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Aging in Place -- Can Universal Design Make It a Reality?

Helen Eltzeroth, M.S. Loudoun County Area Agency on Aging

Helen Eltzeroth, M.S., is a Program Manager at the Loudoun County Area Agency on Aging. She has an extensive background in business management, as well as education and work experience in human services, having worked in a retirement community, the Rehabilitation Research and Training Center at Virginia Commonwealth University (VCU), and at the National Center for Seniors' Housing Research at the NAHB Research Center in Maryland.

Educational Objectives

1. Comprehend the principles of universal design
2. Understand the barriers to aging in place
3. Learn what resources are available to facilitate aging in place

Background

The population is aging at a rapid pace. By the year 2050, the number of people aged 65 and over will increase to over 80 million, according to the U.S. Census Bureau. Normal physiological changes, such as reduced muscle strength and declines in the ability to balance, may affect older adults' ability to function comfortably in their existing houses unless appropriate home modifications are made. Similarly, hearing doorbells or reading thermostats may be difficult because of declines in vision and hearing. In addition, recovering from temporary or acute events, such as heart attack, broken leg, hip fracture, or stroke, may be difficult for anyone, regardless of age, unless their homes have the features they need.

Multiple surveys have shown that older adults want to remain in their homes as they age, but this can be difficult because of the age and type of houses in which they live. Many older adults live in houses built over 30 years ago, and many live in houses of more than one story. Older houses were not designed with the features that facilitate aging in place.

Case Study

Irene is a 69 year old female, living alone. Her husband died two years ago. She lives in the house that she and her husband purchased 45 years ago located in the historic district of a small town. Although the heating and cooling systems have been updated over the years, the only bathroom is upstairs with four small bedrooms. The claw-foot bathtub is situated in the middle of the bathroom, and has been equipped with a shower. The rooms in the remainder of the house are small, the ceilings are high, and the doorways and passages are narrow. There are six steps from the sidewalk to the large front porch, but there are no hand railings. Nevertheless, the house has been well maintained over the years, and a new roof was installed three years ago. The original charm of the historic home has been maintained, but the house has not been updated to reflect many of the conveniences available today.

Irene has a small savings account for emergencies, her house is paid for, and she receives Social Security and benefits from her husband's retirement. She rates her health as good and has always been socially active.

Although her vision has been declining the past couple of years, she is still able to drive. However, she recently fell and broke her ankle while carrying groceries up the front steps. Treatment of the broken ankle revealed the early stages of osteoporosis. Irene is having difficulty navigating into and around her house, but she considers her situation temporary. Her two daughters who live in another state are concerned about her ability to manage in her existing house. They fear she will fall again and need assistance for a lengthy healing process because of the osteoporosis.

The Problem

Irene's daughters have suggested she sell her existing house and move to a condominium for older adults located on the outskirts of town. The occupational therapist working with Irene to rehabilitate her ankle has suggested she create a zero-step entrance to her back door, convert her downstairs library to a bedroom, and convert one of her closets to a small bathroom with a shower. Irene does not want to move away from the neighborhood where she has lived for the past 45 years. She wants to continue to be able to walk to church and to shop in the historic district. Likewise, she does not want to "spoil" the original features of her house by converting her library to a bedroom and a closet to a bathroom, resulting in having "handicap" features in her house. She does not think she needs to make any changes to her home because she believes her present condition is only temporary.

Irene is not aware that there are universally-designed products and features that look no different than standard products. For example, grab bars come in a variety of colors and shapes and can be used as part of the bathroom décor as towel bars. Integrating a zero-step entrance into the landscape design is another such example.

Barriers to Aging in Place

Physical and Financial Barriers

The age of the house can be a barrier. For example, if a bathroom is being completely remodeled, existing water pipes may need to be updated in addition to the renovations to be made inside the room. Similarly, wiring may need to be updated to comply with current code. Both of these conditions can affect the affordability of the remodeling job.

The design and architecture of the space to be remodeled can be barriers, such as small spaces. Creative solutions can be found, but the cost to remodel is likely the major barrier for most older adults. AARP's Fixing to Stay 2000 reported that the primary reasons survey respondents had not remodeled their homes or had not remodeled them as much as they would have liked were financial constraints and the inability to do the remodeling job themselves.

Psychological Barriers

Some older adults deny their aging and, as a result, deny that any home modifications are needed. If the modification implies that the person is older or disabled, some older adults refuse to have the work done. Products and features need to be aesthetically pleasing. Others may choose to "cope." For example, if a bathtub proves difficult to get into, some may "cope" by bathing in the sink. Some do not want to spend the money even when they have it. Still others may fear remodeling will be disruptive to their daily routines and choose not to have it done.

Immediacy of the Need

Irene's situation is similar to the situation many older adults face. When they encounter an acute condition that affects their ability to function, they view the condition as temporary and do not consider what may be an underlying contributor, in Irene's case, osteoporosis. Sometimes, the timing of the event may dictate modifications to be completed in a very short period of time. Finding a knowledgeable remodeler who can complete the work in a short timeframe is often difficult. It is not unusual for adult children to call service providers from their parent's hospital room to seek assistance in making home modifications.

Informational Barriers

Finding a family member, friend or remodeler to perform the home modification may be a problem, regardless

of the timeframe. Older women living alone without family members in close geographic proximity may find remodeling particularly difficult. With the media frequently describing situations where unscrupulous contractors take advantage of older homeowners, the fear of being a victim may prevent some from remodeling. In addition, lack of knowledge by the remodeler, the older adult, and service provider about the products that add comfort and convenience can result in an unsuccessful remodeling project.

The Decision to Remodel or Move

If the older adult and family members have limited funds, the decision will likely be based on which option they can afford. In some cases, modifications to an existing house may not be cost effective in relation to the value of the property. Therefore, moving to another property may be a better choice. Whether the house is owned or rented will also be a consideration. Other considerations include the social connections of the older adult and accessibility to services.

Universal Design

The concept of universal design has been advocated as one way to maximize livability and to facilitate aging in place. Universal design, as defined by the Center for Universal Design, is: " ... the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design."

To explain how the concept applies to the usability of products, Story (1998) discussed the seven principles of universal design.

Principle One: Equitable Use The design is useful and marketable to people with diverse abilities.

Principle Two: Flexibility in Use The design accommodates a wide range of individual preferences and abilities.

Principle Three: Simple and Intuitive Use Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.

Principle Four: Perceptible Information The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.

Principle Five: Tolerance for Error The design minimizes hazards and the adverse consequences of accidental or unintended actions.

Principle Six: Low Physical Effort The design can be used efficiently and comfortably and with a minimum of fatigue.

Principle Seven: Size and Space for Approach and Use Appropriate size and space are provided for approach, reach, manipulation, and use regardless of the user's body size, posture, or mobility.

Resources

There are a number of professionals who have expertise in remodeling existing homes to meet the needs of older adults. Some occupational therapists specialize in working with home modifications for older adults; other health care professionals and the Occupational Therapists Association (OTA) can help identify them. In addition, there are architects, interior designers, and product designers who specialize in universal design. Information about them is generally available through their local professional associations.

Local chapters of the National Association of Home Builders and Remodelers Council can be a source of information on knowledgeable remodelers. In fact, the Home Builders Association has launched a new designation program for home modification remodelers, the Certified Aging in Place Specialist (CAPS). Knowledgeable professionals provide affordable product choices and understand how to use standard products and features in non-standard ways to provide the functionality many older adults need. Good sources about products and features are the National Center for Seniors' Housing Research, NAHB Research Center, The Center for Universal Design, the National Resource Center on Supportive Housing and Home Modification, and the Center for Inclusive Design and Universal Access. All of these organizations have a wealth of

information on their web pages.

Conclusion

Aging in place can mean remaining in an existing house or moving to a new home, but the key is preserving independence in the home environment. Each case is unique, and the extent of the involvement of the older adult, family member, occupational therapist, service provider, and remodeler will vary based upon the circumstances. Knowledge about the options and resources available is critical to a successful remodeling project, and understanding the principles of universal design is an important first step.

Study Questions

1. What factors should older adults consider in deciding to remodel an existing house or move to a new house?
2. How do product instructions affect the choice and usability of a product for older adults?
3. How can professionals work together in completing home modifications that are acceptable to their older clients?

References

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Story, M. F. (1998). Maximizing usability: The principles of universal design. Assistive Technology. 10. Rehabilitation Engineering and Assistive Technology Society of North America. 4-12.

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Author's Note: Ms. Eltzeroth was principal author of two white papers, "Certification of Products for the Mature Market," October 2000 and "Cost and Practicality of Home Modifications," July 2001, NAHB Research Center, and this case study is based in part on these white papers. Executive Summaries of these papers are available online at: www.nahbrc.org/seniors1.asp?TrackID=&CategoryID=1798&Type=

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From the Executive Director, Virginia Geriatric Education Center

Iris A. Parham, Ph.D.

The VGEC was just awarded a two year, \$334,000 contract by the Department of Medical Assistance Services to complete training of 400 Personal Care Aides and Certified Nursing Assistants. This 40-hour training will be delivered in all regions of the state and there will be distance-based components of the training available at all stages of the project. Career ladder issues will be an important component of this training initiative. Additionally, we are moving quickly to complete plans for our End Of Life Care videoconference. We also have a new partnership for a national videoconference related to Parkinson's disease and have the good fortune to be working with one of our alumni, Ms. Miriam Hirsch, who is back in Richmond and the Educational Director for the PADREC here. We have several on-going projects with the Center for Excellence in Aging and Geriatric Health in Williams-burg, the details of which will be included in our next newsletter.

The Virginia GEC just completed the first year of full training for Validation Training Workers and graduated an outstanding group of practitioners. We look forward to our January one-day training session with Ms. Naomi Feil and to the start of our next Worker training, due to begin in February. For further information on any of these initiatives, please contact Kandi Watson at 804.828.9060.

Lastly, I would like to congratulate our staffer, Ms. Lucy Lewis, on her completion of and outstanding work in

the M.S. in Gerontology; she will be applying for the doctoral program. In addition, kudos to our past Senior Project Coordinator, Ms. Leigh (Peyton) Burke who just received her company's Award for Excellence which recognizes operational excellence, meeting the goals and standards of the company, and bringing joy to her facility. Ms. Burke is at Brighter Living in Hopewell. We are delighted for her.

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From the Director, Virginia Center on Aging

Edward F. Ansello, Ph.D.

Greetings at the New Year! This is the time for looking back and stepping forward. The year 2002 saw the VCoA complete its 24th year of service to the Commonwealth. Relative to our three fundamental mandates, some highlights in 2002 include:

Interdisciplinary Studies: "More Life Left to Live: Promoting Healthy Aging." We have been developing an unusual statewide model program on wellness and illness prevention aimed at older adults and service professionals in the aging, health, mental health, gambling, and substance abuse services. The intervention utilizes a "train the trainer" approach that focuses on compulsive gambling, smoking, alcoholism, depression and suicide, healthy behaviors, and wellness in later life. Project products (video, service provider booklet, older adults booklet) are close to being finalized and we have drafted the evaluation instrument to be used in the training. Also, the VCoA and the VGEC are evaluating each aspect of an on-going training collaboration, involving several partners noted below, that is: 1) providing dementia-specific training to 1,000 long-term care personnel (led by the Alzheimer's Association; Phase I), 2) preparing 500 nursing assistants who have participated in the dementia program to provide in-services for their co-workers (VDA/NAI/Alzheimer's Association; Phase II), and 3) offering 40 hours of job-focused training for 100 nursing assistants who successfully complete both the dementia-specific program and the train-the-trainer instruction (VGEC; Phase III). Our outcomes evaluation will help determine the long-term impact of the combined training on job satisfaction and career commitment. Finally, at the very close of 2002, we learned that the Virginia Department of Criminal Justice Services has awarded us funding for a pioneering project we are undertaking as part of the Central Virginia Task Force on Older Battered Women and will conduct in 2003. We will co-direct with VCU Police Department and will administer this initiative to develop a comprehensive system of specialized services, increase awareness and education on domestic violence and sexual abuse against older women, and ultimately improve Central Virginia's capacity to respond to the needs of these women.

Research: VCoA substantially improved the impact and relevance of the Alzheimer's and Related Diseases Research Award Fund (ARDRAF) in 2002. Our work to expand outreach led to a record number and diversity of submissions for the 2002-2003 cycle. There were more proposals submitted, beyond the three medical schools, than ever before (e.g., Radford University, Liberty University, James Madison University, Old Dominion University, Regent University, College of William and Mary; and the Mountain Empire Older Citizens AAA). Researchers at the following were selected for funding: UVA is comparing how well neuropsychological testing predicts the benefits of shunt placement in patients with Normal Pressure Hydrocephalus who either do and do not have a definitive diagnosis of dementia (via intra-operative brain biopsy); VCU is looking to improve the capacity of home care aides in rural areas; JMU is examining attitudes about the use of in-home respite among rural family caregivers; Virginia Tech is working on a new drug design that could increase tolerability of the acetylcho-linesterase inhibiting medicine used to treat Alzheimer's disease; and Mountain Empire is studying the feasibility of computer-assisted support for family caregivers of persons with Alzheimer's disease.

Information and Resource Sharing: Our Elderhostel and Lifelong Learning programs showed gains, amidst declines across our Middle Atlantic region. Enrollments at our Natural Bridge and Richmond Elderhostel sites increased 19% and 41%, respectively. Overall enrollments increased by 5%, rising from 1740 in 2001 to 1821 in 2002. VCU Elderhostel was one of only a few Elderhostel sites in the country that showed increased enrollments for 2002. Our Ninth Annual Love of Learning at Hampton/Yorktown enrolled 89 older adults, its maximum capacity, for a three-day/two-night program in February. In 2002, VCoA Lifelong Learning and VCU Elderhostel reached more than 4,000 older adults and approximately 75 program/ service providers through speaking engagements, exhibits, and other forms of sharing information that covered Virginia geographically, from Fairfax to Urbanna and from New Castle to Goochland.

The year 2003 brings our 25th anniversary. Governor Warner has already declared our anniversary date, March 23, 2003, as Virginia Center on Aging Day in the Commonwealth. We will do all we can to live up to the

confidence Virginians have in us. Best wishes!

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From the Commissioner, Virginia Department for the Aging

Jay W. DeBoer, J.D.

Older Drivers

Americans are living longer and are more mobile than their predecessors. As a result, today's older adults will drive more than previous generations their age did. Older citizens have typically been considered to be very safe drivers; however, recent research indicates that this may be untrue. Older drivers incur more traffic convictions and are involved in more crashes, including more fatal crashes, than any other group, except men under age 25. In 1999, U.S. News and World Report (October 25) featured an article about older drivers that included an alarming statement: "Within about 15 years there will be more elderly drivers involved in crash fatalities than there are drunken-driving deaths (15,935) today."

Each day, many drivers travel familiar routes. They may be able to drive without full concentration, but they must be able to focus on the road immediately if a crisis arises. Driving requires highly complex interaction between a person's eyes, brain and muscles, as well as the ability to cope with unexpected problems quickly. Many older adults can assess their driving skills and will make gradual changes in the way they drive. Most are able to continue driving safely throughout their lives.

It is a different situation, however, for those drivers with Alzheimer's Disease or other dementia. The progression of this disease is usually gradual and somewhat unpredictable. It affects cognitive functions critical to driving, such as judgment, reaction time, and problem solving abilities. It can also cause physical and sensory problems that increase driving risk. With dementia, an individual's capacity to assess his or her own driving abilities will diminish. People with dementia are especially likely to minimize the complexities of driving and overestimate their abilities. They may even make excuses for their high-risk driving. Drivers who suffer from Alzheimer's Disease or other dementia pose a potential risk to other drivers and passengers, as well as to pedestrians.

Like everyone else, people diagnosed with dementia want to drive as long as it is safe. States must constantly weigh the need to respect a person's desire to drive with the need for safety. A single occurrence of poor driving usually is not cause to stop an individual from driving. It does, however, signal the need for increased monitoring of that individual.

In conjunction with the Greater Richmond Chapter of the Alzheimer's Association, VDA will use \$4,000 in grant funds from DMV to develop an educational brochure for families with an older relative who is suffering from Alzheimer's Disease or other dementia and is struggling with driving issues. Brochures will be disseminated through 25 local Area Agencies on Aging, the four Virginia chapters of the Alzheimer's Association, and all local DMV offices. The brochure will include information on:

- How to assess the driving skills of a person with dementia.
- Recognizing the warning signs of dementia.
- How to reduce the older person's need to drive.
- Early planning - how to get the driver involved in decision-making.
- A "Driving Agreement" between the older driver and family or caregivers· How to work with the older person's physician.· Last resort - how to take away the keys.
- Where to find support in dealing with an older driver.
- How to report concerns to DMV.

The goal of this material will be to give families information that will help them intervene when their older relative begins to show signs of having problems with driving. The result will be safer highways for all Virginia's citizens.

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Focus on the Virginia Geriatric Education Center

Frank Kriston

Frank Kriston joined the VGEC and the Department of Gerontology as an accountant in November, 2002. He is responsible for the management of all departmental grants and contracts, as well as state allocated funds.

Frank is currently pursuing his bachelor degree in Business Administration from the University of Phoenix. His future goals are to gain a Master's degree in Health Administration and to manage a large program in the Allied Health field.

Currently, Frank spends his spare time working with his Community Association on its Neighborhood Beautification Committee. He enjoys landscaping, studying historical architecture, and reading Tom Clancy and Anne Rice novels.

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Focus on the Virginia Center on Aging

Katie Young

Katie Young began working at the VCoA in October as a part-time Project Manager. She has been designing an evaluation instrument to examine the impact of the Alzheimer's Association's Train the Trainer program for nursing aides supported through the Virginia Department for the Aging's Alzheimer's Demonstration grant and has also been entering data collected from previous trainings conducted under this grant.

Katie is a first year student in the MS Gerontology program, and hopes to graduate in the spring of 2004. She holds a BA in Liberal Studies from West Chester University in Pennsylvania. She discovered her interest in Gerontology after working in assisted living settings and an adult day center. She realized the need for change in this rapidly growing field and returned to school to earn her Master's degree.

Katie was born and raised in the Philadelphia area. She is enjoying life in Richmond, misses her family, but not the winters!

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Community-Academic Partnerships Distinguish 2002-2003 Alzheimer's and Related Diseases Research Award Fund Projects

Constance Coogle, Ph.D. Virginia Center on Aging

The Alzheimer's and Related Diseases Research Award Fund (ARDRAF) was established by the Virginia General Assembly in 1982 to stimulate innovative investigations by researchers in Virginia 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 for the Commonwealth of Virginia by the Virginia Center on Aging at Virginia Commonwealth University in Richmond. For the past few years, the Research Award Fund has been encouraging partnerships between community-based agencies/facilities and academic institutions. Three projects from the current round of awards exemplify how such collaboration can facilitate research.

"Improving the Capacity of Home Care Aides in Rural Areas Serving Persons with Alzheimer's Disease and Related Disorders" partners the Department of Gerontology at Virginia Commonwealth University and the Chesapeake Bay Agency on Aging, Inc. in an initiative to address the quality of long-term home care for persons with AD and related disorders. The study is researching the potential of a specialized training program and proactive clinical support to improve the ability of aides to handle more effectively home care patients with Alzheimer's disease who live in rural areas. The investigation will also determine how a partnership between an

academic research unit and an area agency on aging can improve research and enhance community-based services.

"Rural Family Caregivers' Perceptions of Facilitators and Deterrents to the Use of In-Home Respite" builds on an on-going collaboration between the Department of Nursing at James Madison University, the Virginia Department for the Aging, and the Central and Western Virginia Chapter of the Alzheimer's Association. This project aims to examine the factors that influence caregivers' decisions to use in-home respite services. The investigators anticipate developing an evidence-based model to improve client assessment and in-home respite services offered through the Caregivers' Community Network, funded through the Alzheimer's Holistic Demonstration grant from the Virginia Department for the Aging. The results will help service providers design and market respite interventions that are tailored to the needs of rural families and encourage them to continue in their role as primary caregivers for loved ones with Alzheimer's disease.

"Using the Internet for Alzheimer's Care: The Challenge for Elders and Service Organizations in Approach" is spear-headed by the Executive Director of Mountain Empire Older Citizens, Inc. (the Area Agency on Aging in Southwest Virginia) and the Coordinator of the Certificate Program in Aging Studies at Johns Hopkins University. The team will begin examining the feasibility of computer-assisted support for family caregivers of persons with Alzheimer's disease in this sparsely populated part of Virginia. Mountain Empire is preparing to take advantage of plans to develop a wired community (i.e., broadly connected by computer technology) in their planning district by conducting focus group sessions to determine what barriers might impede accessibility and the willingness to accept training/technical support from high school students. The findings will serve as the basis for program development and technology support services, with the ultimate goal of assuring that the needs of Alzheimer's caregivers are included in the region's plans for a wired community.

Please contact the ARDRAF Administrator, Dr. Constance L. Coogle, at the Virginia Center on Aging for further information about these or any other funded projects ccoogle@hsc.vcu.edu; 804.828.1525

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COMMONWEALTH OF VIRGINIA

Alzheimer's and Related Diseases Research Award Fund

FINAL PROJECT REPORTS FROM THE 2001-2002 ALZHEIMER'S RESEARCH AWARD FUND

UVA Erik J. Fernandez, Ph.D. (Department of Chemical Engineering) "Revealing Amyloid-b Structure and Oligomer Distributions Using Mass Spectrometry" Alzheimer's disease has long been known to involve formation of fibrillar structures from a protein fragment termed amyloid-b. This protein fragment also forms smaller aggregates that recently have been implicated as the actual toxic species responsible for neuronal damage in Alzheimer's patients. In this research, a new approach based on isotope labeling and mass spectrometry has been used to investigate the structure of amyloid b. The results indicate this technique should be useful in subsequent research to identify the toxic form of amyloid b and identify the structural features responsible for its toxicity. *(Dr. Fernandez may be contacted at 434/924-1351)*

UVA Carol Manning, Ph.D. and Kathleen Fuchs, Ph.D. (Department of Neurology) "The Subjective and Objective Experience of Women at Genetic Risk for Alzheimer's Disease" Concern about the onset of dementia is especially high among women with a parent diagnosed with AD. However, little research has been done to examine cognitive and emotional functioning in those who have first-degree relatives with AD. The investigators assessed the cognitive and emotional functioning of a group of women at increased risk for developing Alzheimer's disease (AD) because they have a parent with AD, and compared their performance with women of comparable age and education who do not have a parent with AD. They found that the women at risk report more symptoms of caregiver burden and anxiety than their peers, but that their general cognitive functioning is comparable. The women in the at-risk group performed in the above average range on a measure of general memory functioning, but they did not perform quite as well as their peers. It does not appear that the difference in level of emotional distress accounts for the difference in memory performance. The investigators are currently investigating other aspects of performance such as learning characteristics that might account for this finding. *(Drs. Manning and Fuchs may be contacted at 434/982-1012)*

UVA John Savory, Ph.D. and Othman Ghribi, Ph.D. (Department of Pathology) "Stress in the Endoplasmic Reticulum Mediates Active Neuronal Death in Experimental Neurodegeneration" Recent studies have implicated apoptosis in the progressive and selective loss of neurons that characterizes AD. Although apoptosis under mitochondrial control has received considerable attention, the mechanisms utilized within the endoplasmic reticulum (ER) are not well understood. This project first investigated the neurotoxic effect of direct injection of Ab1-42 into the brains of New Zealand white rabbits on the ER. Secondly, the researchers established that pre-treating animals with a molecule that up-regulates antiapoptotic protein levels in the ER, glial cell line-derived neurotrophic factor (GDNF), protects against Ab1-42-induced neurotoxicity. The investigators further chose to use lithium treatment in an additional study, since recent work implicated mediation by activity in the glycogen synthase kinase-3b (GSK-3b) and MAP kinases (JNK, p 38, and ERK) signaling pathways. Lithium, used to treat bipolar disorder, was found to protect against Ab-induced neurotoxicity and tau phosphorylation by mechanisms that may involve anti-apoptotic as well as GSK-3b regulation activities. The investigators made significant progress in understanding pathways by which the important Alzheimer's peptide, Ab, causes injury to neurons, and have pointed the way to possible treatments. *(Drs. Savory and Ghribi may be contacted at 434/924-5682)*

VCU/MCV Jurgen Venitz, M.D., Ph.D. and Yuxin Men, M.D. (Department of Pharmaceutics) "Pharmacokinetic/Pharmacodynamic (PK/PD) Modeling of the Interaction of IV Scopolamine and Physostigmine in Healthy Elderly Volunteers" This research proposed to use: 1) scopolamine, a competitive cholinergic antagonist, to temporarily mimic the symptoms of AD in healthy elderly volunteers, and 2) physostigmine, an acetylcholinesterase (AChE) inhibitor used to treat AD patients, to reverse the cognitive impairment induced by scopolamine. The time course of reversal was determined by the physostigmine concentrations in blood achieved in each individual, and sophisticated PK/PD modeling was used to analyze cognitive functioning changes (mimicking AD symptoms), heart rate and saliva flow changes (known side effects of physostigmine), and blood concentrations of scopolamine and physostigmine. Overall, the AChE inhibition was mild (due to the relatively low dose of physostigmine, limited by concern about clinical adverse effects) and short-lived (due to the short half-life of the physostigmine administered). This was reflected in the small and transient reversal effects on the scopolamine-induced pharmacological effects. Higher physostigmine doses, given as an intravenous infusion, would be required to show a more profound and long-lasting (therapeutic) AChE inhibition reversal. However, the results do suggest that physostigmine reverses the scopolamine-induced effects consistent with its therapeutic effect in AD. In addition, the results suggest that elderly females are more sensitive to the effects of scopolamine and physostigmine relative to their male counterparts. *(Drs. Venitz and Men may be contacted at 804/828-6249)*

VCU/MCV Janet H. Watts, Ph.D., O.T.R. and Jodi L. Teitelman, Ph.D. (Department of Occupational Therapy) "Alzheimer's Disease Caregiver Occupational Performance, Respite as a Mental Break, and Program Implications" Recent research suggests that caregivers of persons with AD need more than simple physical distance from care recipients to experience true respite. Achieving a mental break is conceptualized as the essence of respite and as a restorative occupation. Caregivers need to feel free and confident that their loved ones are not just safe, but meaningfully engaged, so that they experience a mental break from their concerns. A phenomenological study involving four in-depth interviews each with fifteen family caregivers of persons with AD explored the experience of getting a mental break. This project produced a working model of how caregivers of persons with AD get a mental break. The model addresses associated factors including: Social Support, Traditional Respite (including Playing "Beat the Clock"), Relief Enhancing Conditions (including Caregiver Predispositions and Situational Prerequisites), and Techniques for Momentary Stress-Reduction (Relaxing Expectations and Getting Unstuck). Achieving a Mental Break addresses: Mental Break Techniques (Creative Deception and Caregiver Carpe Diem) and Experiencing a Mental Break (Absorbing Activities, Description of Mental Break, The Price You Pay). The last components are: Respite Impediment (The Challenge of Accepting Help) and Advice From Caregivers to Caregivers. Practical implications include: continuing refinement of formal respite services to facilitate a mental break by flexible scheduling and demonstrating staff compassion, competence, dependability to reassure caregivers and recipients; counseling caregivers about the other-serving (not self-serving) potential of a mental break to re-energize them in their caregiving roles; promoting the idea that refreshing breaks can be achieved through a wide range of absorbing activities that are mildly or totally absorbing, of short or long duration, near or far from the care recipient, and simple or complex. Further analyses of data from this study will be used to develop a specific psychoeducational intervention for assisting caregivers in identifying opportunities for and achieving mental breaks from their caregiving responsibilities. *(Drs. Watts and Teitelman may be contacted at 804/828-2219)*

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Fifty-eight Geriatric Health Professionals Mentors Trained in 2002

he mentorship initiative, a major focus of the current five-year VGEC grant to educate health professionals in geriatrics, has made significant progress. So far 58 mentors have been trained. These mentors form a network of individuals who, under the guidance of the VGEC, will improve the skills of health care professionals in geriatrics, gerontology, social work, allied health professions, and aging services in serving older persons. After completing a six hour training program, participants were designated as Mentors in the Virginia Geriatric Health Professionals Mentoring Program.

Dr. J.James Cotter and Dr. Constance Coogle, the coordinators for this initiative join Dr. Iris Parham, Executive Director of the Virginia Geriatric Education Center, in congratulating these mentors. They note that these mentors will "enhance the aging network of faculty, practitioners, and students. We look forward to working with these mentors to develop a strong cadre of health professionals ready to serve growing numbers of older persons." Also, and very importantly, the mentors come from a broad spectrum of health professions and from all regions of the state.

The VGEC is accepting applications for individuals who want to participate in the program either as Mentors or as Mentees. If you would like to receive an application or have any questions, please contact us at 804/828-9060.

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Grant Awarded to the Central Virginia Task Force on Older Battered Women Project

The Central Virginia Task Force on Older Battered Women Project has been awarded funding by the Virginia Services, Training, Officers, Prosecution (V-STOP) Violence Against Women grant program. The goal of the project is to address the unique needs of middle-aged and older women who are victims of domestic violence or sexual assault. This goal will be accomplished by increasing awareness and education on domestic violence and sexual assault in later life, promoting more specialized services and training to address the problem, and enhancing collaboration among law enforcement, legal services, criminal justice, aging services, advocates, and allied professionals.

The project is a collaborative effort involving more than 15 aging, domestic violence, law enforcement, legal services, and criminal justice organizations. These organizations are members of the Central Virginia Task Force on Older Battered Women (CVa Task Force), a regional collaboration working since 1998 to raise awareness and improve the community response to older women who experience domestic violence or sexual assault. The Virginia Center on Aging (VCoA) will administer this project, which will serve the jurisdictions of Chesterfield, Hanover, and Henrico Counties, and the City of Richmond. Paula Kupstas, Ph.D., VCoA, and Sgt. Barbara Walker, VCU Police Department, will serve as co-directors. A project coordinator to be hired (see associated job announcement on page 15) will develop and implement project activities. An Advisory Committee of the CVa Task Force will provide direction and expertise to the project co-directors and coordinator. The project will be active from January 1, 2003 through December 31, 2003. The Virginia Department of Criminal Justice Services (DCJS) is the administering agency for the V-STOP grant program. If you would like more information about this project, please contact Paula Kupstas at (804) 828-1525.

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Calendar of Events

January 15, 2003

Legislative Breakfast. Annual gathering sponsored by the Virginia Center on Aging to report to the General Assembly and colleagues. St. Paul's Episcopal Church, Richmond, VA. For info contact (804) 828-1525.

March 6-9, 2003

AGHE Means Business: Educational Opportunities and the World of Work. The 29th Annual Meeting and Educational Leadership Conference of the Association for Gerontology in Higher Education to be held at the Hilton St. Petersburg, St. Petersburg, FL. For more information go to <http://www.aghe.org>

April 2, 2003

End of Life Care for the Geriatric Patient: Pain Management, Communication, and Ethical Dilemmas for

Health Care Professionals. A state of the art, national videoconference presented by the Mountain State, Pennsylvania, Virginia and Western Reserve Geriatric Education Centers. For more info contact Kathleen Watson at Kdwatson@mail2.vcu.edu or call (804)828-9060.

April 3-6, 2003

The 14th Annual Virginia Geriatrics Conference. This conference will be held at The Homestead in Hot Springs, Virginia. For additional information call Thomas Mulligan, MD at 804-675-5181 or Lucy Lewis at 804-828-9060.

April 9-12, 2003

New Elders, New Care. The 24th Annual Meeting of the Southern Gerontological Society will be held at the Sheraton Richmond West Hotel in Richmond, VA. For more information go to <http://www.wfu.edu/Academic-departments/Gerontology/sgs/>

July 20-23, 2003

Bridging Research and Care. Alzheimer's Association's 11th Annual National Alzheimer's Disease Education Conference will be held at the Hyatt Regency Chicago, IL. For more info call (312)335-5790 or email info@alz.org