

# VA Research and Development Leading in the 21<sup>st</sup> Century

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Discovery and Collaboration for Exceptional Health Care

## Research Meeting Convened Top Experts on Women Veterans' Care

In summer 2010, a major conference was held to promote and expand research on issues affecting women Veterans. "The National Meeting on Building the Evidence Base to Improve Health Care and Outcomes for Women Veterans"— which took place July 15-16, 2010 in Washington, DC—was the first event of its type since 2004, when VA first set out to develop a comprehensive research agenda focused on women. Women now account for 17 percent of active duty military and nearly 6 percent of VA health care users, and VA has continued to build a diverse research portfolio targeted to their needs. "We were able to gauge how far we have come since the establishment of the research agenda and to accelerate our growth towards research that will directly impact the care women receive in VA," says Elizabeth Yano, PhD, MSPH. Yano is co-director of VA's Center for the Study of Healthcare Provider Behavior and an adjunct professor of health services at the University of California, Los Angeles, School of Public Health. To learn more about VA research and events marking this year's National VA Research Week (May 2-6) and Central Office events (May 5), visit www.research.va.gov.

## VA Research Targets Wars' Signature Injuries

Since 2001, more than 1.6 million U.S. troops have been deployed to Iraq and Afghanistan. The "signature injuries" of these wars—posttraumatic stress disorder (PTSD) and traumatic brain injury (TBI), which affect large numbers of returning Veterans—can't easily be diagnosed with a blood test, brain scan, or other lab test. Even as VA clinicians apply the latest methods to help Veterans affected by TBI and PTSD, VA researchers are working to finding better ways to accurately diagnose the two conditions, especially in cases where they may overlap in confusing ways. For example, in a small pilot study, a team with VA and the University of California, San Diego, found that a combination of two imaging technologies—magnetoencephalography (MEG) and diffusion tensor imaging (DTI)—can show subtle brain injuries that go undetected in conventional CT and MRI scans. MEG picks up the signals that neurons give off when they fire. DTI picks up abnormalities in the brain's nerve fibers. More research using these technologies is now underway. To learn more about VA research and events marking this year's National VA Research Week (May 2-6) and VA Central Office events (May 5), visit www.research.va.gov.

#### From Cancer to Cardiology, Nobel-Winning VA Scientist is Closing in on Cures

VA Distinguished Medical Research Scientist and University of Miami researcher Dr. Andrew Schally may not yet have found the fabled "cure for cancer," but he's come about as close as any medical researcher. This winner of the 1977 Nobel Prize in Physiology or Medicine is hot on the trail of compounds he believes will revolutionize cancer treatment. But over his decades-long career, Schally has been credited with weighty advances in a wide range of additional specialties—among them, gynecology, gastroenterology, and endocrinology. And now, cardiology can be added to the list. In a potentially important advance in the study of congestive heart failure—a leading cause of disability—Schally and his University of Miami colleagues have found a compound that sparked major recovery in rats after heart attack (which often leads to heart failure). The compound is a derivative of growth hormone, and the research team's findings were published in 2010 in the *Proceedings of the National Academy of Sciences*. All told, Schally has published more than 2,200 papers during his career. To learn more about VA research and events marking this year's National VA Research Week (May 2-6) and VA Central Office events (May 5), visit *www.research.va.gov*.

## VA Researchers Explore Families' Role in Helping Severely Wounded Veterans

Families of Veterans who have sustained polytrauma injuries are the focus of research by a team based at the Minneapolis VA Medical Center, home to one of VA's four main polytrauma centers. One study underway is called Family and Caregiver Experiences with Polytrauma, or FACES. Lead investigator Joan Griffin, PhD, says the study should provide much-needed information about the current and long-term needs of families—people who, in many cases, will continue to be involved in their loved ones' care for years or even decades to come. Other studies by the Minneapolis group aim to make VA polytrauma care more family-centered. That means involving families in the care plan, giving them the right resources, and seeing to their needs. "If we keep families informed and involved in a way that they want to be involved, and in which the *patient* wants them to be involved, adherence to treatment, and outcomes, are likely to be better," says Nina Sayer, PhD, research chairperson for the polytrauma-brain injury Quality Research Enhancement Initiative. To learn more about VA research and events marking this year's National VA Research Week (May 2-6) and VA Central office events (May 5), visit *www.research.va.gov*.

## Patients with Serious Mental Illness May Benefit from New Pharmacy Approach

Managing multiple prescription drugs at home can be a challenge. That's especially true for those with serious mental illness, who often have cognitive problems. Researchers at the VA Ann Arbor Healthcare System worked with clinicians and pharmacy staff to develop and test a solution to the challenge. The system is called MedsHelp. It involves innovative packaging, customized refill service, and close cooperation among pharmacy staff, social workers, nurses, and doctors. "What's unique about MedsHelp is that VA is trying to meet the needs of patients with daunting medical conditions and medication regimens with very personalized care," says Agnes Jensen, a health services research associate and pharmacy technician who was part of the clinical trial that led to the program. Central to MedsHelp is the packaging. Patients receive custom-made blister packs straight from the pharmacy, with their medications for each time of day—breakfast, lunch, dinner, and bedtime—packed into separate plastic bubbles. There's a row for each day of the week and a column for each time of day. Colorful graphic icons and clear instructions are printed right on the packs. To learn more about VA research and events marking this year's National VA Research Week (May 2-6) and VA Central Office events (May 5), visit www.research.va.gov.

## Lifelong Disability Can't Suppress VA Researcher's Soaring Spirit

An investigator at VA's Rehabilitation Outcomes Research Center in Gainesville, Fla., Elizabeth (Lisa) Hannold, PhD, was born with a rare disease called spinal muscular atrophy. She has never walked, and as a result of severe curvature of the spine, is 4 feet 10 inches tall. Poor range of motion in her arms and overall weakness keep her from reaching and lifting everyday objects. Dr. Hannold is prone to respiratory infections and fatigue. Despite its physical impact, though, the disease does not affect her mind, and Hannold is building a bright career as a VA researcher. She has co-authored several publications and presentations about topics such as the effects of locomotor co-training, which gradually improves the walking ability of some patients with spinal cord injury. Dr. Hannold also has worked to create outcome measures that take into account the perspectives of disabled Veterans and address the issues they consider important. Now, she is studying the challenges faced by Iraq and Afghanistan Veterans with polytrauma as they reintegrate into the workforce. To learn more about VA research and events marking this year's National VA Research Week (May 2-6) and VA Central Office events (May 5), visit www.research.va.gov.

## VA Researchers Work to Unlock Genetic Keys to Health

VA investigators specializing in genomics are hunting down disease-linked genes and gene mutations, such as changes in the tumor-suppressor gene BRCA1 that raise the risk of breast and ovarian cancer. New discoveries in this area can improve screening and diagnosis and point toward more effective therapies. Joel Kupersmith, MD, VA's chief research and development officer, says the role of genomics in medical research during the coming years can't be over-emphasized. "The future of medicine is determined by research, and genomics is *the* direction for research in the 21<sup>st</sup> century." Recently, one team of VA researchers found that genetic variations associated with a protein called macrophage migration inhibitory factor may signal an increased risk for prostate cancer recurrence. Another VA group found that while one variant of the "bc12" gene is generally associated with longer survival in patients with kidney cancer, another variant of the gene may actually predict worse outcomes. These are just some examples of the work being done in this area at VA sites nationwide. To learn more about VA research and events marking this year's National VA Research Week (May 2-6) and VA Central Office events (May 5), visit *www.research.va.gov*.

VA's Cooperative Studies Program: Large-Scale Trials to Inform Evidence-based Medicine Recently, Veterans at four VA sites took part in a study that used robots to deliver high-intensity stroke therapy. Other study volunteers received high-intensity therapy without the robot. Both methods proved effective. The results, presented at the 2010 International Stroke Conference, provide compelling new evidence that people can gain back function even years after a stroke. The study is just one example of the impact of VA's Cooperative Studies Program. By conducting trials across many VA sites—often including thousands of Veterans—CSP is able to generate strong evidence to help guide clinical practice. Findings from CSP studies not only inform VA care but also contribute significantly to medical care throughout the United States and the world. CSP was established in its present form in 1972. The program's roots date back to just after World War II, when it conducted the first-ever, large-scale clinical trials to focus on tuberculosis treatments. In the decades since, CSP has conducted numerous influential studies—many of which have appeared in top journals such as the New England Journal of Medicine and the Journal of the American Medical Association. To learn more about VA research and events marking this year's National VA Research Week (May 2-6) and VA Central Office events (May 5), visit www.research.va.gov.

#### A Biohybrid Approach to Rebuilding the Body

Researchers with VA's Center for Restorative and Regenerative Medicine are content to leave Superman's leaps over tall buildings and the Six Million Dollar Man's bulldozer-strength bionic arm in the realm of fiction. It's the natural body's real-life feats of movement and function that CRRM researchers are bent on mimicking. The center's investigators, representing the Providence VA Medical Center, Brown University, and the Massachusetts Institute of Technology, are studying new millennium methods for restoring quality of life to those affected by disease or injury. A major focus is developing "biohybrid" limbs that will merge human tissue and mechanical elements. A related aim is creating "biomimetic" components that mimic biology. For example, the first powered anklefoot prosthesis, constructed by MIT prosthetics engineer and CRRM investigator Hugh Herr, PhD, propels a user forward with tendon-like springs and an electric motor. "This design releases three times the power of a conventional prosthesis to propel you forward and for the first time, provides amputees with a truly humanlike gait," he says. Last November, it was announced that this new powered prostheses was now commercially available. CRRM was founded in 2004 and was rededicated in 2010 with a new 24,000-square-foot, state-of-the-art research space. To learn more about VA research and events marking this year's National VA Research Week (May 2-6) and kickoff events (May 5), visit www.research.va.gov.

## Living with Chronic Lung Ailment Gets Easier Through VA Study

Try breathing through a drinking straw, and you'll have some idea of what it's like to have chronic obstructive pulmonary disease (COPD). COPD is an umbrella term for a group of lung diseases that complicate breathing, such as emphysema and chronic bronchitis (but not asthma). Now, hundreds of Veterans nationwide are taking part in a five-year study to see if patient education and case management can curb hospitalizations and boost quality of life. Pat Jacobs, Phoenix VA coordinator for the study, explains that helping patients fine-tune their medication regimen is one focus of the study. She says she has spent up to two hours a week one-on-one with study volunteers to assist them in this area. "I think it's the individual attention as much as anything that helped," she says. Some of the volunteers are now helping to lead a COPD support group at the center. "They're going to be doing some of the teaching," says Jacobs. "They know they can be of help to other people with COPD." To learn more about VA research and events marking this year's National VA Research Week (May 2-6) and Central Office events (May 5), visit www.research.va.gov.

## Bedford VA Brain Banks Provide Insights on Alzheimer's, TBI, and Other Ailments

Neurology researchers rely heavily on brain banks, including some housed at the Bedford (Mass.) VA Medical Center, to learn about the biology of brain-related medical conditions. "We can't treat what we don't understand," says Ann McKee, MD, head of the neuropathology service for the VA New England Healthcare System and director of the Bedford VA-based brain banks. "The idea with these banks is to learn as much as possible about brain diseases, including their origins and any environmental or genetic triggers." The brain banks she oversees include those of the Boston University Alzheimer's Disease Center and BU's New England Centenarian Study; and the Center for the Study of Traumatic Encephalopathy, a partnership with the Sports Legacy Institute that is partly funded by the VA New England Geriatric Research and Clinical Center and the National Institute on Aging. Dr. McKee is now also studying whether military troops with traumatic brain injury from blasts experience effects similar to those from non-blast injuries. To learn more about VA research and events marking this year's National VA Research Week (May 2-6) and VA Central office events (May 5), visit www.research.va.gov.

## From 'Smart' Electrodes to Electric Bandages, APT Center Researchers are Forging a New Generation of Adaptive Devices

What goes on at the Advanced Platform Technology (APT) Center might sound more like something out of a novel by Isaac Asimov or Robert A. Heinlein. At this research center of excellence, based at the Louis Stokes VA Medical Center in Cleveland, some scientists and engineers are developing a material that can mimic brain tissue. Others are refining a muscle-powered brace that could allow paraplegics to walk and climb stairs. Still others are creating disposable electric bandages to promote faster healing of wounds, and artificial limbs that sync up with the nervous system. "We try to capitalize on advances in materials science and microelectronics, and focus them on the needs of Veterans with disabilities," says APT Center Executive Director Ronald Triolo, PhD. A case in point is a new type of electrode for use in brain-computer systems. Existing brain electrodes are made of stiff silicon so they don't fit well in the watery environment of the brain. An APT Center team has created a material that softens once inside the brain, rendering it mechanically invisible. Results from the promising nanotechnology work first appeared in the journal *Science* in 2007. To learn more about VA research and events marking this year's National VA Research Week (May 2-6) and VA Central Office events (May 5), visit <u>proversearch va.gov</u>.

#### VA, DoD Join Forces to Study Military Suicide

The U.S. Army has expressed significant concern about the number of suicides that have taken place in the past few years among active duty and reserve soldiers. They Army believes that the stresses and demands made on soldiers every day are great, and that it must focus on building resiliency in

soldiers and their families to prevent suicide. The Army also has developed a consortium to mesh military and civilian research efforts on suicide prevention. VA's Eastern Colorado Health Care System is part of that consortium. Peter Gutierrez, PhD of the Mental Illness Research, Education and Clinical Center at the Denver VA Medical Center is a co-director of the consortium, along with Thomas Joiner, PhD, of Florida State University. Dr. Joiner's recent studies have focused on suicide among those with traumatic brain injury. VA and Florida State will each receive \$8.5 million over three years from the Army to further their research, with a particular emphasis on suicide in the military. Army officials say they expect the consortium to bolster the evidence base for policy recommendations and clinical practice guidelines. To learn more about VA research and events marking this year's National VA Research Week (May 2-6) and VA Central Office events (May 5), visit proveresearch va.gov.

## Researchers Explore New Technologies To Help the Blind Navigate

While seeing eye dogs and long white canes are likely to endure as trusted wayfinding aids for the blind, a new generation of digital aids is emerging. Nowadays, it's not uncommon to see people with vision loss using "talking" handheld GPS devices—often along with a guide dog—to navigate along city streets. GPS has its limits, however. Directions for pedestrians can be off by 50 or even 100 feet in certain instances. Clouds or tall buildings can block signals. Indoors, GPS may not work at all, and even under ideal conditions, consumer GPS devices are usually accurate to only about 10 feet. For a blind user, that can mean the difference between walking on the sidewalk and veering off in the street. A VA-funded group of researchers associated with the Baltimore VA Medical Center and the University of Maryland is designing a computer vision system to bridge these limitations and offer added mobility and independence for Veterans with vision loss. Blind people will wear stereo headphones with a small webcam and microphone attached to their lapel. The devices will be wired to a small laptop carried in a backpack. When the user gives a command, such as "find the restroom," the computer compares the webcam's views with images of the area around the target that have been pre-loaded. Beeps, audio signals, and computer-generated speech indicate how the user is to proceed. In the future, the platform being used to build this system could be used for money recognition, finding lost objects, and even facial recognition. To learn more about VA research and events marking this year's National VA Research Week (May 2-6) and VA Central Office events (May 5), visit www.research.va.gov.

## Yes, Chocolate is Good for Your Heart

Go ahead and eat that chunk of dark chocolate, because you may be doing your heart a favor. A new study by a group of researchers associated with VA, Brigham and Women's Hospital, and Harvard Medical School examined chocolate-eating habits and the prevalence of coronary heart disease among nearly 5,000 adults ranging in age from 25 to 93. Those who reported eating chocolate five times per week or more were about half as likely to have heart disease as those who did not partake at all. For those who ate less chocolate, up to four servings a week, there was still a 26-percent reduction in heart disease. The researchers adjusted for various factors that could have influenced the results, such as age, smoking, exercise or hereditary heart risk. While the study didn't distinguish among different types of chocolate (such as dark chocolate versus more sugary types), it did find that eating non-chocolate candy was associated with an increase in heart disease. Study leader Luc Djousse, MD, MPH, DSc, says that dark chocolate is rich in beneficial natural chemicals called flavonoids, which act as antioxidants. The food has been shown in other research to help lower blood pressure, prevent excess blood clotting, lower inflammation, and reduce atherosclerotic plaque. Even though the new study results would seem to suggest "the more the better" when it comes to chocolate, Djousse urges moderation. "At this point," he says, "for cardiovascular benefits, moderate consumption of two to three servings per week would be reasonable." To learn more

about VA research and events marking this year's National VA Research Week (May 2-6) and VA Central Office events (May 5), visit <u>mww.research.va.gov</u>.

## New Hope for Spinal Cord Injured Patients

Between 225,000 and 296,000 people in the U.S. have a spinal cord injury or disorder that significantly affects their daily lives. Of these, more than 25,000 are Veterans who receive care in VA, making VA the largest integrated health care system in the world for spinal cord care. VA's Spinal Cord Injury Collaborative Translational Consortium is building teams of leading investigators to help develop new therapies to heal spinal cord injuries, to nurture high-risk, high-return ideas that would likely not get funded through other programs, and to create synergy among scientists who are in hot pursuit of the same goal. One such project, underway at the San Diego VA Medical Center, is focusing on pinpointing networks of genes that trigger nerve regrowth. Studies in rodents and nonhuman primates have shown that combination of cells, drugs, and growth factors result in regrowth of nerve fibers past the site of injury 12 months after the injury. Another study, at VA's West Haven, Connecticut medical center is developing imaging techniques to track the survival of transplanted cells and to show how nerve fibers are growing inside the live organism. West Haven is also testing the use of adult stem cells for spinal cord regeneration and is working on restoring the waxy insulation around damaged axons (the long, spindly part of the neuron that connects with other neurons to transmit impulses from the brain) so they can once again conduct electrical impulses. To learn more about VA research and events marking this year's National VA Research Week (May 2-6) and VA Central Office events (May 5), visit <u>www.research.va.gov</u>.

#### Studies Show Links between PTSD and Other Diseases

Two recent VA studies have shown links between post-traumatic stress disorder, or PTSD, and other medical issues. A large study by a VA and Stanford University team shows that among the newest generation of Veterans enrolled in VA health care, those with a mental health condition especially PTSD—tend to have more physical ailments. The researchers examined the records of more than 90,000 Iraq and Afghanistan Veterans who used outpatient care in fiscal year 2006-2007. About 35 percent of men and 27 percent of women had PTSD. Women with PTSD had a median of 7 non-mental illness conditions, versus 4.5 for women with no mental health diagnosis. Men with PTSD had a median of 5 medical conditions, versus 4 for men with no mental health diagnosis. The second study, based at the Michael E. DeBakey VA Medical Center in Houston, looked at 10,481 Veterans at least 65 years of age. It found that Veterans with PTSD had a higher risk for dementia than their peers without PTSD. However, while PTSD was associated with higher risk, the great majority of Veterans with PTSD in the study did not develop dementia. A second study at the San Francisco VA Medical Center, also published in 2010, found a roughly doubled risk for dementia among Veterans with PTSD. To learn more about VA research and events marking this year's National VA Research Week (May 2-6) and VA Central Office events (May 5), visit www.research.va.gov

#### Prevalence of Military Sexual Trauma in VA

A VA study, published in the August 2010 *American Journal of Public Health*, looked at the records of 125,729 Veterans who received VA primary care or mental health services between 2001 and 2007 and found that 15 percent of women and .7 percent of men reported military sexual trauma. Both women and men who screened positive for military sexual trauma were more likely to be diagnosed with a mental health condition. The authors say military sexual trauma tends to be under-reported, so the rates they found in the study may not reflect the full extent of the problem. At the same time, they emphasize that the study included only Veterans who have enrolled in VA health care and the findings may not apply to the military in general. VA screens all new patients for military sexual

trauma—among other issues—and provides free care for all related conditions. To learn more about VA research and events marking this year's National VA Research Week (May 2-6) and VA Central Office events (May 5), visit <a href="mmv.research.va.gov">mmv.research.va.gov</a>.

## Study Finds Evidence of ALS Link to Head Injury

One of the first published analyses from a study of genetic and environmental risk factors for amyotrophic lateral sclerosis (ALS), or Lou Gehrig's disease, suggests that prior head injury may double the risk for the condition. The link was strongest for those with a gene known as APOE-4, which is also a risk factor for Alzheimer's disease. A team at the Durham VA Medical Center and Duke University, led by Silke Schmidt, PhD, compared questionnaire and DNA results from 241 Veterans with ALS and 597 without the disease. The Veterans who participated were part of a VA registry that was started in 2003 and enrolled 2,089 patients with ALS through 2007. Of those, about three-quarters provided blood samples for DNA analysis. A few studies have linked ALS to military service in general—though the reasons for the connection are still unclear—and VA extends service-connected disability ratings to all Veterans with ALS, regardless of when and where they served. According to VA physician-researcher and study co-author Eugene Oddone, MD, MHSC, further analyses by the group may reveal other genetic or environmental factors in ALS. Currently, he says, the strongest risk factor is age—the older the person, the higher the risk of ALS. To learn more about VA research and events marking this year's National VA Research Week (May 2-6) and VA Central Office events (May 5), visit <a href="many.research.va.gov">nmny.research.va.gov</a>.

## In Robotics Study, Gains Seen Even Years After Stroke

A VA study that used robots to deliver high-intensity therapy has provided strong new evidence that people can gain back function even years after a stroke. "There are nearly six million stroke patients in the U.S. with chronic deficits. We've shown that with the right therapy, they can see improvements in movement, everyday function, and quality of life," said study chairman Albert Lo, MD, PhD, a neurologist at the Providence (RI) VA Medical Center. The three-year study enrolled 127 Veterans at four VA sites. All had suffered a stroke at least six months earlier and had moderate to severe impairment of an arm. Patients typically get rehabilitation therapy only during the first six months or so after a stroke. Conventional thinking has been that further therapy offers little benefit. Studies in recent years, though, have begun to suggest otherwise. The therapy in the VA study was repetitive, guided movement, three times a week for three months. One group of patients did the therapy with the use of robots designed at the Massachusetts Institute of Technology. Others did similar high-intensity exercises with a therapist. A third, smaller group had only "usual care"—they received general health care, but no specific therapy for their stroke-damaged limb. The two therapy groups showed improvements in arm movement and strength, everyday function, and quality of life. To learn more about VA research and events marking this year's National VA Research Week (May 2-6) and VA Central Office events (May 5), visit www.research.va.gov.

## Immune System Genes Linked to Parkinson's Disease

Researchers with several institutions, including the VA Puget Sound Health Care System, found in 2010 that a group of genes that help control the body's immune response may figure in the development of Parkinson's disease. The team examined the genetic make-up and health histories of nearly 4,000 people—half with the disease, half without—and found that those with the disease were more likely to have certain variations in a group of immune genes known as the human leukocyte antigen system. Cyrus Zabetian, MD, of VA and the University of Washington, said that the new findings from the group's genome-wide association study are the strongest evidence yet of a role for the immune system in the development of Parkinson's. "We don't know specifically which gene because there is a cluster of genes in that region," he said, "but it is the first really strong link

that the immune system plays a role." To learn more about VA research and events marking this year's National VA Research Week (May 2-6) and VA Central Office events (May 5), visit www.research.va.gov.

## New Approach to Smoking Cessation Boosts Quit Rates for Veterans with PTSD

Smoking cessation treatment that is made part of mental health care for Veterans with PTSD improves quit rates, according to a new VA study. When smoking cessation is made part of a Veteran's overall mental health treatment program, short-term quit rates were as high as 18 percent versus 11 percent for those receiving the usual standard of care, which is referral to a standard smoking cessation clinic. Volunteers who received integrated care stayed smoke free for more than a year at about twice the rate of those who were referred to clinics. Nearly 9 percent of those Veterans were smoke free after a year, compared to 4.5 percent of the other group. VA smoking cessation care generally involves a mix of group and individual counseling, typically in combination with nicotine replacement therapy or other medication prescribed by a VA health care provider. In VA's study, Veterans in the integrated group worked with the same therapist on PTSD and smoking issues. Medication for smoking cessation, if used, was prescribed on an individual basis by the same medical provider managing pharmacologic treatment of the Veteran's PTSD symptoms. To learn more about VA research and events marking this year's National VA Research Week (May 2-6) and VA Central Office events (May 5), visit <a href="https://www.research.va.gov">www.research.va.gov</a>.

## VA's Caregiver Support Program Expanding

The Department of Veterans Affairs is expanding support nationally to caregivers of Veterans with Alzheimer's disease. A pilot program of the REACH VA (Resources for Enhancing Alzheimer's Caregiver Health in VA) program, completed in 2011, showed great success in reducing stress on caregivers while improving care outcomes throughout the world. For six months, 127 caregivers connected to 24 VA medical centers were provided 12 individual in-home and telephone counseling sessions; five telephone support group sessions; a caregiver guide; education on safety and patient behavior management; and training for their individual health and well being. Caregivers saw their burden reduced and experienced drops in depressive symptoms and related daily impacts, fewer frustrations, and decreases in dementia-related behaviors from the Veterans for whom they cared. They also reported they were able to spend fewer hours per day devoted to caregiving duties. The median age for caregivers was 72 and the majority of the participants were spouses. VA will roll out REACH VA on a national basis through its home-based primary care programs. In addition, the program will be modified to assist caregivers of Veterans with other diagnoses like spinal cord injury and traumatic brain injury. An article on the program was published in the February 28 issue of the Archives of Internal Medicine. To learn more about VA research and events marking this year's National VA Research Week (May 2-6) and VA Central Office events (May 5), visit <u>nnw.research.va.gov</u>.