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### Case Study

*by Jeffrey C. Michaels, O.D. and Mary Bullock, OTR/L*

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**Jeffrey C. Michaels, O.D.**, is the Director of the Richmond Eye & Ear Hospital Low Vision Rehabilitation Center in Richmond, Virginia. He lectures on low vision rehabilitation, the role of contact lenses in low vision, intraocular tumors, and age-related macular degeneration. Dr. Michaels is studying reading in persons with low vision; the effect of macular translocation surgery on low vision rehabilitation; the use of the scanning laser ophthalmoscope in low vision rehabilitation; and driving for the visually impaired. Dr. Michaels completed a one-year low vision research and clinical fellowship at the Lions Vision Research and Rehabilitation Center at the Wilmer Ophthalmological Institute at the Johns Hopkins University after graduating from the Michigan College of Optometry.

**Mary D. Bullock, OTR/L**, is the Occupational Therapist for the Low Vision Rehabilitation Service at the Richmond Eye & Ear Hospital. Her role is instructing patients on the best use of their remaining vision and teaching them to use optical and non-optical devices that will enhance their functional vision and safety for daily tasks. She has worked in the field of physical rehabilitation for 20 years and also received education and training in low vision from the Lions Low Vision Research and Rehabilitation Center.

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## Educational

### Objectives

1. Understand the epidemiology of visual impairments of older adults.
2. Understand the symptoms of functional loss secondary to visual impairments.
3. Understand the rehabilitative options available for those with vision loss.
4. Understand the multi-disciplinary approach in low vision rehabilitation.
5. Understand the impact of low vision rehabilitation services.

### Background

Low vision is a permanent visual impairment that is not correctable with spectacles, contact lenses, or surgical intervention, and that interferes with normal everyday function.<sup>1</sup> It is estimated that there are at least three million Americans with low vision.<sup>2-3</sup> Most people with low vision in this country are 65 years of age or older and have age-related macular degeneration (ARMD), diabetic retinopathy, cataract, glaucoma, or optic nerve disease. In the United States, ARMD accounts for almost 45% of all cases of low vision.<sup>3</sup> The prevalence of low vision is highly age dependent; research has shown that visual impairments increase from less than 1% of persons 40 to 49 years old to more than 15% of those 79 years and older.<sup>3</sup> It is widely accepted that the number of elderly will dramatically increase in coming decades; it is also expected that the number of elderly persons with visual impairments will increase. This increase demands a service that will meet the needs of patients and their functional complaints.

Low Vision Rehabilitation At the Richmond Eye & Ear Hospital, low vision rehabilitation encompasses many services that are coordinated between the optometrist and the occupational therapist. In our office, the optometrist performs a thorough evaluation that includes measurements for visual acuity, contrast sensitivity, reading speed, and visual field. A measurement of the spectacle prescription is also performed for both distance and near. Time is spent counseling the patient, family, and/or friends about the visual condition, ramifications of the visual impairment, potential for rehabilitation, and coordinating other services. These services may include orientation/ mobility, social work, blindness rehabilitation, occupational therapy, or vocational rehabilitation.

Occupational therapy is an intricate component of the successful rehabilitation of our patients. Many patients with low vision lose their ability to perform such routine daily tasks as reading mail, writing a check, or threading a needle. Our occupational therapist thoroughly evaluates the patient's present level of independence for these and many other daily living tasks. The goal of rehabilitation is to increase the patient's overall independence with everyday tasks that people with normal vision take for granted. During the first occupational therapy visit, rehabilitation options are discussed which are based on the patient's lifestyle, goals, eye condition, visual function, expectations, and motivation to reach desired goals. Often, goals are reached with the use of specialized optical devices that require instruction (e.g. telescopes, high power reading glasses, etc.), practice, and emotional adjustment on the part of the patient. The occupational therapist will teach the patient to optimize his or her remaining vision and to use the prescriptive optical and non-optical devices to increase the present level of independence. A major role of the occupational therapist is to inform patients with low vision about helpful resources in the community. Resources such as support groups, vocational rehabilitation, blind skills training, and home adaptive skills may all ease patients' adjustment to vision loss and aid in the overall quality of life.

Symptoms of Low Vision Both the causes and the manifestations of visual impairments are many. By far, the most common complaint of persons with low vision is difficulty in reading. This complaint may relate to newspapers, mail, bibles, medicine bottles, one's writing, a watch face, the telephone book, a menu, and similar common items. Other functional complaints include: not being able to identify faces at a distance, difficulty identifying markings on a stove dial, not being able to see one's own face in a mirror, not being able to fill out a check, difficulty identifying steps/curbs, difficulty seeing street signs while driving, difficulty passing a department of motor vehicles (DMV) vision test, falling over objects in the home, problems in navigating through unfamiliar territories, staying on the line when writing a letter, inability to distinguish words on a TV screen, not being able to see icons on a computer screen, difficulty judging distances, knocking over glasses on a table, and trouble in pouring liquids, to only name a few.

### Case Report

Anita Help, a 79-year-old white female, reported to the Richmond Eye & Ear Hospital Low Vision Rehabilitation Center upon a referral by her ophthalmologist. Her chief complaints were difficulty in reading small

print (her bible, mail, newspaper, and menus in restaurants), seeing faces from across the room, and worry that she would not be able to renew her driver's license on her birthday eight months hence. She reported a decrease in visual acuity in her left eye while watching TV during the last week.

Ocular history was significant for age-related macular degeneration in both eyes, and she had previously undergone laser treatment to stop bleeding in her right eye which resulted in a permanent decrease in visual acuity. She had previous cataract surgery in both eyes.

Medical history was significant for hypertension (controlled with Atenolol), history of smoking for the past 60 years, and arthritis (non-medicated); she was taking multi-vitamins daily.

Functional history showed that Mrs. Help lived alone in a house in the city, as she had for the past 45 years. Currently, she drives and uses a support cane for mobility. She uses several hand-held magnifiers that she purchased from the "dollar store" to assist her in reading, although recently they are not providing enough magnification. Mrs. Help is responsible for her own finances, cooking, shopping, and cleaning. She is retired, but volunteers at a local hospital's gift shop. Since the passing of her husband and her failing vision, she admits to being frustrated, anxious, and depressed. She has been under the care of an ophthalmologist for ARMD, although no treatment for the "good eye" is indicated. She has never received visual rehabilitation. For now, she is only being monitored.

Entering visual acuity was 20/300 in the right eye and 20/100 in the left (20/20 is "normal" vision and 20/200 is considered legally blind). Near visual acuity was 8.0M in the right eye and 2.5M in the left (newspaper print is approximately 1.0M). Contrast sensitivity testing measured 1.05 with both eyes (1.50 - 1.65 is the normal measurement for her age). Central visual field testing showed a large central scotoma (blind spot) in the right eye (consistent with the previous laser treatment) and a smaller scotoma in the left eye. Binocular vision testing showed that Mrs. Help favored the left eye. Fundus evaluation was significant for a large disciform scar in the right eye (secondary to previous laser treatment) and a neovascular membrane in the left eye (site of new bleeding secondary to ARMD).

Low Vision Rehabilitation Because rehabilitation is task oriented, we had to identify different interventions for each of her complaints. The most important goal for Anita Help was reading. We provided her with a 4X

microscope that would allow her to read newspaper print without the chore of holding a magnifier; this would allow her to hold the newspaper under a halogen light for optimal reading conditions. This 4X microscope, which looks like conventional glasses, requires Mrs. Help to hold reading material only a few centimeters away from her eyes. In order to become acclimated to this new close "working distance," she worked with our occupational therapist for a one-hour session. This session included training with her new glasses, education for ways to improve reading performance, training for how to use her vision to its potential, and a demonstration of large print checks (because Mrs. Help had difficulty staying on the lines when filling out her standard size checks).

With regard to devices for reading, there were several options available to Mrs. Help. We could have provided her with hand-held magnifiers, a closed circuit television (reading machine), or other adaptive devices. Because Mrs. Help had arthritis, she found it difficult to hold a magnifier for a prolonged period of time. Therefore, we provided her with a device that does not need to be held in the hand (the glasses rest on her nose like a standard pair of spectacles).

Patients with ARMD, like Anita Help, suffer from reduced contrast sensitivity. How well something "stands out" is an example of its contrast. For example, black print on a white background is excellent contrast. Unfortunately, for printed material like a newspaper, the print is dark gray on a light gray background. This is an example of poor contrast and is the etiology of many complaints by persons with impaired vision. Measuring contrast is probably the single most important indicator of functional loss (compared to visual acuity, visual field, etc.). Persons with reduced contrast sensitivity require increased lighting to improve function. While we can suggest proper lighting for the patient in his or her home, conditions outside the home pose another challenge. Restaurants and churches usually offer inadequate lighting for these people. We often have to recommend portable lighting for these situations (e.g., flashlights, illuminated magnifiers).

Anita Help's vision is 20/100 in the better eye. In the Commonwealth, state law requires vision to be 20/40 for unrestricted driving privileges. Drivers may, however, use a bioptic telescope to drive. A bioptic telescope is a magnifier mounted into one's spectacles that can provide distance magnification. Through training, a person can learn to use the telescope with relative ease and incorporate it into daily life. This device can help one to identify faces at a distance, read signs, and see a clock face from a greater distance. The Commonwealth does require that the best corrected

vision without the telescope (spectacles only) to be better than 20/200 and the correction with the telescope to better than 20/70. In Anita Help's case, her left eye was 20/100, which is within state law for bioptic use. A 2.2X telescope corrected her to 20/50, which is also within state law. Extensive training in our office with the use of this device over three months assured that Anita Help had the skills necessary to pass an DMV road evaluation.

### Conclusion

Our low vision service was able to meet the many functional needs of Anita Help. While she was not eligible for any medical/surgical intervention, we were still able to improve her quality of life. This is what low vision care is all about. It is important to note that Anita Help will remain under the care of her ophthalmologist. She has an ocular condition that requires constant evaluations of her eye health. Given the active bleeding process in Mrs. Help's left eye, the ophthalmologist can provide special testing that is imperative to her management. Anita Help had a very common eye disease found in the elderly--age-related macular degeneration. Other conditions that result in functional complaints can be managed in a low vision service as well. These include: diabetic eye disease, glaucoma, traumatic brain injury, and cerebral vascular accident. Mrs. Help was referred to our service by her ophthalmologist, although a referral by a doctor is not necessary. Patients often refer themselves.

Anita Help's visual acuity (the most common test used to measure vision) was 20/200 and 20/100 in the right and left eyes, respectively. Functional complaints (difficulty reading small print, seeing faces, and watching TV) occur with vision as "good" as 20/50. These complaints can easily be managed in a low vision service.

The Richmond Eye & Ear Hospital Low Vision Rehabilitation Center is located at 1001 E. Marshall St. in downtown Richmond, across from the campus of the Medical College of Virginia. Our office can be reached at 804/775-4513.

### References

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2. National Advisory Eye Council. Vision research: a national plan 1984-1988. National Institutes of Health, National Eye Institute, 1993:305-21.
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impairment in an American urban population. The Baltimore Eye Survey. *Arch Ophthalmol* 1990;108:286-90.

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## **From the Executive Director, *Virginia Geriatric Education Center***

*Iris A. Parham, Ph.D.*

The Virginia Geriatric Education Center has been in the process of preparing for the submission of a new grant which, if funded, would fund the VGEC for an additional five years beginning in the fall of the year 2000. In the preparation process, we have put together our numbers of training participants who are serving rural and/or underserved populations throughout the Commonwealth. The following is our preliminary data: Abingdon (233); Roanoke (203); Warrenton (165); Richmond (120); Petersburg (144); Hampton (243); Norfolk (202); and Virginia Beach (193). In addition to these numbers of practitioners serving under-served elderly populations, we have served many other health care practitioners in the state.

Despite Hurricane Floyd, which prevented us from going on-line for the September 17th kick-off for our Geriatric Interdisciplinary Team Training Course, we have begun the training of students at five sites across Virginia. The instructors had the pleasure of meeting with the students at the sites to give them an orientation to the materials, syllabi, and readings. There are now 43 students taking the course, including: 16 pharmacy students, six nurses, two physical therapists, eight social workers, one audiologist, six in-patient counselors, and four gerontologists (obviously some of the students in the other categories are considered gerontologists as well, but the numbers are designated by major discipline area). It is also important to note that the disciplines are highly mixed at the sites. As one of the instructors, I met with the students at the Charlottesville site for the first time recently, and I have to say that the time flew by as we worked on the aging knowledge and teaming exercises together. This promises to be a most rewarding experience for all. At the upcoming November meeting of the Gerontological Society of America, Dr. Ellen Netting will lead the team by presenting an overview of the GITT course. There were also well-attended training sessions at Bon Secours and Sentara this quarter. In addition to these sessions, the first in a monthly series of training sessions began at our own Medical College of Virginia Hospitals of VCU. There were 44 attendees. In addition, the statewide medication management

training is continuing in high gear, and the VGEC is active with the Virginia Guardianship Association. There are many other wonderful things happening, so we look forward to our next update.

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## **From the Director, *Virginia Center on Aging***

*Edward F. Ansello, Ph.D.*

Virginia is responding to the needs of its older citizens with dementing illnesses and of those who care for them, whether in an institutional or a family setting. The Alzheimer's Disease and Related Disorders Commission, appointed by Governor Gilmore, has worked for several months in public meetings to consider effective responses to the challenges posed by the increasing number of Virginians affected by these conditions. The problem is multi-faceted. Alzheimer's is one of several types of dementing conditions. The Commonwealth needs meaningful ways to help those already affected by dementia, as well as strong initiatives that will help clarify the causes, treatments, and prevention of the various disorders that often steal one's mind while sparing one's body.

The Alzheimer's Commission is recommending responses by the Commonwealth that speak to several vital areas of need and that do so in ways that maximize the impact of the money that would be invested. The Commission recommends steps to strengthen family caregivers, those who provide the overwhelming majority of chronic care to Virginians with dementia, as well as steps to improve formal care and patient safety: (1) eliminate the waiting list for the Respite Care Initiative that assists older Virginians in nine locations who are at risk of institutional placement, and expand the program to six new locations statewide; (2) appropriate monies for the Virginia Caregivers Grant Fund to provide \$500 annually to assist family caregivers who give chronic care to relatives with two or more serious impairments; (3) launch a pilot program to teach basic dementia care to 1000 staff members (nurses, social workers, certified nurse assistants, activities, housekeeping, etc.) and state inspectors of long-term care facilities; (4) establish dementia-specific training for all public safety personnel, through both interpersonal and interactive computer means; and (5) expand statewide the Safe Return Program which provides a safety net for memory-impaired persons who wander.

Regarding research into the causes, consequences, treatment, and prevention of dementia, the Commission recommends increased support of

the Alzheimer's and Related Diseases Research Award Fund (ARDRAF), which our Virginia Center on Aging administers for the Commonwealth. New follow-up surveys indicate that this seed grant program for Virginia researchers returns almost 10 dollars to Virginia for every one dollar appropriated.

And, finally, the Commission hopes that its own work of increasing public awareness and serving as a resource for citizens will be maintained and strengthened.

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## ***From the Commissioner, Virginia Department for the Aging***

*Ann Y. McGee, Ed.D.*

Hurricanes Dennis and Floyd roared onto the Eastern seaboard and created havoc throughout many states. In Virginia, these storms served to highlight the role that Virginia's 25 Area Agencies on Aging (AAAs) have in assisting frail older citizens handle the stress, danger, and aftermath of these storms. Fortunately, the national Weather Service is usually able to provide us with sufficient warning to prepare for the worst storms. Even so, AAAs monitored the approach of Dennis and Floyd with a certain degree of apprehension. AAA staff in Southwest Virginia remember the devastation created by Hurricane Camille. Staff in the AAAs serving Virginia's coastal communities also understand the dangers that these storms create, particularly for persons living in low-lying areas.

As each storm approached, AAAs worked to prepare their frail and isolated clients for severe weather. AAAs delivered non-perishable, ready-to-eat meals to those older persons who might lose power or become isolated by high water. AAAs encouraged older persons living in flood-prone areas to move in with relatives or friends or to move into temporary emergency shelters. AAAs also made sure that those older persons living alone were being checked on by family, friends, or neighbors.

In the aftermath of each storm, AAA staff called clients to check on their condition. In areas where phone service was disrupted, staff were out on the roads, negotiating high water and storm debris, visiting clients to assess their situation and provide services if needed. Some AAAs lost vehicles to the flood waters, while others found that local nutrition sites or senior

centers were damaged and the services had to be relocated. AAA staff worked long and hard to assure that there was a mini-mum disruption of services and that those clients who had serious needs were identified and served. The Department for the Aging also moved quickly to apply for disaster funds through the federal Department of Health and Human Services.

The lessons AAAs learned from Dennis and Floyd will help them prepare for future weather-related emergencies. VDA is working with the Office of Emergency Services to develop disaster planning training for AAAs this winter. Together, we will work to assure that frail older citizens will continue to receive the services they need during weather emergencies.

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## Focus on the Virginia Geriatric Education Center

*Erica Motley*

Erica Motley came to work at the Virginia Geriatric Education Center (VGEC) in August, after becoming a master's student in the Department of Gerontology at Virginia Commonwealth University. Erica works for Dr. Iris Parham, Chair of the Gerontology department, as a part-time office services specialist through the VGEC. Her current and proposed projects include assisting Dr. Parham on the development of a grant writing web-course in the Health Sciences Ph.D. program, preparing for grant proposal renewal in December, and assisting with upcoming Spring semester courses such as *Problems, Issues, and Trends* and *Psychology of Aging*.

Erica's interest in the elderly and aging studies was developed through participating in cognitive aging research while an undergraduate at the University of Richmond, as well as through personal family experiences with her elderly grandfather. Erica was a Cigna Scholar and was awarded by the Omicron Delta Kappa leadership honor society while at UR. After graduating with a bachelor degree in psychology, Erica became the research coordinator for the Memory and Cognitive Aging Project, a National Institute on Aging grant project at the University of Richmond, under the direction of Dr. Jane Berry. Once she has received her master's degree, Erica hopes to continue her education, pursuing a career in health administration or research-oriented consulting, advocating for the elderly and their issues.

## Focus on the Virginia Center on Aging

*Kimberly S. Smith*

Kimberly Smith is the Public Relations Assistant Specialist for the Virginia Center on Aging (VCoA). She has been with VCoA, in a variety of positions, since 1994. As the Editor of *Age in Action*, Kim strives to create newsletters that are informative, interesting, and attractive. These same goals apply to her work on VCoA's web page (<http://views.vcu.edu/vcoa>), which features current Elderhostel course listings, detailed information regarding the Alzheimer's and Related Diseases Research Award Fund, a complete listing of videos available for lending, sources for age-related data, and information about other VCoA projects. Kim also manages VCoA's film library, gives presentations to promote VCoA's Elderhostel and lifelong learning programs, and represents VCoA at public awareness functions. Her experience as a veterinarian's assistant and a lifelong fondness for animals have led her to work on a pilot project with the Department of Gerontology which will measure the effect of pet bird therapy on the loneliness and depression of seniors in adult day care centers.

Kim serves as Secretary to the Board of the Virginia Association on Aging. She is also a member of the Professional/ Consumer Advocacy Council, the Southern Gerontological Society, and the Patient and Family Services Committee of the Greater Richmond Chapter of the Alzheimer's Association. Kim is pursuing a masters degree in Gerontology, with a concentration in adult education, from Virginia Commonwealth University. She expects to graduate in August, 2000.

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## Virginia Seeking Volunteers to Counsel Senior Citizens on Health Insurance

The Virginia Insurance Counseling and Assistance Program (VICAP) is seeking volunteers to provide free health insurance counseling for Virginians aged 60 and older. During November, the Virginia Department for the Aging will be providing training sessions throughout the state for volunteers to assist people with Medicare and Medicaid enrollment, as well as decisions about Medicare supplemental (Medigap) and long-term care insurance.

VICAP is looking for volunteers of all ages who are comfortable working with numbers and people, and who can provide counseling and assistance in their local area. People who are licensed to sell insurance, or who consult in the insurance business, are not eligible to participate in the volunteer program.

The Virginia Department for the Aging sponsors VICAP in cooperation with the State Corporation Commission's Bureau of Insurance and other agencies. Since 1993, VICAP has reached thousands of older Virginians with information and help on health insurance issues. The Health Care Financing Administration, the federal Medicare agency, provides funding for VICAP. All counseling and training is free. For more information about VICAP and the November training sessions, contact Joe Guarino, VICAP state program coordinator, at the Virginia Department for the Aging, 1-800-552-3402.

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## New Videos Available from the Information Resource Center

The Information Resources Center (IRC) has purchased three new videos that are available for loan. The IRC is maintained by the VCoA and the VGEC. The three videos, part of the series, "The Basic Care Guide for Elderly Patients," are: (1) Care Essentials: Vital Signs Plus, (2) Recognizing and Preventing Emergencies, and (3) Care Means Caring. These videos provide caregivers (both institutional and family) with important information to recognize the need for medical attention and offer physical and emotional care for older adults. For information about borrowing these videos, call VCoA at (804) 828-1525.

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## Geriatric Rotational Education And Training Project (G.R.E.A.T.)

In April, the John A. Hartford Foundation of New York City, working with the New York Academy of Medicine, awarded Virginia Commonwealth University's School of Social Work one of 11 one-year \$50,000 planning grants. The purpose of the Hartford Foundation's initiative is to "develop more aging-rich practicum sites that will become permanent, ongoing, and hopefully an enlarging component of the graduate social work education."

VCU's School of Social Work will use this award to build a consortium of field agencies and design the Geriatric Rotational Education and Training Project (G.R.E.A.T.). In December, this model will be submitted to receive a two-year, \$250,000 implementation grant.

The G.R.E.A.T. model will create a tri-regional (Richmond, Tidewater, and Northern Virginia) consortium that will expose students to diversity among older persons and complexity of chronic care issues by customizing field experiences so that students rotate through the full geriatric continuum of care during both their foundation and concentration years.

Collaborators in the Consortium are the Virginia Geriatric Education Center and the Department of Gerontology at VCU, the Evelyn R. Strong School of Social Work at Norfolk State University, and the Virginia Institute for Social Services Training Activities (VISSTA). Ten agencies recognized for leadership in geriatric care serve as Field Organizations in the Consortium: Bon Secours Richmond Health System, Capital Area Agency on Aging, Lucy Corr Village, MCV Hospitals, MCV Housecalls, Virginia Department of Social Services, Sentara Health System, INOVA Health System, Goodwin House, Inc., and Instructive Visiting Nurse Association.

One anticipated outcome of the G.R.E.A.T. Model is 10 gerontologically trained social workers graduating in Spring, 2002, and 10 students-in-training for graduation in 2003.

Some features of the Model include: student rotations through the geriatric continuum of care over four semesters; geriatric classroom faculty rotating through the continuum as field liaisons and mentors; interdisciplinary

opportunities incorporated into the rotation; practice cluster seminars held in each of the three regions for students, field instructors, and field liaisons; consortium meetings to design transregional learning opportunities; and CE events in geriatrics for field instructors, faculty, and graduates. For more information about the G.R.E.A.T. Project, contact Kristina Hash at the School of Social Work (804/828-1098). To learn more about the Hartford Foundation's Geriatric Social Work Practicum Development Program, visit <http://www.nyam.org/gsw/index.html>.

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## **Final Project Reports from the 1998-1999 Alzheimer's Research Award Fund**

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 along a variety of avenues, such as the causes, diagnosis, and treatment of the disorder; public policy and financing of care; and the social and psychological impacts of the disease upon the individual, family, and community. ARDRAF conducts an annual competition for pilot study awards of \$16,500 each, administered by the Virginia Center on Aging. A panel of researchers and scholars judges each proposal on its scientific merit. There are no "a priori" preferred topics of investigation. The following page summarizes the final reports for the 1998-99 ARDRAF award winners. To receive the 2000-2001 ARDRAF Call for Proposals, call VCoA at (804) 828-1525.

### **Alzheimer's and Related Diseases Research Award Fund - Final Reports (1998-1999)**

#### **VCU/MCV J. James Cotter, Ph.D., "Special Care for Persons with Alzheimer's Disease or Related Disorders: The Response of Virginia's Nursing Facilities, Adult Care Residences, and Home Care Agencies"**

Long-term care organizations are responding to the new challenges of serving older persons with dementia by establishing Special Care Units (SCUs) and Special Care Programs (SCPs). Our study, the Continuum of Special Care Project, surveyed 301 nursing facilities, 584 adult care residences and 422 home health care agencies in Virginia to determine how many and what kind of SCUs and SCPs were being implemented and what types of organizations were initiating SCUs and SCPs. One in five nursing homes and adult care residences has an SCU or SCP. Nursing facilities serve an average of 39 residents in the SCUs; adult care residences serve an average of 16 residents in their SCUs.

Based on the facilities' plans, 33% of these facilities will have established an SCU or SCP within the next two years. Nursing facilities and adult care residences that are larger, part of chains, in urban areas, and/or with affiliations to other providers have a greater tendency to establish special care units than do other facilities. Most of the SCUs have a number of the key characteristics associated with special care units and programs, but only 14% have the full range of traits that characterize special care. Initiatives in home health agencies are nascent and focus on training and assignment of aides. Responses indicate considerable interest and experimentation on the part of long-term care organizations in Virginia to better serve persons with Alzheimer's disease or related dementia. (Dr. Cotter can be reached at 804/828-6938.)

**VA Tech Bradley G. Klein, Ph.D. and Jeffrey Bloomquist, Ph.D.,  
"Improved Visualization and Localization of the Neural Substrates of  
Experimental Parkinsonism"**

Parkinson's disease is a debilitating movement disorder of the brain which afflicts at least 1 million Americans in late middle age. It is analogous to Alzheimer's disease in its clinical target population, progressive neurodegenerative nature, and its functional, emotional and economic impacts upon the family and society. A condition almost identical to Parkinson's disease can be experimentally produced in animals by a compound called MPTP, which is similar in chemical structure to the herbicide paraquat. Although the MPTP model has provided important information on the neural mechanisms of Parkinson's disease, it is difficult to localize the regions and cells in the brain that use MPTP to produce the hallmarks of the disease. This research project addressed the usefulness of a chemical analog of MPTP, called t-THP, with regard to its potential for providing direct visualization of the brain regions and cells that are involved in experimental Parkinsonism. In general, results support several important similarities in metabolism, kinetics, and neurochemical function between MPTP and t-THP. However, one important difference, demonstrated by our ARDRAF data, is that the t-P<sup>+</sup> pyridinium metabolite of t-THP does not appear to rely on sodium-dependent membrane transporters for incorporation into nervous system elements. It appears that t-THP has promise for use as a visual marker for micro-environments where MPTP-like compounds are taken up and converted to potentially neurotoxic pyridinium species. The utility of this marker is further underscored by our ARDRAF-funded finding that t-THP does not appear to destroy components of the system it is meant to identify. Such a marker could be employed to address some of the issues regarding the selectivity of MPTP neurotoxicity. (Drs. Klein and Bloomquist can be reached at 540/231-7398.)

**UVA Carol A. Manning, Ph.D. and J. Hunter Downs, III, Ph.D.,  
"Brain Effect of Glucose Facilitation on Memory in Alzheimer's  
Disease: A Functional Magnetic Resonance Imaging  
Study"**

Numerous experiments indicate that increasing the blood glucose level improves memory in patients with Alzheimer's disease. Glucose, which is the main fuel for the brain, can cross the blood-brain barrier and enter the brain. What happens to brain activity when blood glucose levels are raised has yet to be definitively determined. A new technology called Functional Magnetic Resonance Imaging (fMRI) allows researchers to examine brain activity while patients are performing memory tasks. In this study, brain activity was compared in Alzheimer's patients and healthy elderly people. Each participant had a functional MRI with high blood glucose levels on one occasion and normal blood glucose levels on another. While undergoing the fMRI, they performed tests of memory for stories and faces. Significant and novel results indicate that glucose improves memory for healthy elderly and people with Alzheimer's disease, and that the critical brain areas involved are similar. In addition, glucose has a direct effect on brain activity in both groups of people. (Drs. Manning and Downs can be reached at 804/982-1012.)

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## Seniors Sail on the *Paradocks II*

On Friday morning, August 20th, after an evening of thunderstorms, a small group of older adults from the Program for All-Inclusive Care for the Elderly (PACE) in Norfolk enjoyed an ocean cruise on the *Paradocks II*. The *Paradocks II*, which is fully accessible to those with mobility limitations, is a 54-foot houseboat featuring a chair lift to the top sun deck, an air-conditioned cabin, a small kitchen, and shaded front and rear decks.

Organized by PARAdapt Services, the Virginia Center on Aging, and the Virginia Geriatric Education Center, this trip was specifically designed for elders with disabilities or impairments. Most on board chose to sit on the bow deck to enjoy the breeze, the view of the beach, and the homes surrounding Rudee Inlet. Although impending rains and rough water kept some of the scheduled guests from joining the cruise, those who came were rewarded with a thoroughly enjoyable day, including an unscheduled visit by a group of dolphins swimming close to the boat. A good time was had by all, with the proof being provided by the smiles on their faces.

The *Paradocks II* is available during the summer months to groups of persons with disabilities or impairments in mobility. For further information, contact Gary Melton (owner and captain of *Paradocks II*) at 757-722-7700.

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## Upcoming Programs from the Department of Gerontology at VCU/MCV

### Gerontology Courses - Spring 2000 Semester

#### *VCU Campus*

GRTY 410-002 Introduction to Gerontology Welleford Tues & Thur 8-9:15

GRTY 410-001 Introduction to Gerontology Osgood Tues & Thur 11-12:15

GRTY 410-901 Introduction to Gerontology Ansello Wednesday 6-8:40

GRTY 601-901 Biology & Physiology of Aging Harkins Wednesday 5-7:40

GRTY 602-901 Psychology of Aging Welleford Video-Assisted

GRTY 604-901 Problems, Issues, and Trends Pyles/Cotter Thursday 6-8:40

GRTY 607-901 Field Study in Gerontology Parham

GRTY 612-901 Recreation, Leisure & Aging Osgood Thursday 5-7:40

GRTY 625-901 Aging & Minority Communities Welleford Monday 6-8:40

GRTY 638-901 Longterm Care Administration Rivnyak Thursday 7-9:40

GRTY 641-901 Survey Psy. Access & Treatment Wood Tuesday 6-8:40

GRTY 642-901 Practicum: Geropsy Parham

GRTY 691-901 Research Methods II Owens Monday 6-8:40

GRTY 692-801 Independent Study Parham

GRTY 692-802 Independent Study Harkins

GRTY 798-801 Thesis Parham

## *Off Campus Courses*

GRTY 606-C01 Aging & Human Values Flanagan Video-Assisted

For registration information regarding these courses or about the Gerontology program at VCU/MCV, contact the Department of Gerontology at (804) 828-1565 or visit their web site at <http://views.vcu.edu/sahp/gerontology>.

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## **Calendar of Events**

### **November 1-3, 1999**

*Aging Locally and Aging Globally: Reflections and Renewal Statewide Conference.* Sponsored by the North Carolina Division of Aging. North Raleigh Hilton, NC. For info. call (919) 733-3983.

### **November 9, 1999**

The Alzheimer's Association - Blue Ridge of Virginia Chapter presents *Naomi Feil, MSW, ACSW*, author of Validation Therapy. Clarion Airport Hotel, Roanoke, VA, 8:30 a.m. - 4:30 p.m. For info. call (540) 345-7600.

### **November 10, 1999**

*Social Security: Every Woman's Issue.* Sponsored by the Virginia Geriatric Education Center and the National Committee to Preserve Social Security and Medicare. Virginia Commonwealth University, 5:30 - 8:30 p.m. (Free). See back page for details.

### **November 19-23, 1999**

*New Perspectives on Aging in the Post-Genome Era.* 52nd Annual Scientific Meeting of the Gerontological Society of America. San Francisco Hilton and Towers, CA. For info. call (202) 842-1275.

### **December 2-4, 1999**

*Promoting Independence and Quality of Life for Older Persons: An International Conference on Aging.* Hyatt Regency Crystal City, Arlington, VA. For info. contact (800) 537-9728 or <http://www.asa.asaging.org>.

**February 24-27, 2000**

*Gerontological and Geriatric Education: Where Have We Been and Where Are We Going?* 26th Annual Meeting of the Association for Gerontology in Higher Education. Wyndham Myrtle Beach Resort, Myrtle Beach, SC. For info. call (617) 353-5045.

**March 25-28, 2000**

*Passages through Time: Facing Change, Finding Meaning.* 46th Annual Meeting of the American Society on Aging. Town & Country Hotel & Convention Center, San Diego, CA. For info. call (415) 974-9600.

**March 28-April 1, 2000**

*Vital Aging: Our Second 50 Years.* 50th Anniversary Conference & Exposition of the National Council on the Aging. For info. call (202) 479-6991.

**March 30-April 2, 2000**

*Aging in the New Century: Linking Policy, Practice, and Research.* 21st Annual Meeting of the Southern Gerontological Society. North Raleigh Hilton, Raleigh, NC. For info. contact (850) 222-3524 or [SGS111@aol.com](mailto:SGS111@aol.com).

**May 17, 2000**

*Choice...Independence..Dignity.* 17th Annual Conference of the Maryland Gerontological Association. Omni Inner Harbor Hotel, Baltimore, MD. For info. call (410) 560-5628.

**June 7-11, 2000**

*Rural Aging: A Global Challenge.* Presented by the West Virginia University Center on Aging. Charleston Civic Center, Charleston, WV.

Call for Abstracts deadline: October 31, 1999. For info. call (304) 293-0628.

**July 9-18, 2000**

*World Alzheimer Congress 2000: With Change in Mind, Pivotal Research and Creative Care.* Call for Abstracts available October 1999. Washington Hilton and Towers, Washington, D.C. For info. call (312) 335-5813.

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National Committee to Preserve Social Security and Medicare and the Virginia Geriatric Education Center, Department of Gerontology, Virginia Commonwealth University Present

## **SOCIAL SECURITY: EVERY WOMAN'S ISSUE**

**A National and Local Discussion on Women's Economic Security and Retirement Policy Issues**

Wednesday, November 10, 1999 at 5:30 p.m. VCU University Commons, Commonwealth Ballroom B, 907 Floyd Avenue, Richmond, VA (Parking available at the VCU Parking Deck, 801 West Main Street)

### **National Panelists Include:**

Martha McSteen, Moderator, President, NCPSSM; Maya MacGuineas, Third Millennium; Lea Abdor, Alliance for Worker Retirement Security; Gail Shaffer, Business and Professional Women USA; Ouida Williams, NCPSSM

Community leaders, retirement consultants, and VCU faculty will serve as expert panelists for the local discussion immediately following the pre-taped national discussion. Refreshments will be served.

For more information or to RSVP, contact the VGEC at (804) 828-9060.

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