



VA Research Currents

Update from Health Services Research and Development...

HSR&D findings vital to policymakers, VA managers

By John G. Demakis, MD, Director, HSR&D

The Health Services Research & Development Service (HSR&D) is continuously working to improve health care for veterans by advancing knowledge and promoting innovations that result in optimal access to high quality, cost-effective care. Accordingly, HSR&D investigators are conducting projects on a variety of important health care topics, including assessing the efficacy and cost-effectiveness of health care; measuring the impact of changes in practice guidelines on patient outcomes over time; determining equity in health care; and seeing how VA measures up to the private sector in a number of areas.

For example, Dr. Laura Petersen's work published in the *New England Journal of Medicine* (NEJM) last December indicates that patients in VA and non-VA hospitals receive similar quality of care for acute myocardial infarction (AMI)—despite the fact that VA patients were significantly more likely to have other chronic complications. In a study published this September in *Medical Care*, Dr. Peter Kaboli showed that intensive care unit (ICU) mortality is similar in VA and the private sector. After adjusting for severity of illness, the study also showed that ICU length of stay was similar in VA and the private sector.

This is important for managers to know, since ICUs nationally represent nearly 10 percent of all inpatient beds and account for more than 20 percent of all inpatient hospital costs.

Another important area of investigation is examining variations in treatment and outcomes and identifying ways to reduce and eliminate them. In another study by Dr. Petersen, now in press with *Medical Care*, investigators found no significant disparities in health care between nearly 5,000 African-American and white VA patients with regard to the use of non-interventional therapies or diagnostic

see **POLICYMAKERS** on pg. 3

Robotic walker for vision-impaired elderly being tested by VA

VA researchers in Pittsburgh and Atlanta are evaluating a high-tech walking frame designed to promote mobility and independence for vision-impaired frail elderly. The walker, known as the PAM-AID (Personal Adaptive Mobility Aid), was launched commercially on Oct. 5 at a rehabilitation conference in Europe by its manufacturer, Ireland-based Haptica.

The walker weighs about 60 pounds and costs around \$8,000. It uses robotics and artificial intelligence to sense the environment and support and guide its user. According to the manufacturer, the device “builds the functionality of a guide dog into a robust walking frame.”

Rory Cooper, PhD, director of VA's Center for Wheelchair and Related Technology in Pittsburgh, is lead investigator on a grant from Rehabilitation Research and Develop-

ment to evaluate the device. While Dr. Cooper bench-tests the prototype from an engineering standpoint, Bruce Blasch, PhD, coordinator of the Vision Research Program at the Center of Excellence on Geriatric Rehabilitation at the Atlanta VA Medical Center, will lead a clinical trial with 45 residents of an assisted-living facility.

Dr. Blasch's team will test the PAM-AID against a far less expensive, low-tech device known as the Adaptive Mobility Device (AMD), developed by VA. Made of aluminum and plastic, with no electronic circuitry, the AMD features two parallel canes in a rectangular frame.

“It's a better type of cane, more suitable to the elderly,” said Dr. Blasch about the AMD. “It requires very little

see **WALKER** on pg. 3

Recent publications and presentations

Below is a sampling of recent publications and presentations by VA investigators. Due to space constraints, only VA authors and affiliations are noted.

Notification of upcoming publications and presentations can be sent to R&D Communications by e-mail at researchinfo@vard.org or by fax at (410) 962-0084. Include the manuscript title, journal title and publication date (if known), abstract, and full names and degrees of all VA-affiliated authors or presenters. If you feel the publication or presentation is particularly newsworthy, please indicate so.

“Accuracy of Self-Reported Stroke Among Elderly Veterans.” Ronnie D. Horner, PhD; Harvey J. Cohen, MD. **Durham.** *Aging and Mental Health*, Aug. 2001.

“Building an Explanation Function for a Hypertension Decision-Support System.” Susana B. Martins, MD; Mary K. Goldstein, MD. **Palo Alto.** *Medinfo2001*, London, Sept. 2 – 5.

“Health Status and Satisfaction with Care: A Longitudinal Study Among Patients Served by the Veterans Health

Administration.” Xinhua S. Ren, PhD; Lewis Kazis, ScD; Austin Lee, PhD; Susan Pendergrass, PhD. **Bedford** (Mass.) *American Journal of Medical Quality*, Sept./Oct. 2001.

“Impaired Inhibitory G-Protein Function Contributes to Increased Calcium Currents in Rats with Diabetic Neuropathy.” Karen E. Hall, MD, PhD; Jackie Liu; John W. Wiley, MD. **Ann Arbor.** *Journal of Neurophysiology*, Aug. 2001.

“Length of Stay as a Source of Bias in Comparing Performance in VA and Private Sector Facilities: Lessons Learned from a Regional Evaluation of Intensive Care Outcomes.” Peter J. Kaboli, MD, MS; Mitchell J. Barnett, RPh, MS; Susan M. Fuehrer, MBA; Gary E. Rosenthal, MD. **Iowa City** and **Cleveland** (SMF). *Medical Care*, Sept. 2001.

“Operative Mortality with Elective Surgery in Older Adults.” Emily V.A. Finlayson, MD; John D. Birkmeyer, MD. **White River Junction** (Vt.) *Effective Clinical Practice*, July 2001.

“Organizational Culture, Continuous Quality Improvement and Medication Administration Error Reporting.” Bonnie J. Wakefield, PhD, RN; Elizabeth A. Chrischilles, PhD; Douglas S. Wakefield, PhD. **Iowa City.** *American Journal of Medical Quality*, July-Aug. 2001.

“Percutaneous Coronary Intervention Versus Coronary Artery Bypass Graft Surgery for Patients with Medically Refractory Myocardial Ischemia and Risk Factors for Adverse Outcomes with Bypass: A Multi-Center, Randomized Trial.” Douglass A. Morrison, MD; Gulshan Sethi, MD, chairs, Angina With Extremely Serious Operative Mortality Evaluation (AWESOME) cooperative study. **Tucson.** *Journal of the American College of Cardiology*, July 2001.

“Racial Differences in Outcomes of Veterans Undergoing Percutaneous Coronary Interventions.” Charles Maynard, PhD; Steven M. Wright, PhD; Nathan R. Every, MD; James L. Ritchie, MD. **Seattle** and **Boston** (NRE). *American Heart Journal*, Aug. 2001.

“Rates and Predictors of Relapse Among Older Former Problem Drinkers.” Kathleen K. Schutte, PhD; Kristin Nichols, MPH; Penny L. Brennan, PhD; Rudolf Moos, PhD. **Palo Alto.** American Psychological Association annual meeting, Aug. 26, 2001.

“Risk Adjustment for Measuring Health Outcomes: An Application in VA Long-Term Care.” Amy K. Rosen, PhD; Dan Berlowitz, MD, MPH; Carter Rakovski, MS. **Bedford** (Mass.) *American Journal of Medical Quality*, July/Aug. 2001.

“Shoulder Imaging Abnormalities in Individuals with Paraplegia.” Michael L. Boninger, MD; Rory A. Cooper, PhD. **Pittsburgh.** *VA Journal of Rehabilitation Research and Development*, July/Aug. 2001.

“Successful Ventricular Defibrillation by the Selective Sodium-Hydrogen Exchanger Isoform-1 Inhibitor Cariporide.” Raul J. Gazmuri, MD, PhD; Iyad M. Ayoub, MS; Elizabeth Hoffner, MS; Julieta D. Kolavora, MD. **North Chicago.** *Circulation*, July 2001.

“A Systematic Review of Interventions for the Treatment and Management of Chronic Fatigue Syndrome.” John E. Cornell, PhD, **San Antonio.** *Journal of the American Medical Association*, Sept. 19, 2001.

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Computerized Patient Record System plays key role in cancer study

Researchers at the Central Arkansas Veterans Healthcare System (CAVHS) found that the true incidence of chronic lymphocytic leukemia, one of few malignancies that can be diagnosed without a tissue biopsy, is substantially higher than estimated from tumor-registry data. These findings were reported in the Sept. 1 issue of *Cancer*.

A team led by Clive Zent, MD, of the CAVHS and the University of Arkansas for Medical Sciences, compared the actual and reported incidence of the disease for a 10-year interval at CAVHS. Dr. Zent credits VA's Computerized Patient Record System (CPRS) with making the study possible.

"The CPRS is a powerful tool," he said. "It allows researchers to review

data from a large patient population without handling paper records." Over four years, Dr. Zent and colleagues reviewed the lymphocyte counts of more than 45,000 patients.

Prior to this study, the reported incidence of chronic lymphocytic leukemia was based on tissue pathology and cancer-treatment data reported by the tumor registry at CAVHS. The tumor registry did not take into account the change in diagnosis of this disease from bone-marrow biopsy to flow cytometric analysis of blood cells, resulting in under-reporting of new diagnoses since 1990.

The Computerized Patient Record System is used by more than 100,000 Veterans Health Administration staff members, including investigators.

Policymakers (cont. from pg. 1) angiography for AMI, or in short- or long-term mortality.

In a study led by Dr. Sam Bozzette, researchers found that the total cost of care for adults with HIV infection has declined since the introduction of highly active antiretroviral therapy. To make this determination the study followed almost 3,000 patients receiving care for HIV infection for three years. Published in the March 15 *NEJM*, these findings are important to VA managers and policymakers because VA is the largest provider of HIV care in the United States.

HSR&D will continue to provide high quality scientific evidence to VA managers and policymakers and to promote innovations that improve the health and care of veterans and the nation. ■

New center to study colon cancer

As part of its Quality Enhancement Research Initiative (QUERI) program, VA has established a new center at the Minneapolis VA Medical Center to translate research on colorectal cancer into improved prevention, diagnosis and care. The Cancer QUERI Center, also known as CRC-QUERI, is a collaborative effort between Health Services Research and Development and the National Cancer Institute.

"We expect that the Cancer QUERI will develop leadership and become a nationally recognized resource in both cancer research and in the systematic translation of research findings," said John Demakis, MD, director of HSR&D.

With early diagnosis, the five-year survival rate for colon cancer is better than 90 percent. However, fewer than one-third of cases are detected early. Thus, the first priority of CRC-QUERI will be improving screening and diagnosis. Another priority will be improving the quality of colorectal cancer treatment and end-of-life care. Colorectal cancer is the second leading cause of death from cancer, after lung cancer.

HSR&D REAP funding

REAP (Research Enhancement Award Program) funding is available from Health Services Research and Development to support existing health-services research at VA medical centers that do not host, and are not affiliated with, an HSR&D center of excellence. HSR&D teams may be eligible to receive up to \$250,000 per year over five years, plus funding for start-up costs. For details contact Jay A. Freedman, PhD, at (202) 408-3662 or jay.freedman@hq.med.va.gov.

Walker (cont. from pg. 1)

dexterity, which can be a problem for elderly with arthritis. They can't move a cane back and forth. [The AMD] gives the user preview about the environment ahead of him, which is what a blind person needs."

The sophisticated PAM-AID, on the other hand, uses laser range finders, sonar sensors, steering motors and a motion controller. These mesh with software that recognizes "landmarks" such as turns and doorways and avoids obstacles. The device audibly announces these decisional points to the user. When used in automatic mode, the device senses which way the user wants to go, through pressure on the handlebars, and gently steers in that direction.

Achievements

• The **Albuquerque Pharmacy Coordinating Center**, which provides pharmaceutical services for clinical trials of VA's Cooperative Studies Program, received one of two 2001 Robert W. Carey Quality awards from the Veterans Health Administration. The award recognizes VA programs that excel in leadership, strategic planning, management and other areas.

If a VA cooperative trial involves drugs or medical devices, the Albuquerque center provides input into the design of the study and is responsible for drug-related activities such as developing the drug-handling protocol, negotiating with pharmaceutical companies, and packaging and distributing the drugs. The facility, which was recently recognized by the New Mexico State Quality Program, has grown from 5 to 69 employees over the past two decades.

The Carey Quality Award, presented annually since 1992, is named for the late director of the Philadelphia VA

Regional Office and Insurance Center, who led his office in initiating a total-quality management approach to serving veterans and their families. (The other award winner this year was VISN 2, the VA Healthcare Network of Upstate New York.)

• **Douglas Noffsinger, PhD**, chief of Audiology and Speech Pathology at the VA Greater Los Angeles Healthcare System, received the 21st annual Olin E. Teague Award for his leadership in audiology care and research. Dr. Noffsinger, author of nearly 60 papers in peer-reviewed journals, has conducted VA- and NIH-funded audiology research since 1973, and recently led a VA delegation that worked with other national organizations to standardize protocols for hearing evaluation and hearing-aid selection and fitting.

The Teague Award is named for the late congressman, a highly decorated World War II veteran who served 31 years on the House Committee on Veterans Affairs. It recognizes outstanding achievements in the rehabilitation of veterans, especially those injured in war.

Upcoming events

• **VA's Clinical Research Methods Course** will be held April 8 – 12, 2002, in Santa Fe, N.M. The course teaches the basics of designing and conducting a scientifically valid study. For details contact William Henderson, PhD, director of the Hines (Ill.) VA Cooperative Studies Coordinating Center, by phone at (708) 202-5853 or by e-mail at Henderson@research.hines.med.va.gov.

• **Health Services Research and Development** will hold its 25th anniversary celebration and 2002 annual meeting Feb. 13 – 15 in Washington, D.C. For details set your Internet browser to www.va.gov/resdev/fr/frmtngs/mtng.cfm.

• **Rehabilitation R&D's 2002** national meeting will take place Feb. 11 and 12 in Washington, D.C. For details, check the Rehabilitation R&D website at www.vard.org.

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