

Study tracks mental-health effects of Gulf War deployment

According to a VA study published in this month's *British Journal of Psychiatry*, U.S. troops deployed in the Persian Gulf War were more likely to develop a mental disorder during the war than troops of the same era who were not deployed. Deployed veterans continued to show more evidence of mental disorders 10 years later, compared with those who had not been deployed, but the rates for both groups had improved significantly.

"The good news is that Gulf War-associated depression, anxiety, and PTSD actually improve substantially over time," said senior author Seth Eisen, MD, MSc. "The bad news is that, unfortunately, even 10 years after the war, some veterans still suffer from war-related psychiatric disorders. Eisen, now director of VA Health Services Research and Development, said the 10-year findings emphasize "the prolonged impact of war on health, as well as the importance of providing early and long-term mental-health services to our veterans and continuing to support research to understand how to prevent and treat these disorders."

The study was funded by VA's Cooperative Studies Program and led by Rosemary Toomey, PhD, of the Boston VA Health-care System, Boston University and Harvard Medical School.

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Photo courtesy of Department of Defense

VA Research Week: Time to highlight our achievements

By Joel Kupersmith, MD
Chief Research and Development Officer



The theme for this year's VA Research Week poster is "Real-world research to improve veterans' lives."

We think this slogan underscores a key message we need to deliver to veterans and the American public. All our research is focused on veterans and their health needs. While we strongly value our ties to our university affiliates and greatly benefit from and contribute to these partnerships, our research agenda is rooted not in academic queries but in real-world concerns. Our mission is to improve the health of the men and women who have served this nation in uniform, from the World War II era through today's generation of war-fighters.

A glance at recent headlines attests to our steadfast adherence to this principle. Within the past few weeks, the news media reported on these studies—among many others—funded by VA or involving VA investigators:

- An ongoing trial of robot-assisted therapy for stroke patients.
- A test of a Web-based program designed to help men decide on prostate-cancer treatments.
- A clinical trial that confirmed the drug prazosin as an effective treatment for PTSD nightmares.
- Studies on the use of virtual reality in PTSD therapy.
- Research that showed that patients with Parkinson's disease have diminished levels of hypocretin, a brain peptide, and suggested possible new therapeutic targets.

News reports such as these help tell the story of VA

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VA presents Middleton awards to two West Coast researchers

VA's William S. Middleton Award, the agency's highest honor for biomedical research, is for the first time being presented to two investigators.

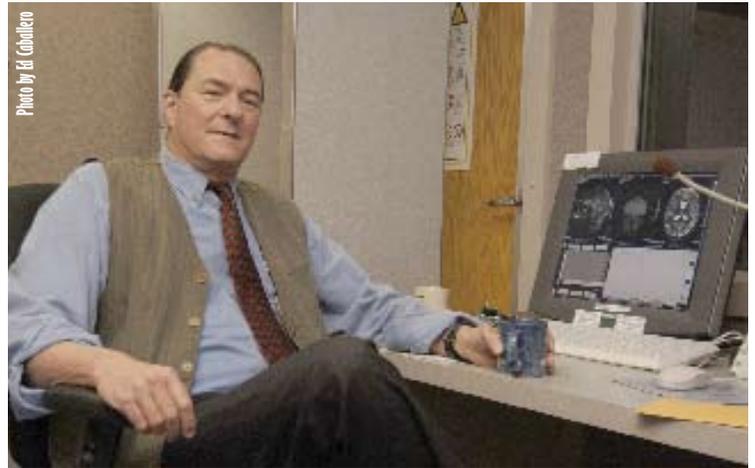
The recipients of the 2006 award—presented in 2007—are Michael Weiner, MD, director of the Center for the Imaging of Neurodegenerative Diseases at the San Francisco VA Medical Center and professor of radiology, medicine, psychiatry and neurology at the University of California, San Francisco; and Roland C. Blantz, MD, chief of nephrology at the VA San Diego Healthcare System and professor of nephrology at the University of California, San Diego.

The researchers were recognized at a ceremony in Washington, DC, on May 15. Each Middleton winner will receive \$50,000 per year for three years in research support and a cash award of \$5,000. In addition, each researcher and his medical center will receive an inscribed plaque.

Weiner spearheading VA-DoD brain-imaging project

Weiner, a nephrologist by training, joined VA in 1980 as chief of hemodialysis. In the same year, he first worked with nuclear magnetic resonance (NMR) technology to obtain images of a kidney in a living rat

Among other roles, Middleton winner Michael Weiner, MD, leads the San Francisco VA Neuroscience Center of Excellence, which aims to improve diagnosis and treatment of traumatic brain injury, posttraumatic stress disorder, and other neurological conditions faced by combat personnel.



— one of the earliest biological applications of NMR. He went on to establish the magnetic resonance imaging program at the San Francisco VA, and has helped developed brain-imaging techniques used around the world. Currently, he is lead investigator of the Alzheimer's Disease Neuroimaging Initiative, a nationwide clinical trial designed to establish biomarkers for Alzheimer's disease. Weiner is also the principal investigator of the San Francisco VA Neuroscience Center of Excellence, a research collaboration between VA, the Department of Defense, and the Northern California Institute for Research and Education. The project focuses on improving diagnosis and treatment of traumatic brain injury, posttraumatic stress disorder, and other neurological conditions faced by combat personnel.

Blantz cited for contributions to treatment of kidney disease

Blantz was cited for his contributions to the understanding of kidney physiology and the role of hormones and inflammatory mediators in various kidney diseases. His research has helped lay the groundwork for the discovery of drug treatments for kidney

VA investigators garner honors at SGIM meeting

Three investigators funded by VA Health Services Research and Development were honored at the Society of General Internal Medicine meeting held April 25 – 28 in Toronto.

Paul M. Haidet, MD, MPH, Houston, received the National Award for Scholarship in Medical Education for his leadership in the areas of team-based learning, doctor-patient relationships, and the culture of medical school, which has been termed the "hidden curriculum." Haidet was also cited for his insightful, creative approach. Among his latest articles is an essay on medical interviewing, "Jazz and the 'art' of medicine: Improvisation in the medical encounter," published in the March-April issue of the *Annals of Family Medicine*.

Louise C. Walter, MD, San Francisco, was named Junior Investigator of the Year. Walter's major research interest is cancer screening, and she is currently focusing on how health status affects the use and out-

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Can education close the racial gap in joint-replacement therapy?

Joint-replacement surgery has been shown to be one of the most effective treatments for end-stage knee osteoarthritis. It relieves pain in more than 90 percent of patients, and most need no help walking once they recover. But African Americans are less likely than whites to consider it as an option—and as a result, are up to five times less likely to undergo the procedure.

Said Ibrahim, MD, MPH, and colleagues aim to change that.

An investigator with VA's Center for Health Equity Research and Promotion (CHERP), Ibrahim is leading a new study to test whether offering better education about joint replacement to African Americans can change their views on the procedure and help erode the disparity in utilization rates.

“African American patients in general know little about the treatment benefits and risks,” says Ibrahim, also an associate professor at the University of Pittsburgh School of Medicine. “We thought providing education in an evidence-based way would bring these patients up to par with others who are considering the treatment.”

Study will include 600 African American veterans

The study, funded by VA Health Services Research and Development and based at the Pittsburgh and Cleveland VA medical centers, will include 600 older African American patients with osteoarthritis of the knee who are medically eligible for joint-replacement therapy. One group among the patients will watch a video produced by the Foundation for Informed Medical Decision Making as a “decision aid” for those considering knee-treatment options. Others will see the video plus receive a form of counseling known as motivational interviewing. A third group will receive only the counseling, and the remainder of the patients—the control group—will be offered a booklet on osteoarthritis from the National Institutes of Health, but not see the video or receive counseling.

The video is not geared to any particular ethnic group, but the motivational interviewing—to be conducted by minority counselors—will address any cultural gaps in the education effort. “The interviewing is intended to supplement any cultural differences in response to the video,” says Ibrahim. “The counselors will try to bring out any additional issues that African Americans may have.”

Adds the researcher, “The goal is not to ‘sell’ joint replacements, but to help patients focus on the issue at hand and move



Said Ibrahim, MD, MPH, is leading a study that aims to provide evidence-based education about knee replacement to African American patients.

them from a position of ambivalence to one of action, where they feel more comfortable making a decision.”

Intervention based on previous CHERP research

The video-intervention concept is informed by Ibrahim's earlier studies, which first documented the disparity between African Americans and whites in the use of joint replacement and then explored the reasons for the gap.

Ibrahim: “We did surveys to identify the potential differentiating factors between African Americans and whites that could explain the disparities, and we found that one key factor was lack of knowledge among African Americans about the treatment itself. That's how we made the decision to use the video—it provides exactly the information we think African Americans need to feel com-

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Recent publications and presentations by VA investigators

Below is a brief sampling of recent publications and presentations by VA investigators, based on notifications received by R&D Communications (see reporting requirements at www.research.va.gov/resources/policies/pub_notice.cfm). Every attempt is made to present a cross section of investigators, topics and medical centers. Only VA-affiliated authors are listed here, due to space constraints.

“Characteristics and Impact of Drug Detailing for Gabapentin.” Michael A. Steinman, MD; G. Michael Harper, MD; Mary-Margaret Chren, MD; C. Seth Landefeld, MD. **San Francisco.** *PLoS Medicine*, April 2007.

“Complementary and Alternative Medicine Use among Veterans Affairs Outpatients.” Katherine A. Bradley, MD, MPH.; Clarence H. Braddock, 3rd, MD; Stephan D. Fihn, MD., MPH. **Seattle.** *Journal of Alternative Complementary Medicine*, March 2007.

“The Demise of Oregon’s Medically Needy Program: Effects of Losing Prescription Drug Coverage.” Judy Zerzan, MD, MPH. **Seattle.** *Journal of General Internal Medicine*, March 23, 2007

“Determinants of Lung Volumes in Chronic Spinal Cord Injury.” Evan L. Stepp, MD; Carlos G. Tun, MD; David R. Gagnon, MD, MPH, PhD; Nitin B. Jain, MD; Eric Garshick, MD, MOH. **San Francisco.** American Thoracic Society Meeting, May 18-23, 2007.

“Does Quality of Care for Cardiovascular Disease and Diabetes Differ by Gender for Enrollees in Managed Care Plans?” Allen M. Fremont, MD, PhD; Thomas Rector, Pharm. D., PhD. **West Los Angeles, Minneapolis.** *Women’s Health Issues*, April 13, 2007.

“Heterogeneity in Hip Fracture Patients: Age, Functional Status, and Comorbidity.” Joan D. Penrod, PhD; Albert L. Siu, MD, MSPH. **Bronx.** *Journal of the American Geriatrics Society*, March 2007.

“IFI16 in Human Prostate Cancer.” Divaker Choubey, PhD. **Hines.** *Molecular Cancer Research*, March 2007.

“Internalizing and Externalizing Subtypes in Female Sexual Assault Survivors: Implications for the Understanding of Complex PTSD.” Mark W. Miller, PhD; Patricia A. Resick, PhD. **Boston.** *Behavior Therapy*, March 2007.

“Interventions to Increase Influenza Vaccination Rates in Veterans with Spinal Cord Injuries and Disorders.” Frances M. Weaver, PhD; Bridge Smith, PhD; Sherri LaVela, MPH, MBA; Carolyn Wallace, PhD; Charlesnika T. Evans, MPH; Margaret Hammond, MD; Barry Goldstein, MD, PhD. **Hines. Seattle.** *Journal of Spinal Cord Medicine*, 2007.

“Motivational Enhancement Therapy for High-Risk Adolescent Smokers.” Amy Helstrom, PhD. **Boston.** *Addictive Behaviors*, March 7, 2007.

“Multi-State Decoding of Point-and-Click Control Signals from Motor Cortical Activity in a Human with Tetraplegia.” John D. Simeral, PhD; Leigh R. Hochberg, MD, PhD. **Providence.** The 3rd International IEEE EMBS Conference on Neural Engineering, May 5, 2007.

“Physicians: Communication and Perceptions of Patients: Is it How They Look, How They Talk, or is it Just the Doctor?” Howard S. Gordon, MD. **Chicago.** *Social Science & Medicine*, April 24, 2007.

“Prevalence and Impact of Diarrhea on Health-Related Quality of Life in HIV-

Infected Patients in the Era of Highly Active Antiretroviral Therapy.” Edmund J. Bini, MD, MPH; Michael Poles, MD, PhD; **New York.** *Journal of Clinical Gastroenterology*, May/June 2007.

“Readjustment Processes of OEF/OIF Veterans & Families Living in Puerto Rico.” Constance Uphold, RN, PhD; Maude Rittman, RN, PhD; Craig Boylstein, PhD. **Gainesville.** NOVA 27th Annual Meeting, May 10-12, 2007.

“Role of the Medial Temporal Lobes in Relational Memory: Neuropsychological Evidence from a Cued Recognition Paradigm.” Irene P. Kan, PhD; Kelly S. Giovanello, PhD; Mieke Verfaellie, PhD. **Boston.** Cognitive Neuroscience Society 14th Annual Meeting, May 5-8, 2007.

“Self-Efficacy in Communicating with Physicians Moderates the Relationship between Health Literacy and Systolic Blood Pressure.” Amy K. Silberbogen, PhD; Erin W. Ulloa, PhD; Allison E. Collins, PhD. **Boston.** Institute for Healthcare Advancement’s annual Health Literacy Conference, May 3-4, 2007.

“Syme Amputation for Limb Salvage: Early Experience with 26 Cases.” Robert G. Frykberg, DPM, MPH; Suzanne Abraham, DPM; Edward Tierney, DPM; Jared Hall, DPM. **Phoenix.** *Journal of Foot and Ankle Surgery*, March/April 2007.

“Using Information Technology to Improve Care of the Complex Patient: Lessons from VA: Approaches to Evaluating and Improving the Quality of Care.” **Palo Alto.** Society of General Internal Medicine: The Puzzle of Quality: Clinical Educational and Research Solutions, April 27, 2007.

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disease. Among his current VA-funded research is a study on the effects of arginine and other amino acids on kidney function. The work may lead to new treatments for the kidney breakdown that occurs during sepsis, a serious medical condition caused by the body's response to an infection. Blantz also leads the Hypertension Training Program at UCSD, which trains investigators researching hypertension and related diseases.

The Middleton Award was named for the physician-scientist who served as VA's chief medical officer from 1955 to 1963. Past winners of Middleton awards have included medical luminaries such as Thomas Starzl, MD (1968), who performed the world's first successful liver transplant; and Andrew Schally, PhD (1970), who in 1977 would receive the Nobel Prize for Medicine for his hormone discoveries and is still active as a VA investigator. ■



Middleton Award winner Roland C. Blantz, MD, of the VA San Diego Healthcare System, was cited for his contributions to increasing understanding of normal kidney function and diseases such as chronic kidney failure and diabetic kidney disease.

SGIM (from pg. 2)

comes of cancer screening in older people. Recently, her work on prostate-specific antigen screening rates among elderly veterans, including those with limited life expectancy, was featured in the "Author in the Room" series of *The Journal of the American Medical Association* and the Institute for Healthcare Improvement.

Rachel Werner, MD, PhD, Philadelphia, received the T. Franklin Williams Scholars Award in Geriatrics. She was also cited for Best Published Research Paper of the Year for her article "Relationship between Medicare's 'Hospital Compare' performance measures and mortality rates," published in 2006 in *The Journal of the American Medical Association*. The study found that these performance measures predict only small differences in risk-adjusted mortality rates, and pointed to the need for performance measures more "tightly linked to patient outcomes." ■

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fortable with this treatment." One of those earlier studies, published in 2002 by Ibrahim and colleagues Laura A. Siminoff, PhD, Christopher J. Burant, MS, and C. Kent Kwoh, MD, showed that African Americans were less likely than whites to be familiar with joint replacement and more likely to expect a longer hospital stay and pain and disability following surgery. Consequently, they were less willing to consider the therapy.

Ibrahim points out that as common as osteoarthritis is in the U.S.—it's the leading cause of disability—veterans may be at increased risk, due to the joint trauma sometimes caused by the intense physical activity associated with military training and service.

He adds that the VA health system, where access to care is not limited by insurance, is an ideal setting in which to study how preferences affect healthcare utilization—particularly when it comes to elective procedures such as joint replacement.

"This is an elective treatment. Physicians don't look you in the eye and say, 'This is what you need to do.'" Patients have more latitude to exert their preference, and "preference is very heavily influenced by culture and social background."

He hopes that his current studies will yield valuable information not only on the management of osteoarthritis, but on "how we think about patient preferences and expectations, doctor-patient communication, and issues related to multiple treatment options." ■



Soldiers deployed in the Gulf War had more new-onset mental-health problems during the war than non-deployed troops, says a new VA study. The gap in mental health had grown smaller but still persisted 10 years later.

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Some 700,000 American troops were deployed to the Middle East during the war. The deployment was marked by a high percentage of National Guard and reservist units and the exposure of troops to potentially harmful environmental toxins. Past studies, including the “National Health Survey of Gulf War Era Veterans and Their Families,” showed more mental symptoms and disorders among deployed versus non-deployed Gulf War-era veterans, as well as higher rates of chronic multi-symptom illness.

In the new study, researchers followed up on the mail and telephone surveys of the National Health Survey by conducting face-to-face structured clinical interviews with 1,061 deployed and 1,128 non-deployed Gulf War-era veterans at 16 VA medical centers between 1998 and 2001. The interviews were aimed at es-

tablishing the past and current prevalence of disorders that started during the war. The veterans also completed questionnaires about their current symptoms and quality of life.

Among the findings:

- During the Gulf War, deployed troops were about twice as likely to experience the onset of at least one mental disorder, such as PTSD or depression (18.1 vs. 8.9 percent).
- For PTSD, the prevalence of new cases during the war was 6.2 percent among deployed troops, and 1.1 percent among their non-deployed peers. Ten years later, the prevalence had dropped to 1.8 and .6 percent, respectively.
- Gulf War-onset depression affected 7.1 percent of deployed and 4.1 percent of non-deployed troops during the war. Ten years later, 3.2 percent of deployed and .8 percent of non-deployed veterans continued to have depression.
- Gulf War-onset anxiety (other than PTSD) affected 4.3 percent of deployed troops versus 1.4 percent of non-deployed troops during the war. Ten years later, the figures had dropped to 2.8 percent and 1.2 percent.

Depression and anxiety in non-deployed veterans were significantly more likely to improve over time than the same conditions in deployed veterans. Remission rates for PTSD did not differ significantly between groups. The researchers found no evidence linking the disparity in depression remission to different rates of medication use between the two groups. However, remission of anxiety disorders, including PTSD, was associated with whether patients used medication: Non-deployed veterans with anxiety conditions were more likely to be taking anti-anxiety medications than were deployed veterans with these disorders.

The researchers said that overall, the findings “point to the need for adequate mental healthcare for veterans with persistent mental illness” following major military deployments. ■

QUERI associate director sought

VA is seeking a qualified clinician manager for the position of associate director for the Quality Enhancement Research Initiative (QUERI). Candidates are expected to have strong clinical, scientific and managerial backgrounds, and to hold an MD or other clinical doctoral degree. The position involves guiding and managing all scientific and administrative aspects of QUERI, including managing a budget of more than \$13 million. For full details, visit <http://www.vhaexecrecruit.cio.med.va.gov> and click on “Central Office Positions.”

The rich history of VA research

Remembering William Chardack, MD, cardiac-pacemaker pioneer

By Andrew A. Gage, MD, and Anthony J. Federico, MD

[Editor's note: The following essay originally appeared in Heart Rhythm. We reprint it here to mark the one-year anniversary of the passing of Dr. Chardack, one of the most noted figures in the history of VA research. The authors are former VA physicians and colleagues of Dr. Chardack's.]

William M. Chardack, MD, a recognized pioneer in the development of the implantable cardiac pacemaker, died on May 28, 2006, at the age of 91 years. Dr. Chardack was a skilled and innovative cardiothoracic surgeon who was also known for admirable leadership, tenacious pursuit of cures for difficult cancers, and experimental surgical research.

Chardack's noteworthy career started in 1947 as Assistant Chief of Surgery at the VA Hospital, Castle Point, New York. In early 1950, he moved to the VA Hospital, Buffalo, New York. From late 1950 to 1952, he served in Korea as Chief Surgeon of the 1st MASH (8209th), earning a Bronze Star and a Croix de Guerre for a battlefield-developed transfusion pump made from the base of an artillery shell. Chardack then returned to the VA Hospital in Buffalo, where he successfully removed a Pancoast tumor (1952), achieving the first recorded long-term survival for a patient with that pernicious lesion.

As Chief of Surgery in 1954, he established the University Thoracic Surgical Residency and was among the first to use aortic homografts for treatment of the Leriche syndrome and abdominal aortic



Andrew Gage, MD (left), and William Chardack, MD, in a 1974 photo.

aneurysms, as well to perform the first closed mitral valvuloplasty in Buffalo.

Beginning in the mid 1950s, Chardack's earliest research focused on the revascularization of ischemic myocardium. He later extended his efforts to include the implantable cardiac pacemaker (Surgery, 1960), pumping devices for cardiac assistance, carotid sinus stimulation for relief of hypertension, hyperbaric oxygenation for coronary arterial occlusion, and synthetic substitutes for skin.

First implants performed in 1960

Chardack's most outstanding contribution to medicine was his leadership role on the team of Chardack, Greatbatch, and Gage, which developed the first successful implantable cardiac pacemaker. In early 1958, Greatbatch constructed a handful of low current drain transistorized pulse generators driven by mercury cells that successfully paced the canine heart. In 1960, 16 patients with complete heart block benefited from implantation of the pacemaker. Subsequent and frequent myocardial electrode failures identified the critical need for an electrically and

mechanically stable electrode. Working with remarkable determination, Chardack developed a helical coil electrode based on an intra-oral orthodontic spring and made from corrosion-resistant platinum-iridium alloy (1961). Then a substantial technological advance in pacing, Chardack's helical coil electrode subsequently enabled the successful technique of pacing with transvenous electrodes (1964). In later years, he contributed widely to pacemaker design and use until it became largely an electrical engineering task.

Chardack was a dedicated public servant, military surgeon, clinician, and research scientist who actively encouraged his associates and resident surgical staff to participate in his diverse research programs. In addition to several patents and numerous professional publications, he contributed to the *Sabiston Textbook of Surgery* and *Gibbon's Surgery of the Chest*, for which he authored the chapters on cardiac pacemakers.

[Chardack is remembered] for his keen intelligence, inquisitive nature, perseverance, and zest for life, [and his] death is a loss to his family, friends, medicine, and the members of the Heart Rhythm Society. His contributions to humankind have stood the test of time.

Dr. Gage joined the Buffalo VA as a surgeon in 1953 and served as chief of surgical service from 1968 to 1984 and chief of staff from 1971 to 1986. Dr. Federico was a resident in general and thoracic surgery at the Buffalo VA in the late 1950s, and then entered private practice. Reprinted from Heart Rhythm, volume 3, copyright 2006, with permission from The Heart Rhythm Society.

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RESEARCH WEEK (from pg. 1)

research to veterans and the American public. Research Week is an opportunity for us—the VA research community—to work toward the same goal.

A few days ago, I had the privilege of participating in the Research Week kick-off in Pittsburgh. The events at this site included a keynote address by Congressman Mike Doyle, informational exhibits, and poster displays. Anyone visiting the Pittsburgh VAMC during this time could not help but come away with an enhanced understanding of, and appreciation for, the work VA researchers do every day.

Similar events around the country—for instance, luncheons for research volunteers at the Richmond and Cleveland VAMCs, and lab tours at the Omaha VAMC—go a long way toward spreading the good word about VA research nationwide.

To all those who have worked hard to make Research Week 2007 a success, thanks for helping to tell the story of VA research. ■



Research Week events at the Richmond VAMC included a luncheon for more than 400 research volunteers and a Purple Heart and Combat Action Award presentation to Army Sgt. Brian Pearce (left, in top photo). Pearce was seriously injured by an IED in Oct. 2006 and is now a polytrauma outpatient and clinical-trial participant at the Richmond VA. Col. Scott Wuestner, his commander in Iraq, presented the medals. With Pearce is his wife, Angie, who received a Patriotic Service Award.

VA, NIMH, DoD working group on mental-health research

Experts on adjustment and mental-health issues related to military deployment met in Rockville, Md., May 17 and 18 to discuss current research and map out an agenda for future studies. The researchers and clinicians who met represented VA, the National Institute of Mental Health, and the U.S. Army Medical Research and Materiel Command. Their report is available on the VA research website at www.research.va.gov/news/announcements/deployment-meeting.cfm.

On the Web: The ABCs of case-control studies

VA Research Currents has been featuring occasional columns from VA's Seattle Epidemiologic Research and Information Center that explain key concepts in research methodology. The latest column, on case-control studies, can be found on the Seattle ERIC website at: www.eric.seattle.med.va.gov/research_currents.html. The column is the second in a series on observational study designs.