. The General Assembly and the Governor made this possible. They gave VCoA its permanence, its foundation on which to build.

Our first patrons

The General Assembly of Virginia created the Virginia Center on Aging formally during its 1978 Session. Senator Edward Holland and Delegate Mary Marshall introduced Senate Bill No. 534 on February 6, 1978 establishing VCoA and assigning it various duties and responsibilities. This Bill was a companion to House Bill No. 503 introduced a week earlier whose chief patron, Delegate Marshall, was joined by co-patrons (in order of seniority) Delegates Thomas Michie, Robison James, Lewis Fickett, Jefferson Stafford, George Grayson, Joan S. Jones, Benjamin Lambert, Franklin Hall, James Christian, Kenneth Plum, Walter Emroch, Orby Cantrell, Dorothy McDiarmid, Alson Smith, James Almand, Franklin Slayton, and George E. Allen. Jr. The bills were consolidated into SB 534 which was reported and passed by the General Assembly, signed into law by Governor Dalton, and became incorporated in the Code of Virginia as 23-50.15.

Virginia Center on Aging Emphases

Operational focuses include aging with disabilities, both lifelong and late-onset, and maintaining community living in later life, through self-health, lifelong learning, and family caregiving initiatives. VCoA has independently or in partnership obtained some 60 competitive grants from federal and non-profit sources since its creation to further this and other work. VCoA annually reports its activities to the General Assembly by means of a Legislative Breakfast in January in Richmond. This event highlights successful partnerships and initiatives undertaken across the Commonwealth. VCoA maintains a statewide commitment, conducting at least one of its three principal functions in all five geographic regions of Virginia every year. VCoA annually lists agencies and businesses it has worked with by geographic region. In calendar year 2002, for example, VCoA worked with 290 regional entities, 31 statewide departments, coalitions, and non-profit organizations, and 27 units of Virginia Commonwealth University in satisfying its legislated mandates. These are:

Interdisciplinary studies VCoA operates the Elderhostel lifelong learning program for older adults. VCoA initiated in
1978 Virginia's first two Elderhostel sites (VCU and Marymont College) and administered all Elderhostel programs statewide from 1978 until 1991 under Virginia State Director Bill Egelhoff. VCoA conducts Elderhostel programs, usually weeklong, in Hampton/Yorktown, Richmond, Petersburg, and Natural Bridge, and enrolled its 25,000th Elderhostel student in fall 2002. Elderhostelers from outside Virginia coming to VCoA's programs have brought since 1992 approximately $1,000,000 annually to Virginia's economy in related tuition, lodging, restaurant, museum, charter bus, and related expenses and discretionary spending.

**Research**  VCoA has administered the Alzheimer's and Related Diseases Research Award Fund (ARDRAF) since its creation by the General Assembly in 1982, Code of Virginia, 2.2-710. ARDRAF is a competitive seed program of small grants to researchers anywhere in Virginia to stimulate promising lines of inquiry into the causes, consequences, and treatments of dementing illnesses. VCoA solicits, reviews, awards, and monitors, passing through all of each year's ARDRAF appropriation without administrative cost. Between 1982-2002 VCoA awarded 84 seed grants totaling $1,088,000, which have, in turn, resulted in over $8.9 million dollars in subsequent awards from major foundations, as well as over 181 scientific articles.

**Information Sharing**  VCoA's quarterly 20-page publication, Age in Action, co-produced with the Virginia Department for the Aging and Virginia Commonwealth University's Department of Gerontology, reaches some 4,500 professionals, paraprofessionals, and elders each issue, with case studies, opportunities, research, and educational information. In 2000 it was recognized by the Southern Gerontological Society as "the best publication" of its type in its 16 state region. Subscription is free to any resident of Virginia.

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**March 23, 1978**  Governor John N. Dalton signs legislation approved by the General Assembly creating the Virginia Center on Aging.

1978 VCoA, in partnership with the Department of Gerontology of Virginia Commonwealth University's Department of Gerontology, Capital Area Agency on Aging, and RSVP of the United Way of Richmond, develops the Widowhood Peer Counseling Program, with funding by the State Agency for Title I, Higher Education Act.

1978-1979 VCoA evaluates the Virginia Nursing Home Pre-Admission Screening Program, the first statewide pre-admission screening program in the United States. The federal Administration on Aging (AoA) funds the study.

1978-1980 VCoA conducts the Statewide Survey of Older Virginians, which provides the first comprehensive data (demographic, housing, service, caregiving, etc.) on Virginians 60 years of age or older. The survey is funded by Title XX of the Social Security Act, via the Virginia Department of Social Services and the Virginia Office on Aging.

1979 VCoA assumes the State Directorship of Elderhostel, a lifelong learning program for older adults. VCoA and Marymount College offer the first programs in Virginia.

1979-1980 VCoA develops a training manual for employment counselors in state agencies and conducts training aimed at assisting the older job seeker. The Governor's Employment and Training Council funds this educational program.

1981-1982 VCoA conducts Job Clubs for Older Adults, a project to develop and coordinate four clubs to assist middle aged and older disadvantaged workers to locate work. The Governor's Employment and Training Council funds the project.

1982 The General Assembly establishes the Alzheimer's and Related Diseases Research Award Fund (ARDRAF), a special resource for innovative pilot studies on dementia (Code of Virginia § 2.1-373.9), and denotes VCoA as administrator. The annual appropriation is $10,000. Two grants of $5,000 are to be awarded each year.

1982 VCoA has now produced: eight state-of-the-art publications in its Education Series, including Geriatric Medical and Nursing Education; Model Programs in Mental Health and Aging; Drug Use and the Elderly; and Gerontology in Virginia: A Compilation of Course Syllabi; six publications in its Research Series, including The Final Report from the Study of Adult Day Care Programs in Virginia and Natural Support Systems for Preserving Independence of Older Persons; five publications in its Public Policy Series, including Property Tax Relief Programs for the Elderly; and eight publications in its Special Series on findings from the Statewide Survey of Older Virginians.
1982-1984 VCoA conducts Model Training for Service Providers in Mental Health and Aging, which trains approximately 60 providers in two regions of Virginia in mental health services to the elderly and intersystem collaboration. AoA funds this project.

1983 VCoA becomes the first site in the nation to hold an Elderhostel program at a medical school, specifically, the Medical College of Virginia (MCV) of VCU.

1984 The General Assembly increases the annual appropriation for the Alzheimer's and Related Diseases Research Award Fund (ARDRAF) to $40,000. Four grants of $10,000 are to be awarded each year.

1984-1985 VCoA conducts the Long Term Care Alternatives Study, comparing the cost and effectiveness of home care in the community and nursing home care in Virginia. The study's Final Report proposed pre-admission screening, uniform assessment instruments, and a system of case management as the most economical means of appropriate level of services. The Long Term Care Council funds the study.

1985 VCoA conducts a study of the Virginia Medicaid Nursing Home Reimbursement System, examining assessment forms, comparing patients' conditions, and evaluating intensity of care. VCoA's Final Report recommends a new formula for reimbursement based on care requirements. The Virginia Department of Medical Assistance Services (DMAS) funds the study.

1985-1987 VCoA develops case mix measures for comprehensive long-term care. This study, funded by the AARP Andrus Foundation, involves re-analysis of data from the South Carolina Community Long Term Care Demonstration.

1985-1988 VCoA collaborates with the VCU Department of Gerontology, which secures support to establish a Geriatric Education Center (GEC), a multi-institutional, multidisciplinary consortium based at VCU. The U.S. Department of Health and Human Services (DHHS) funds the GEC.

1986-1988 VCoA conducts the Outpatient Mental Health Study, evaluating Medicaid policies and procedures. It is funded by DMAS.

1986-1989 VCoA evaluates the aftercare needs of elders with mental illnesses who have been deinstitutionalized and are now residents in adult homes. The Virginia Department of Mental Health, Mental Retardation, and Substance Abuse Services (DMHMRAS) funds this project.

1987-1990 VCoA evaluates Project Reach, a community peer support program for elders with mental health problems. The project is conducted by the City of Richmond Community Services Board and the City's Department of Health, and is funded by the National Institute of Mental Health through the Office of Geriatrics, DMHMRAS.

Fall 1988 VCoA and the GEC jointly publish the inaugural issue of Age in Action, replacing the Virginia Center on Aging Newsletter published since 1978.

1988-1990 VCoA collaborates with the VCU Department of Gerontology in its competitive renewal proposal for the GEC, which is funded by the U.S. Department of Health and Human Services.

1989 VCoA develops and tests the Second Career Program for Mid-Life and Older Virginians, and trains Virginia Retirement System counselors who will incorporate the techniques into their programming. The General Assembly funds this effort.

1989-1991 VCoA partners with the VCU Department of Gerontology on A Detection and Prevention Program for Geriatric Alcoholism, aimed at educating elders, their families and caregivers, and professionals in aging, medicine, and mental health. AoA funds it.

1990 VCoA conducts Geropharmacy and Gerontology for Rural Community Pharmacists, funded by the AARP Andrus Foundation, through a subcontract with the University of Maryland. The project conducts model training programs at partner institutions across the United States.

1990-1992 VCoA conducts Improving Planning and Services for Older Persons with Developmental Disabilities (Partners II), a statewide project to address the aging of Virginians with lifelong disabilities, through cross-training, consumer and family education, and intersystem collaboration. It is funded by AoA through the Virginia Department for the Aging (VDA).
1991 VCoA and VDA develop and publish The Older Person as a Resource: A Position Paper, which is initially distributed at the federal Region III Conference, Future Directions in Aging.

1991 VCoA collaborates with the VCU Department of Psychology in the research project, Relation of Older Adult Attributes to Self-Directed and Leader-Directed Career and Life Planning Interventions, which studies different types of personal planning strategies. The AARP Andrus Foundation funds the study.

1991-1992 VCoA studies the balance of work and family caregiving among 10,000 VCU employees through Elder-Caregiving among University Employees: Responsibilities and Needs, funded through VCU Grants-in-Aid to Faculty.

1991-1992 VCoA collaborates with the Center for the Study of Pharmacy and Therapeutics for the Elderly, University of Maryland School of Pharmacy, as evaluator of the Maryland Caregiver Program, a research and training initiative for the family caregivers of 1400 frail elders. The Governor's Office of Justice Assistance, State of Maryland, supports this project.

1991-1994 VCoA collaborates with the VCU Department of Gerontology in a proposal to operationalize the Virginia Geriatric Education Center (VGEC), which is awarded by the Bureau of Health Professions, U.S. Health Resources and Services Administration, DHHS.

1991-1996 VCoA serves on the Geriatric Subject Matter Committee in the School of Medicine, Medical College of Virginia, VCU, for geriatrics/gerontology content to be developed and introduced into the medical students' basic sciences curriculum.

1992 VCU becomes an Elderhostel Supersite because of VCoA (20 or more programs annually).

1992-1993 VCoA partners with the VGEC and the VCU School of Pharmacy to conduct Gerontology and Geropharmacy for Rural Community Practice, an on-site seminar program for pharmacists and nurses, in the Northwest, Southwest, and Southside, and on the Eastern Shore.

1992-1995 VCoA develops and field-tests in Central and Southside Virginia the project Families Who Care, a curriculum for family caregivers of minority and rural elders with dementia. The project is designed to prepare trusted community leaders to be trainers of and resources to family caregivers and ties curriculum content to the progressive stages of dementia. AoA funds this intervention.

1993 VCoA helps establish and is a charter member of the Virginia Coalition for the Prevention of Elder Abuse.

1993-1996 VCoA and VDA jointly develop and test a model project for intersystem cooperation, An Integrated Model for Collaborative Planning and Services to Older Adults with Developmental Disabilities (popularly known as Partners III). This project establishes a replicable model, with three key elements, for effective intersystem collaboration to benefit older adults with lifelong disabilities, their families, and direct service staffs. AoA funds this project.

1994 VCoA enrolls its 5,000th Elderhostel student

1994-1997 VCoA develops and implements in 15 counties and 12 cities across Virginia A Consumer-Driven Model for Improving Home- and Community-Based Care (HCBC), an educational intervention to build up the capacities of older Virginians to remain in their homes. AoA funds this.

1995 VCoA establishes the Professional/Consumer Advocacy Council (PCAC) on Aging and Developmental Disabilities, a grassroots organization of individuals with lifelong disabilities, family caregivers, and academic and agency professionals for inter-agency cooperation and public education.

1996 VCoA collaborates with the VCU School of Social Work Graduate Program on a research study of Sheriffs as Guardians of Last Resort, which is funded by VCU Grants-in-Aid to Faculty.

1996 VCoA initiates national dissemination for the publications resulting from the Families Who Care project. Resources include Families Who Care: Assisting African American and Rural Families Dealing with Dementia, a training manual, and a replication plan.

1996 In June VDA joins VCoA and the VGEC as a third partner in publishing Age in Action, which now has a...
1996 VCoA enrolls its 10,000th Elderhostel student.

1996 VCoA completes a systematic revisit to the 1990-95 recipients of the ARDRAF seed grants to determine consequences of their awards, especially subsequently funded research and scientific publications. VCoA documents more than $1.7 million in subsequent funding and 49 articles.

1996 In October, in anticipation of the 15th anniversary of the ARDRAF that he sponsored in the General Assembly, VCU and VCoA honor Delegate Kenneth Plum at a special program at the Annandale campus of Northern Virginia Community College. VCU Vice President Jones, fellow Delegates and Senators, and previous ARDRAF awardees are speakers.

1996-1997 VCoA conducts a national assessment, a two-wave survey of all 50 states, of state level mental retardation and aging services directors to determine their critical issues, priorities, funding, and practices related to public services for older adults with lifelong, developmental disabilities.

1997 The General Assembly increases the annual appropriation for ARDRAF to $66,000. Four grants of $16,500 are to be awarded each year.

1997 VCoA publishes Partners: Building Inter-System Cooperation in Aging with Developmental Disabilities, a detailed manual based on supervised field-testing in Virginia and Maryland, and distributes it to agencies across Virginia and to over 700 state and area agencies on aging nationally.

1997-1998 VCoA joins with Internal Medicine, Neurosciences, and MCVH Administration in VCU's Geriatric Services Task Force, an initiative to increase community awareness of MCV's geriatric services. The Task Force develops outlines for an elder-oriented MCV "Healthline," "Seniorline" for information and referral, and "Senior Subjects Speakers Bureau."


1997-2000 The Bureau of Health Professions, U.S. Health Resources and Services Administration, DHHS, awards the VGEC a grant for the Geriatric Interdisciplinary Team Training project. VCoA conducts the project's evaluation component.

1997-2002 VCoA collaborates with the VCU Department of Gerontology to conduct a five-year follow-up to A Model Detection and Prevention Program for Geriatric Alcoholism. The project is self-funded.

1998 As part of its 20th anniversary celebration, VCoA partners with area agencies on aging across Virginia in conducting educational lifelong learning programs in Hopewell, Isle of Wight, Richlands, and Waynesboro; and honors in Richmond Delegate Frank Hall and Senator Benjamin Lambert for their years of commitment to Virginia's elders and their families.

1998 VCoA enrolls its 15,000th Elderhostel student.

1998 VCoA leads a partnership of organizations in developing a pioneering, multi-state conference Aging with Cerebral Palsy: Meeting Everyday Needs, focusing on research and best practices related to health care and personal well-being within this population.

1998-1999 VCoA conducts the research investigation, Cost-Effectiveness of Family Caregiver Training, to determine the effect of caregiving of elders and mid-life adults with disabilities on hours in the labor force and work probability. This research is funded by VCU Grants-in-Aid to Faculty.

1998 VCoA co-founds the Central Virginia Task Force on Older Battered Women, a collaboration of aging and domestic violence service providers, to increase awareness of and capacity to respond to older women who experience domestic and sexual violence.

1999 VCoA conducts extensive follow-up study of all previous recipients of small grants from the Alzheimer's and Related Diseases Research Award Fund (ARDRAF) to determine consequences of funding, and learns that ARDRAF
stimulates substantial research publications and enables many large federal and foundation grants, returning over $9 in subsequent awards for every $1 appropriated.

**2000** VCoA completes an upgrade of its web page (http://www.vcu.edu/vcoa), complying with VCU and "Bobby's" protocols and including past and current issues of Age in Action on-line, all past awards in the ARDRAF and call for applications, a catalog of all audiovisual holdings for loan, etc.

**2000** In March VCoA welcomes its 20,000th Elderhosteler.

**2000** VCoA leads a partnership in developing a second, multi-state conference on Meeting Everyday Needs: Aging with Cerebral Palsy and Other Developmental Disabilities.

**2000** VCoA hosts the first Alzheimer's research conference based on the valuable contributions of the Alzheimer's and Related Diseases Research award Fund. It features 12 previous ARDRAF awardees, six each in basic and applied research, who discussed their projects and consequences.

**2000-2001** VCoA partners in an initiative led by the Virginia Department of Health and the Virginia Chapter of the Arthritis Foundation entitled the Virginia Arthritis Task Force (VATF). It assesses arthritis awareness in Virginia and issues the 2001-2005 Virginia Arthritis Action Plan. The U.S. Centers for Disease Control and Prevention funds the VATF.

**2000-2005** VCoA is directing evaluation of the Virginia Geriatric Education Center Core Grant, federally funded by USDHHS to improve geriatrics training of pre-service and in-practice health professionals.

**2001-2004** VCoA partners with the VGEC, the VDA, the Alzheimer's Association Chapters, and the Nursing Assistant Institute in a multi-year, multi-part project, Dementia-Specific Training of Long-Term Care Personnel, to train nursing assistants and develop a core of leaders within them. 2001-2004 VCoA and VCU's Department of Gerontology jointly are funded by the State of Delaware for the project, More Life Left to Live: Educating Older Adults about Healthy and Unhealthy Lifestyles, to assist elders to break habits of gambling, smoking, substance abuse, etc.

**2002** VCoA welcomes its 25,000th Elderhosteler, and now conducts educational programs at sites in Hampton, Hampton/Yorktown, Richmond, Petersburg, and Natural Bridge.

**2002** VCoA partners with the Alzheimer's Association - Greater Richmond Chapter and the Virginia Geriatrics Society in hosting Discovering Treatments and Improving the Care of Persons with Dementia: The Second Biennial Conference of the Alzheimer's and Related Diseases Research Award Fund.

**2002** The Alzheimer's and Related Diseases Research Award Fund (ARDRAF), which VCoA administers with third party professional screening, has now awarded $1 Million in small seed grants for innovative studies into the causes and consequences of dementia. ARDRAF study findings have resulted in a documented $8.9 Million in subsequent, directly related grants from non-state sources.

**2002** VCoA receives funding from the VDA to evaluate a train-the-trainer educational intervention that prepares nursing assistants to provide in-services for their co-workers on three dementia caregiving skills, as part of AoA's Alzheimer's Disease Demonstration Grants to States.

**2002-2003** As part of its 25th anniversary celebration, VCoA conducts a variety of special "birthday" educational programs across Virginia, including "Gadgets and Gizmos and Other Cool Stuff: Adaptive Products for Older Virginians" (co-sponsored with Virginia Assistive Technology System, VDA, the Virginia Association of Area Agencies on Aging, and VDSS) in Pulaski, Williamsburg, and Fredericksburg; "25 Years of Partnering for Elders and Their Families" in Richmond and Lynchburg; and "Lewis and Clark: The Journey Begins in Virginia" in Big Stone Gap.

**2003** VCoA and the VCU Police Department obtain and administer a grant awarded to the Central Virginia Task Force on Older Battered Women to raise awareness of domestic violence and sexual assault against older women and to improve the capacities of agencies in Richmond and three surrounding counties to respond. The Virginia Department of Criminal Justice Services funds this.

**2003** In February VCoA holds its Tenth Love of Learning program, its traditional Valentine's Day introduction to lifelong learning for older Virginians.
Governor Mark Warner officially declares VCoA's 25th anniversary, March 23, 2003, as Virginia Center on Aging Day in the Commonwealth of Virginia.

Calendar of Events

September 17-18, 2003

Nutrition and Aging XVIII: Obesity in Older Adults to be held at the Peabody Hotel, Three State Plaza in Little Rock, AK. For more info call (501) 661-7962.

September 19, 2003

Science and Religion in Health Conference: In Pursuit of Better Healthcare. The sixth annual spirituality and healthcare conference will be held on the MCV Campus of VCU. For more info, contact Bobby Vickers at (804) 675-5087 or visit www.srih.org

September 25-26, 2003

The Intersection of Delirium and Faculty: A Multi-disciplinary Conference to be held at the Towsley Center in Ann Arbor, MI. For more info call (734) 763-1400.

October 2-3, 2003

Computer-Based Technology and Caregiving for Older Adults. For more info see the website at www.spry.org/conference/

October 13-14, 2003

Historical Influences on Lives and Aging presented by the Penn State Gerontology Center. To be held at the Penn Stateer Conference Center and Hotel at State College, PA. For more info visit their website at www.outreach.psu.edu/C&I/HistoricalInfluences/

October 15-18, 2003

Uniting Generations to Build a Better World. The 12th International Conference of Generations United to be held at the Hilton Old Town Alexandria. For more info visit their website at www.gu.org

November 12-15, 2003

Partnerships Across the Heartland: Together We Stand brought to you by the Southwest Society on Aging and the Mid-America Congress on Aging. To be held at the Tulsa Marriott Southern Hills, Tulsa, Oklahoma. For more info visit their website at www.PartnerShipsforAging.org

December 4-6, 2003

Advancing Technology and Services to Promote Quality of Life. An EU-US sponsored International Conference on Aging, Disability and Independence. To be held at the Hyatt Regency Crystal City in Arlington, VA. For more info see the website at www.asaging.org/icadi/

January 28, 2004

Virginia Center on Aging’s Annual Legislative Breakfast to be held at St. Paul’s, Richmond. For more info, call (804) 828-1525.